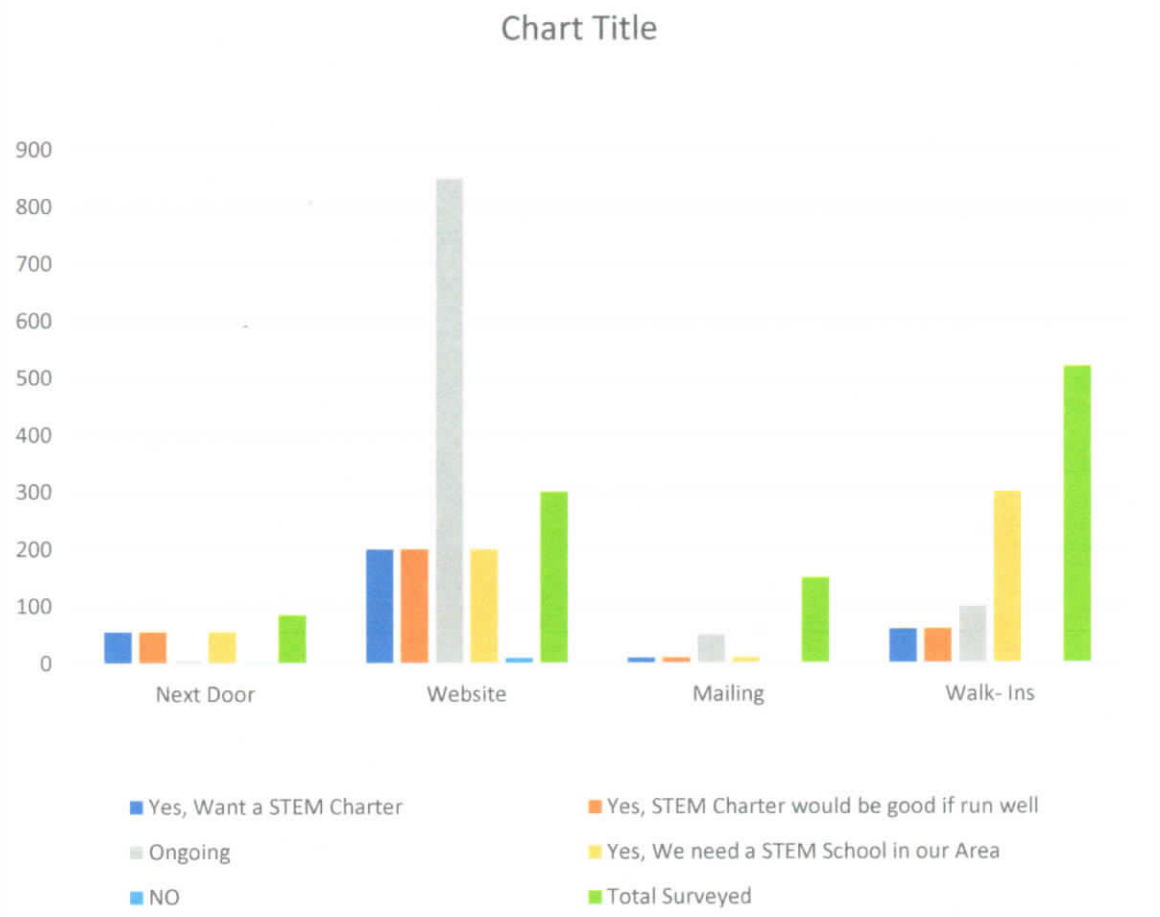
Appendix _A_: [Evidence of Parent/Community Support]

[Clara Science Academy]

Clara Science Academy Charter School Survey Results



This survey is still ongoing. CSA website has over 800 hits with 271 mailing surveys from last year.

Additionally, 300 surveys have been completed via store walk ups. CSA volunteers have collected over 300 petitions from events at churches, masjids, education programs and other non-profits.

Clara Science Academy is still engaged in the collection of data and feedback for the school.

Clara Science Academy Survey

Thank you for your interest in a proposed charter school in your county. Help us as we plan and develop a charter school in your community. Please share with us thoughts and feeling about public education, charter schools and what academic programs are important to you in North Carolina schools. This survey should take approximately 5 minutes to complete.

Background Information

1. Which county do you reside in? Mecklenburg

2. Do you have pre-school or school-age children that live with you? ___ No ✓ Yes How many? 2

School Related Questions

3. Would you like to see a charter school (k-12) with in your community? ✓ Yes ___ No

4. Charter schools offer a tuition-free alternative from regular public schools. Would you consider sending your child or children to a charter school? ✓ Yes ___ No

5. Would you be interested in a school that places an emphasis on school cultural factors such as character education, citizenship programs, school uniforms, and active parental involvement? ✓ Yes ___ No

6. Would you be interested in a school that places an emphasis on a college prep with a focus on Science, Technology, Engineering and Math (STEM)? ✓ Yes ___ No

7. Are there special areas of focus or programming you would be interested in seeing offered at the proposed charter school in your area? ✓ Yes ___ No Please explain: Community and parental engagement

Your time and responses are greatly appreciated. This survey is also available at www.clarascienceacademy.com Thank you for your participation!

Name:	Your Address	Do you live in Mecklenburg County (Y/N)?	Are you in favor of a STEM charter school in your neighborhood (Y/N)?
Ayesha Wilson	416 Goshawk Lane	Yes	Yes
Simone Pipas	10815 Touchwood Dr.	Yes	Yes
Michelle Chatman	2336 Briargrove Dr	yes	yes
Hans Dens	1027 Bannister Pl.	yes	yes
Syed hussain	826 Square hill Rd	yes	yes
Anne Atkins-Bostic	6721 Hanbrook Rd	yes	yes
Tawanika Humphry	5323 Myrica Ln	yes	yes
Charles Adamson	2426 Finchley Dr	yes	yes
Khadigah DIALLO	6011 Treetop court	yes	yes
Syedi Wills	302 AUNT MARY AVE 27405	NO	Yes
Kristen King	Greensboro NC 27212	Y	Y
debbie muhammad	8200 trevor Ct	no	yes
DaQuo Brock	6803 Fairway PT Dr.	yes	yes
Sam Wilson	5323 myrica ln	yes	yes
VASHTI EADDY	6435 ZEGLER LN	Y	Y
Umar Haqq	~~764 287~~ 922 Tom Hunter RD.	y	y
Tamir Mutakabbir	944 Autumnwood Ln	Y	Y
Hallemah Umrani	6701 Cardigan Ave	y	y
Bruce Hughes	3605 Cliffhaven Dr.	X	Y
~~Clarence Fetherson~~			
Clarence Fetherson	3123 Burbank Drive	Yes	Yes
Jerry Wilson	5323 Myrica Ln	Yes	Yes

SAADIA TAITI		NO	yes

Faiza Masoud	8618 Idlewild Rd	Yes	Yes
Saida Hassen	6443 Playhay	NO	Yes
Hadiyah weeks	7117 Sycamore Grove CT		Yes
Jai Janneh	6205 Green Vista Ct	yes	yes

Clara Science Academy website Month Summary

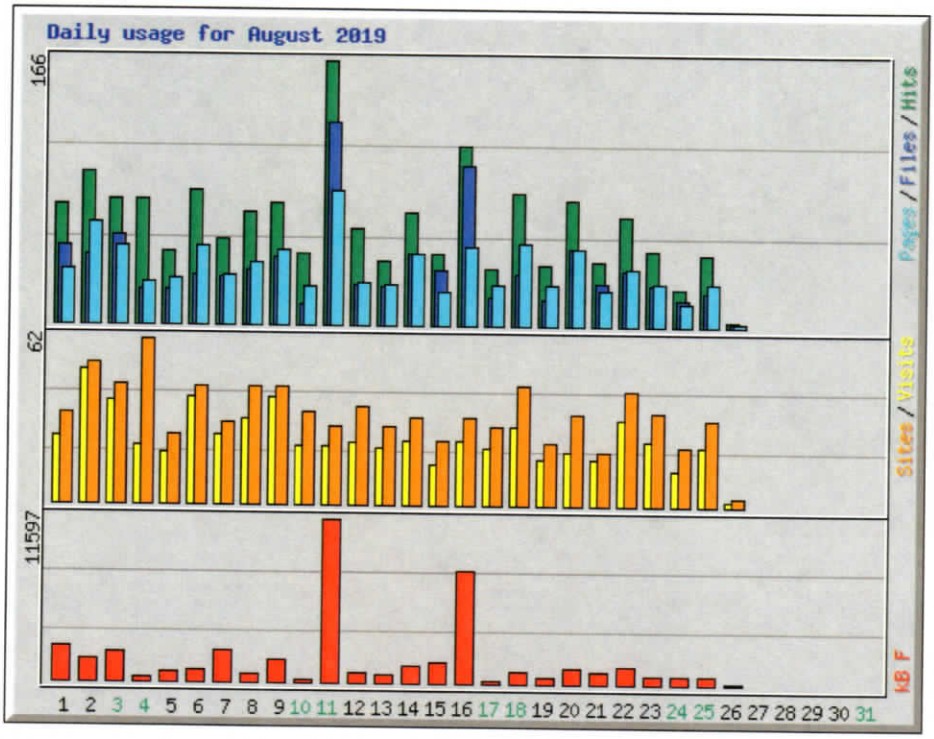
Summary by Month										
Month	Daily Avg				Monthly Totals					
	Hits	Files	Pages	Visits	Sites	kB F	Visits	Pages	Files	Hits
Mar 2019	26	17	21	17	119	1537	105	127	107	156
Feb 2019	33	24	24	16	424	20169	470	675	696	942
Jan 2019	59	36	30	14	336	53401	445	950	1139	1830
Dec 2018	20	13	12	9	298	13143	305	399	421	633
Nov 2018	21	11	14	10	259	8385	303	431	352	653
Oct 2018	23	13	15	10	265	14629	323	484	412	738
Sep 2018	20	11	12	8	216	12516	253	381	359	615
Aug 2018	14	9	8	6	172	8361	207	278	300	458
Jul 2018	15	11	8	6	170	12887	205	268	357	493
Jun 2018	15	10	7	5	163	11298	179	229	306	458
May 2018	15	10	7	5	158	12000	182	233	318	488
Apr 2018	12	8	6	4	133	8449	135	186	242	373
Totals						**176775**	**3112**	**4641**	**5009**	**7837**

Usage Statistics for www.clarascienceacademy.com

Summary Period: August 2019
Generated 26-Aug-2019 02:41 EDT

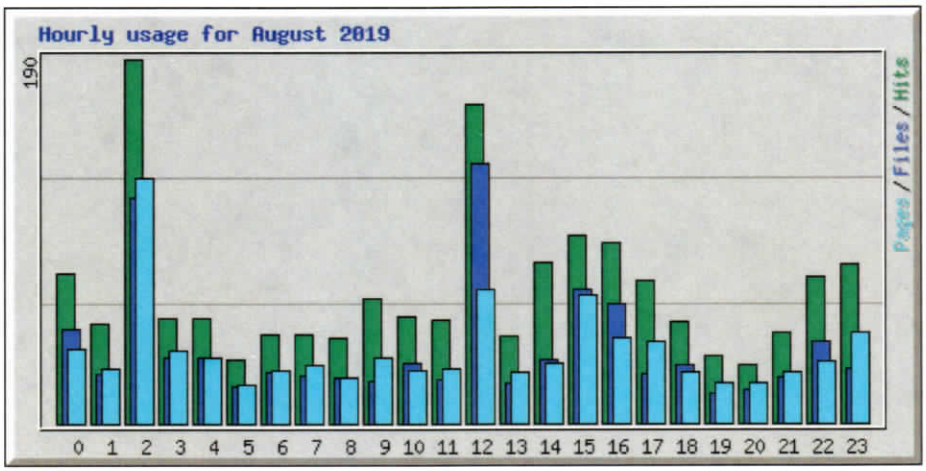
|Daily Statistics| |Hourly Statistics| |URLs| |Entry| |Exit| |Sites| |Referrers| |Search| |Agents| |Countries|

Monthly Statistics for August 2019		
Total Hits		1659
Total Files		936
Total Pages		918
Total Visits		641
Total kB Files		42219
Total Unique Sites		543
Total Unique URLs		48
Total Unique Referrers		29
Total Unique User Agents		146
	Avg	Max
Hits per Hour	2	100
Hits per Day	63	166
Files per Day	36	127
Pages per Day	35	84
Sites per Day	20	62
Visits per Day	24	50
kB Files per Day	1624	11597
Hits by Response Code		
Code 200 - OK	56.42%	936
Code 304 - Not Modified	4.46%	74
Code 403 - Forbidden	7.90%	131
Code 404 - Not Found	30.56%	507
Code 412 - Precondition Failed	0.54%	9
Code 500 - Internal Server Error	0.12%	2



Daily Statistics for August 2019

Day	Hits		Files		Pages		Visits		Sites		kB F	
1	75	4.52%	49	5.24%	35	3.81%	25	3.90%	34	6.26%	2497	5.91%
2	95	5.73%	43	4.59%	64	6.97%	50	7.80%	53	9.76%	1564	3.70%
3	79	4.76%	56	5.98%	49	5.34%	39	6.08%	45	8.29%	2156	5.11%
4	78	4.70%	22	2.35%	26	2.83%	22	3.43%	62	11.42%	283	0.67%
5	46	2.77%	22	2.35%	29	3.16%	19	2.96%	26	4.79%	686	1.63%
6	84	5.06%	31	3.31%	49	5.34%	40	6.24%	44	8.10%	815	1.93%
7	54	3.25%	30	3.21%	31	3.38%	26	4.06%	31	5.71%	2277	5.39%
8	71	4.28%	35	3.74%	39	4.25%	32	4.99%	44	8.10%	538	1.27%
9	76	4.58%	42	4.49%	47	5.12%	40	6.24%	44	8.10%	1569	3.72%
10	45	2.71%	13	1.39%	24	2.61%	22	3.43%	35	6.45%	185	0.44%
11	166	10.01%	127	13.57%	84	9.15%	22	3.43%	29	5.34%	11597	27.47%
12	60	3.62%	25	2.67%	26	2.83%	23	3.59%	37	6.81%	648	1.53%
13	40	2.41%	24	2.56%	25	2.72%	21	3.28%	29	5.34%	545	1.29%
14	71	4.28%	45	4.81%	45	4.90%	24	3.74%	33	6.08%	1177	2.79%
15	45	2.71%	35	3.74%	21	2.29%	15	2.34%	24	4.42%	1423	3.37%
16	112	6.75%	100	10.68%	49	5.34%	24	3.74%	33	6.08%	7953	18.84%
17	36	2.17%	17	1.82%	25	2.72%	21	3.28%	29	5.34%	160	0.38%
18	83	5.00%	32	3.42%	51	5.56%	29	4.52%	45	8.29%	789	1.87%
19	38	2.29%	16	1.71%	25	2.72%	17	2.65%	23	4.24%	496	1.17%
20	79	4.76%	48	5.13%	48	5.23%	20	3.12%	34	6.26%	1134	2.69%
21	40	2.41%	26	2.78%	22	2.40%	17	2.65%	20	3.68%	854	2.02%
22	68	4.10%	34	3.63%	36	3.92%	32	4.99%	43	7.92%	1163	2.75%
23	47	2.83%	25	2.67%	26	2.83%	24	3.74%	35	6.45%	550	1.30%
24	23	1.39%	16	1.71%	14	1.53%	13	2.03%	22	4.05%	583	1.38%
25	45	2.71%	21	2.24%	26	2.83%	22	3.43%	32	5.89%	564	1.34%
26	3	0.18%	2	0.21%	2	0.22%	2	0.31%	3	0.55%	13	0.03%



Hourly Statistics for August 2019

Hour	Hits			Files			Pages			kB F		
	Avg	Total		Avg	Total		Avg	Total		Avg	Total	
0	3	78	4.70%	1	49	5.24%	1	39	4.25%	87	2250	5.33%
1	2	52	3.13%	1	26	2.78%	1	29	3.16%	33	870	2.06%
2	7	190	11.45%	4	117	12.50%	4	128	13.94%	361	9388	22.24%
3	2	55	3.32%	1	34	3.63%	1	38	4.14%	20	511	1.21%
4	2	55	3.32%	1	34	3.63%	1	34	3.70%	27	712	1.69%
5	1	33	1.99%	0	19	2.03%	0	20	2.18%	14	371	0.88%
6	1	46	2.77%	1	27	2.88%	1	28	3.05%	30	770	1.82%
7	1	46	2.77%	0	25	2.67%	1	30	3.27%	38	986	2.33%
8	1	44	2.65%	0	24	2.56%	0	24	2.61%	33	860	2.04%
9	2	65	3.92%	0	22	2.35%	1	34	3.70%	9	247	0.58%
10	2	56	3.38%	1	31	3.31%	1	28	3.05%	39	1009	2.39%
11	2	54	3.25%	0	23	2.46%	1	29	3.16%	21	549	1.30%
12	6	166	10.01%	5	135	14.42%	2	70	7.63%	378	9826	23.27%
13	1	45	2.71%	0	21	2.24%	1	27	2.94%	14	360	0.85%
14	3	84	5.06%	1	33	3.53%	1	31	3.38%	87	2266	5.37%
15	3	98	5.91%	2	70	7.48%	2	67	7.30%	59	1521	3.60%
16	3	94	5.67%	2	62	6.62%	1	44	4.79%	104	2703	6.40%
17	2	74	4.46%	1	26	2.78%	1	43	4.68%	26	675	1.60%
18	2	53	3.19%	1	30	3.21%	1	27	2.94%	44	1155	2.74%
19	1	35	2.11%	0	15	1.60%	0	21	2.29%	14	367	0.87%
20	1	30	1.81%	0	17	1.82%	0	21	2.29%	61	1589	3.76%
21	1	47	2.83%	0	24	2.56%	1	27	2.94%	21	546	1.29%
22	2	76	4.58%	1	43	4.59%	1	32	3.49%	61	1585	3.75%
23	3	83	5.00%	1	29	3.10%	1	47	5.12%	42	1105	2.62%

Top 20 of 48 Total URLs

#	Hits		kB F		URL
1	340	20.49%	2557	6.06%	/
2	43	2.59%	644	1.53%	/enrollment.html
3	42	2.53%	255	0.60%	/contact.html
4	38	2.29%	4300	10.18%	/maximenu2_files/maximenu2.js
5	35	2.11%	191	0.45%	/board.html
6	34	2.05%	777	1.84%	/maximenu2_files/maximenu1501604715.css
7	34	2.05%	191	0.45%	/mission.html
8	34	2.05%	446	1.06%	/survey.html
9	33	1.99%	182	0.43%	/minutes.html

10	32	1.93%	263	0.62%	/stem.html
11	29	1.75%	201	0.48%	/education_plan.html
12	28	1.69%	299	0.71%	/faq.html
13	26	1.57%	366	0.87%	/employment.html
14	22	1.33%	158	0.37%	/images/CSA.gif
15	20	1.21%	3682	8.72%	/images/CSA_01.gif
16	18	1.08%	233	0.55%	/favicon.ico
17	12	0.72%	490	1.16%	/PDF/Guidance_Counselor_Job_Description.pdf
18	12	0.72%	2015	4.77%	/images/map.gif
19	11	0.66%	1974	4.68%	/PDF/2019_Clara_Science_Academy_Enrollment.pdf
20	11	0.66%	1464	3.47%	/PDF/Clara_Science_Academy_Spanish.pdf

View All URLs

Top 10 of 48 Total URLs By kB F

#	Hits		kB F		URL
1	10	0.60%	10398	24.63%	/PDF/School_Nurse_Job_Description.pdf
2	38	2.29%	4300	10.18%	/maximenu2_files/maximenu2.js
3	20	1.21%	3682	8.72%	/images/CSA_01.gif
4	340	20.49%	2557	6.06%	/
5	12	0.72%	2015	4.77%	/images/map.gif
6	11	0.66%	1974	4.68%	/PDF/2019_Clara_Science_Academy_Enrollment.pdf
7	11	0.66%	1464	3.47%	/PDF/Clara_Science_Academy_Spanish.pdf
8	6	0.36%	1203	2.85%	/images/Coming_Soon.gif
9	6	0.36%	1104	2.62%	/images/girls.gif
10	11	0.66%	1101	2.61%	/PDF/Elementary_Principal_Job_Description.pdf

Top 13 of 13 Total Entry Pages

#	Hits		Visits		URL
1	340	20.49%	392	64.69%	/
2	43	2.59%	29	4.79%	/enrollment.html
3	34	2.05%	24	3.96%	/survey.html
4	34	2.05%	23	3.80%	/mission.html
5	35	2.11%	21	3.47%	/board.html
6	33	1.99%	20	3.30%	/minutes.html
7	28	1.69%	19	3.14%	/faq.html
8	32	1.93%	19	3.14%	/stem.html
9	42	2.53%	18	2.97%	/contact.html
10	29	1.75%	18	2.97%	/education_plan.html
11	26	1.57%	16	2.64%	/employment.html
12	6	0.36%	6	0.99%	/application.html
13	1	0.06%	1	0.17%	/google5ba7db74ba9154ac.html

Top 13 of 13 Total Exit Pages

#	Hits		Visits		URL
1	340	20.49%	371	61.94%	/
2	42	2.53%	28	4.67%	/contact.html
3	43	2.59%	28	4.67%	/enrollment.html
4	34	2.05%	24	4.01%	/survey.html
5	34	2.05%	23	3.84%	/mission.html
6	35	2.11%	21	3.51%	/board.html
7	32	1.93%	21	3.51%	/stem.html

8	29	1.75%	20	3.34%	/education_plan.html
9	28	1.69%	20	3.34%	/faq.html
10	33	1.99%	19	3.17%	/minutes.html
11	26	1.57%	17	2.84%	/employment.html
12	6	0.36%	6	1.00%	/application.html
13	1	0.06%	1	0.17%	/google5ba7db74ba9154ac.html

Top 20 of 543 Total Sites

#	Hits		Files		kB F		Visits		Hostname
1	96	5.79%	88	9.40%	8808	20.86%	1	0.16%	39.64.76.34.bc.googleusercontent.com
2	39	2.35%	19	2.03%	412	0.98%	11	1.72%	37-9-87-185.spider.yandex.com
3	35	2.11%	35	3.74%	2046	4.85%	4	0.62%	cpe-174-108-26-188.carolina.res.rr.com
4	34	2.05%	34	3.63%	5989	14.19%	0	0.00%	bzq-82-80-230-228.cablep.bezeqint.net
5	31	1.87%	12	1.28%	145	0.34%	18	2.81%	60.191.38.77
6	26	1.57%	26	2.78%	269	0.64%	2	0.31%	211.56.145.140
7	26	1.57%	26	2.78%	1944	4.60%	1	0.16%	libraryvpn.mecknc.gov
8	24	1.45%	24	2.56%	1728	4.09%	1	0.16%	cpe-172-73-43-37.carolina.res.rr.com
9	22	1.33%	0	0.00%	11	0.03%	1	0.16%	185.234.217.41
10	22	1.33%	22	2.35%	1087	2.58%	1	0.16%	bzq-82-80-249-192.dcenter.bezeqint.net
11	18	1.08%	1	0.11%	16	0.04%	1	0.16%	91.227.154.104.bc.googleusercontent.com
12	16	0.96%	0	0.00%	11	0.03%	2	0.31%	static.149.105.203.116.clients.your-server.de
13	15	0.90%	1	0.11%	15	0.04%	1	0.16%	ip-51-79-28.eu
14	15	0.90%	15	1.60%	1035	2.45%	3	0.47%	researchscan26.comsys.rwth-aachen.de
15	15	0.90%	12	1.28%	94	0.22%	1	0.16%	spider-33.lipperhey.com
16	14	0.84%	2	0.21%	21	0.05%	2	0.31%	227.129.225.35.bc.googleusercontent.com
17	13	0.78%	1	0.11%	48	0.11%	1	0.16%	fulltextrobot-77-75-79-95.seznam.cz
18	12	0.72%	12	1.28%	889	2.11%	1	0.16%	cpe-173-92-183-171.carolina.res.rr.com
19	12	0.72%	11	1.18%	217	0.51%	1	0.16%	ec2-52-14-23-112.us-east-2.compute.amazonaws.com
20	12	0.72%	12	1.28%	918	2.18%	1	0.16%	ip66-104-227-162.z227-104-66.customer.algx.net

View All Sites

Top 10 of 543 Total Sites By kB F

#	Hits		Files		kB F		Visits		Hostname
1	96	5.79%	88	9.40%	8808	20.86%	1	0.16%	39.64.76.34.bc.googleusercontent.com
2	34	2.05%	34	3.63%	5989	14.19%	0	0.00%	bzq-82-80-230-228.cablep.bezeqint.net
3	35	2.11%	35	3.74%	2046	4.85%	4	0.62%	cpe-174-108-26-188.carolina.res.rr.com
4	26	1.57%	26	2.78%	1944	4.60%	1	0.16%	libraryvpn.mecknc.gov
5	24	1.45%	24	2.56%	1728	4.09%	1	0.16%	cpe-172-73-43-37.carolina.res.rr.com
6	7	0.42%	2	0.21%	1447	3.43%	2	0.31%	fulltextrobot-77-75-79-36.seznam.cz
7	8	0.48%	1	0.11%	1268	3.00%	2	0.31%	fulltextrobot-77-75-79-109.seznam.cz
8	22	1.33%	22	2.35%	1087	2.58%	1	0.16%	bzq-82-80-249-192.dcenter.bezeqint.net
9	15	0.90%	15	1.60%	1035	2.45%	3	0.47%	researchscan26.comsys.rwth-aachen.de
10	12	0.72%	12	1.28%	918	2.18%	1	0.16%	ip66-104-227-162.z227-104-66.customer.algx.net

Top 7 of 29 Total Referrers

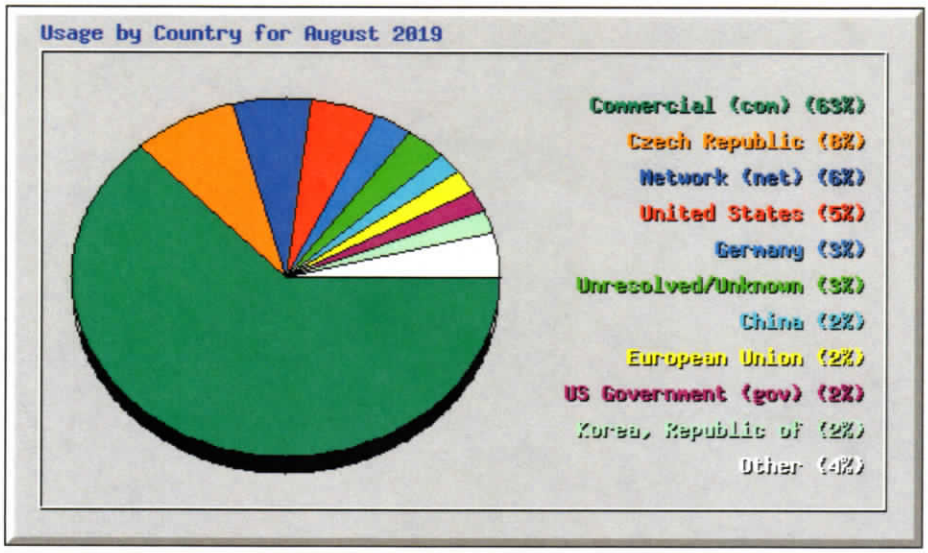
#	Hits		Referrer
1	1452	87.52%	- (Direct Request)
2	4	0.24%	https://www.google.com/
3	2	0.12%	http://www.google.com.hk
4	2	0.12%	https://dissiti.com/the-ghost-story-megapacks-i-ii-3852615-freedownloads
5	2	0.12%	https://www.google.com

6	1	0.06%	554fcae493e564ee0dc75bdf2ebf94caads
7	1	0.06%	https://king.host/

Top 20 of 146 Total User Agents

#	Hits		User Agent
1	145	8.74%	Mozilla/5.0 (compatible; SemrushBot/3~bl; +http://www.semrush.com/bot.html)
2	130	7.84%	Mozilla/5.0 (compatible; SeznamBot/3.2; +http://napoveda.seznam.cz/en/seznambot-intro/)
3	108	6.51%	Mozilla/5.0 (compatible; Nimbostratus-Bot/v1.3.2; http://cloudsystemnetworks.com)
4	95	5.73%	Mozilla/5.0 (Macintosh; Intel Mac OS X 10.11; rv:52.0) Gecko/20100101 Firefox/52.0
5	87	5.24%	Mozilla/5.0 (compatible; bingbot/2.0; +http://www.bing.com/bingbot.htm)
6	78	4.70%	Mozilla/5.0 (compatible; AhrefsBot/6.1; +http://ahrefs.com/robot/)
7	65	3.92%	Mozilla/5.0 (compatible; YandexBot/3.0; +http://yandex.com/bots)
8	50	3.01%	Mozilla/5.0 (Windows NT 10.0; Win64; x64)AppleWebKit/537.36 (KHTML, like Gecko) Chrome/66.0.3359.181 Safari/537.36
9	49	2.95%	Mozilla/5.0 (compatible; Googlebot/2.1; +http://www.google.com/bot.html)
10	39	2.35%	Mozilla/5.0 (compatible; SemrushBot/6~bl; +http://www.semrush.com/bot.html)
11	35	2.11%	Mozilla/5.0 (compatible; Baiduspider/2.0; +http://www.baidu.com/search/spider.html)
12	31	1.87%	Mozilla/5.0 (Macintosh; Intel Mac OS X 10.11; rv:47.0) Gecko/20100101 Firefox/47.0
13	28	1.69%	Mozilla/5.0 (Linux; Android 6.0.1; Nexus 5X Build/MMB29P) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/41.0.2272.96 Mobile S
14	27	1.63%	Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/63.0.3239.132 Safari/537.36
15	26	1.57%	Mozilla/5.0 (Linux; Android 4.4.2; Nexus 4 Build/KOT49H) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/34.0.1847.114 Mobile S
16	26	1.57%	Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36
17	24	1.45%	Mozilla/5.0 (Windows NT 6.1; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/75.0.3770.142 Safari/537.36
18	24	1.45%	Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/76.0.3809.100 Safari/537.36
19	22	1.33%	Go-http-client/1.1
20	22	1.33%	Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/62.0.3202.94 Safari/537.36

View All User Agents



Top 31 of 31 Total Countries

#	Hits		Files		kB F		Country
1	1046	63.05%	614	65.60%	22211	52.61%	Commercial (com)
2	130	7.84%	19	2.03%	4140	9.81%	Czech Republic
3	105	6.33%	94	10.04%	9110	21.58%	Network (net)
4	86	5.18%	62	6.62%	1918	4.54%	United States
5	56	3.38%	38	4.06%	1231	2.91%	Germany
6	44	2.65%	8	0.85%	74	0.18%	Unresolved/Unknown
7	40	2.41%	14	1.50%	163	0.39%	China

8	28	1.69%	5	0.53%	51	0.12%	European Union
9	26	1.57%	26	2.78%	1944	4.60%	US Government (gov)
10	26	1.57%	26	2.78%	269	0.64%	Korea, Republic of
11	10	0.60%	0	0.00%	5	0.01%	Sweden
12	9	0.54%	2	0.21%	18	0.04%	Canada
13	9	0.54%	0	0.00%	4	0.01%	United Kingdom
14	8	0.48%	8	0.85%	50	0.12%	Russian Federation
15	6	0.36%	5	0.53%	344	0.82%	Japan
16	5	0.30%	2	0.21%	13	0.03%	Australia
17	4	0.24%	2	0.21%	15	0.04%	Non-Profit (org)
18	3	0.18%	3	0.32%	602	1.42%	Ireland
19	2	0.12%	1	0.11%	7	0.02%	France
20	2	0.12%	0	0.00%	1	0.00%	Italy
21	2	0.12%	2	0.21%	13	0.03%	Netherlands
22	2	0.12%	0	0.00%	2	0.00%	Thailand
23	2	0.12%	0	0.00%	1	0.00%	Ukraine
24	1	0.06%	1	0.11%	7	0.02%	Bulgaria
25	1	0.06%	1	0.11%	7	0.02%	Brazil
26	1	0.06%	1	0.11%	7	0.02%	Switzerland
27	1	0.06%	1	0.11%	4	0.01%	Greece
28	1	0.06%	1	0.11%	7	0.02%	Latvia
29	1	0.06%	0	0.00%	1	0.00%	Turkey
30	1	0.06%	0	0.00%	0	0.00%	Tanzania
31	1	0.06%	0	0.00%	0	0.00%	Vietnam

Appendix __B_: [Curriculum Outline for Each Grade Band the School Will Ultimately Serve]

[Clara Science Academy]

Scope and sequence

Amplify Reading is designed hand-in-hand with experts, drawing from the latest research. In addition to covering foundational skills, vocabulary, and comprehension, the program guides students toward building mental models as they read—a practice known as *microcomprehension*. Each of the program's games maps to specific skills and aligns to the most rigorous reading standards.

G = Game(s) **B** = Interactive book activity **V**= Vocabulary app **T**= TFE

Phonological awareness		
Kindergarten standards	**G:** Rhyming; Blending compound words; Segmenting compound words; Blending syllables; Segmenting syllables; Blending onset-rime; Segmenting onset-rime; Blending phonemes; Beginning/ending sound isolation	RF.K.2 · RF.K.2.A · RF.K.2.B · RF.K.2.C · RF.K.2.D · RF.K.2.E
Grade 1 standards	**G:** Beginning/ending/middle sound isolation; Blending phonemes; Segmenting phonemes; Counting phonemes	RF.1.2 · RF.1.2.B · RF.1.2.C · RF.1.2.D
Phonics & fluency		
Kindergarten standards	**G:** Individual letter sounds; Decoding VC and CVC words; Decoding words with common word families; Decoding words with consonant blends; Sight word reading; Applying skills in text reading	RF.K.3 · RF.K.3.A · RF.K.3.B · RF.K.3.C · RF.K.3.D · RF.K.4
Grade 1 standards	**G:** Individual letter sounds; Letter combinations (diagraphs and vowel teams); Decoding words with common word families; Decoding words with consonant blends; Reading words with complex letter patterns (e.g., letter combinations, VCe); Reading words with inflectional endings; Sight word reading; Applying skills in text reading	RF.1.3 · RF.1.3.A · RF.1.3.B · RF.1.3.C · RF.1.3.E · RF.1.3.F · RF.1.3.G · RF.1.4
Grade 2 standards	**G:** Reading words with complex letter patterns (e.g., advanced letter combinations, various syllable types); Reading multisyllabic words; Sight word reading; Applying skills in text reading	RF.2.3 · RF.2.3.A · RF.2.3.B · RF.2.3.C · RF.2.3.D · RF.2.3.E · RF.2.3.F · RF.2.4
Grade 3 standards	**G:** Multisyllabic decoding **G, B:** Reading fluency	RF.3.3A · RF.3.3B · RF.3.3C · RF.3.4
Grade 4 standards	**G, B:** Reading fluency	RF.4.4
Grade 5 standards	**G, B:** Reading fluency	RF.5.4
Microcomprehension		
Kindergarten standards	**G, B:** Inference	RL.K.1
Grade 1 standards	**G, B:** Inference; Syntactic awareness **G:** Cognitive flexibility	RL.1.1 · RI.1.3 · L.1.1
Grade 2 standards	**G, B:** Inference; Syntactic awareness **G:** Cause/effect; Comprehension monitoring; Text structure	RL.2.10 · RI.2.3 · RI.2.5 · L.2.1 · L.2.3
Grade 3 standards	**G:** Building a mental model, Text schema, Comprehension monitoring, Syntactic awareness **B:** Figurative language **B, G:** Text structure	RL.3.1; · RI.3.3; · RL.3.4 · RL.3.5 · RI.3.5 · RL.3.10 · L.3.1 · L.3.3
Grade 4 standards	**G:** Building a mental model, Text schema, Comprehension monitoring, Syntactic awareness **B:** Text structure **B, G:** Figurative language **T:** Causal reasoning, Tone	RL.4.1 · RL.4.4 · RL.4.5 · RI.4.5 · RI.4.8 · RL.4.10 · L.4.1
Grade 5 standards	**G:** Building a mental model, Figurative language, Text schema **B:** Text structure **B, G:** Figurative language **T:** Figurative language	RL.5.1 · RL.5.4 · RL.5.5 · RI.5.5

Comprehension		
Kindergarten standards	**G, B:** Story elements: character, setting, problem, solution **G:** Main idea **B:** Retell and sequence; Genre characteristics	RL.K.1 · RL.K.2 · RL.K.3 · RL.K.4 · RL.K.5 · RL.K.10 · RI.K.1 · RI.K.2 · RI.K.4 · RI.K.10
Grade 1 standards	**G, B:** Story elements: character, setting, problem, solution **G:** Main idea; Character traits **B:** Retell and sequence; Character point of view; Genre characteristics	RL.1.1 · RL.1.2 · RL.1.3 · RL.1.4 · RL.1.5 · RL.1.6 · RL.1.10 · RI.1.2 · RI.1.3 · RI.1.4 · RI.1.8 · RI.1.9 · RI.1.10
Grade 2 standards	**G, B:** Story elements: character, setting, problem, solution; Character traits **G:** Main idea; Supporting inference with evidence; Comparing texts; Text schema; Evaluate evidence with statements **B:** Retell and sequence; Character point of view; Genre characteristics; Diagrams in text; Author's purpose	RL.2.1 · RL.2.2 · RL.2.3 · RL.2.4 · RL.2.5 · RL.2.6 · RL.2.9 · RL.2.10 · RI.2.1 · RI.2.2 · RI.2.3 · RI.2.4 · RI.2.5 · RI.2.6 · RI.2.7 · RI.2.8 · RI.2.9 · RI.2.10
Grade 3 standards	**G:** Supporting inference with evidence, Character traits, Connecting claims to evidence, Comparing texts **B:** Inference, Theme, Character motivation, Character change, Nonfiction connections, Point of view **B, G:** Main idea, Plot structure	RL.3.1 · RI.3.1 · RL.3.2 · RI.3.2 · RL.3.3 · RI.3.3 · RL.3.5 · RL.3.6 · RI.3.8; · RL.3.9 · RI.3.9
Grade 4 standards	**G:** Supporting inference with evidence, Character traits, Poetry, Comparing texts **B:** Inference, Theme, Character change, Nonfiction connections, Point of view **B, G:** Main idea, Character motivation, Genre/plot structure **T:** Setting and Mood; Text Structure: Description and Sequence; Characterization; Text Structure: Compare/Contrast and Problem/Solution; Point of View, Intro to Claim, Evidence, Reason	RL.4.1 · RI.4.1 · RL.4.2 · RI.4.2 · RL.4.3 · RI.4.3 · RL.4.4 · RL.4.5 · RL.4.6; · RI.4.9 · RI.5.8
Grade 5 standards	**G:** Supporting inference with evidence, Character traits, Poetry, Comparing texts **B:** Inference, Theme, Character motivation, Character change, Nonfiction connections, Point of view **B, G:** Main idea, Genre/plot structure **T:** Text Structure: Cause and Effect; Character Conflict; Intro to Ethos/Pathos/Logos; Conflict Resolution and Character Change; Symbolism and Theme; Counterclaims/Rebuttals; Text Structure: Argument	RL.5.1 · RI.5.1 · RL.5.2 · RI.5.2 · RL.5.3 · RI.5.3; · RL.5.4 · RL.5.5 · RI.5.5 · RL.5.6 · RI.5.8 · RI.5.9
Vocabulary		
Kindergarten standards	**G:** Word categories **B:** Words in context	RL.K.4 · RI.K.4 · L.K.5.A
Grade 1 standards	**G:** Synonyms; Antonyms; Affixes; Word categories; Shades of meaning **B:** Words in context	RF.K.4 · RI.K.4 · L.1.4.B · L.1.5 · L.1.5.A · L.1.5.B · L.1.5.C. · L.1.5.D
Grade 2 standards	**G:** Synonyms; Antonyms; Affixes; Word categories; Shades of meaning; Multiple meanings **B:** Words in context; Descriptive words and phrases	RL.2.4 · RI.2.4 · L.2.4 · L.2.4.A · L.2.4.B · L.2.5 · L.2.5.A · L.2.5.B
Grade 3 standards	**G:** Multiple meanings, Idioms **B,V:** Words in context **B,G:** Affixes and roots **V:** Synonyms & Antonyms	RL.3.4 · L.3.4 · L.3.4.A · L.3.4.B · L.3.5 · L.3.6
Grade 4 standards	**G:** Idioms **B, V:** Words in context **B, G:** Affixes and roots **V:** Synonyms & Antonyms	RL.4.4 · L.4.4 · L.4.4.A · L.4.4.B · L.4.5.B · L.4.5.C · L.4.6
Grade 5 standards	**G:** Idioms **B, V:** Words in context **B, G:** Affixes and roots **V:** Synonyms & Antonyms	RL.5.4 · L.5.4 · L.5.4.A · L.5.4.B · L.5.5.B · L.5.5.C · L.5.6

Scope and Sequence

Amplify CKLA Skills teaches students the decoding skills needed for independent reading. Each lesson begins with a warm-up, reviewing previously taught content in phonics, reading, grammar, writing, and spelling. All reading times—denoted below as demonstration stories or whole group, small group, or partner reading—consist of a story preview, presentation, and discussion.

Unit 1 | 10–13 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
1	Awareness of Noises Left/Right Discrimination	Use Common Prepositions		Prewriting Skills: Drawing on a Vertical Surface
2	Awareness of Noises Left/Right Discrimination	Use Common Prepositions		Prewriting Skills: Vertical Line*
3	Awareness of Noises Left/Right Discrimination*	Use Common Prepositions		Prewriting Skills: Vertical Line
4	Awareness of Noises Left/Right Discrimination Blending Pretest	Use Common Prepositions		Prewriting Skills: Horizontal Line*
5	Awareness of Noises and Words* Left/Right Discrimination	Use Common Prepositions		Prewriting Skills: Circle*
6	Awareness of Noises, Words, and Phrases*	Use Common Prepositions		Writing Strokes Pretest Prewriting Skills: Circle
7	Awareness of Noises and Words Tracking Practice	Use Common Prepositions		Prewriting Skills: Diagonal Line*
8	Awareness of Words	Use Common Prepositions		Prewriting Skills: Square; Vertical and Horizontal Lines—Review
9	Awareness of Words*	Use Common Prepositions		Prewriting Skills: Triangle; Circle and Diagonal Line—Review
10	Awareness of Words and Phrases Tracking Assessment*	Use Common Prepositions		Prewriting Skills Assessment
Pausing Point	Review: Awareness of Noises, Words, and Phrases Review: Directionality and Tracking			Review: Prewriting Skills

* Additional practice offered with Take-Home Material. Occasionally, Take-Home Material consists of a review of prior content not practiced during the lesson it is correlated with. In such cases, the marker (*) appears on a blank line.

Unit 2 | 10–13 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
1	Tracking Practice			Prewriting Skills: Cup*
2	Blending Syllables and Sounds	Use Common Prepositions		Prewriting Skills: Hump*

* Additional practice offered with Take-Home Material. Occasionally, Take-Home Material consists of a review of prior content not practiced during the lesson it is correlated with. In such cases, the marker (*) appears on a blank line.

Continued...

Unit 2, Cont. | 10–13 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
3	Blending Sounds into Words Differentiating Shapes	Use Common Prepositions		Prewriting Skills: Zigzag * *
4	Blending Sounds into Words Beginning/End Recognition	Use Common Prepositions		Prewriting Skills: Wavy Line* *
5	Blending Sounds into Words	Use Common Prepositions		Prewriting Skills: Spiral Handwriting: Own Name* *
6	Blending Sounds into Words	Use Common Prepositions		Prewriting Skills: X, +* Handwriting: Own Name
7	Blending Sounds into Words	Use Common Prepositions		Prewriting Skills: Loop Handwriting: Own Name* *
8	Blending Sounds into Words	Use Common Prepositions		Prewriting Skills: Cane* Handwriting: Own Name
9	Blending Sounds into Words	Use Common Prepositions		Prewriting Skills: Hook* Handwriting: Own Name
10	Blending Sounds into Words Sound Blending Assessment *	Use Common Prepositions		Handwriting: Own Name Prewriting Skills Assessment
Pausing Point	Review: Syllable and Sound Blending, Blending Sounds into Words Review: Tracking			Review: Prewriting Skills Review: Handwriting—Own Name

* Additional practice offered with Take-Home Material. Occasionally, Take-Home Material consists of a review of prior content not practiced during the lesson it is correlated with. In such cases, the marker (*) appears on a blank line.

Unit 3 | 14–17 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
1	Sound /m/ Spelled 'm'	Use Common Prepositions		Handwriting 'm': Letter
2	Sound /m/ Spelled 'm'	Use Common Prepositions		Handwriting 'a': Letter
3	Sound /t/ Spelled 't' Chaining: One-Syllable Short Vowel Sounds	Use Common Prepositions		Handwriting 't': Letter
4	Sound /d/ Spelled 'd' Chaining: One-Syllable Short Vowel Sounds *	Use Common Prepositions		Handwriting 'd': Letter
5	Review: Oral Blending and Sound Spelling Chaining: One-Syllable Short Vowel Sounds†		Chaining: One-Syllable Short Vowel Sounds†	Review: Handwriting 'm', 'a', 't', 'd'—Letter
6	Sound /o/ Spelled 'o' Chaining: One-Syllable Short Vowel Sounds *	Use Common Prepositions		Handwriting 'o': Letter Handwriting 'm', 'a', 't', 'd': Words*

* Additional practice offered with Take-Home Material. Occasionally, Take-Home Material consists of a review of prior content not practiced during the lesson it is correlated with. In such cases, the marker (*) appears on a blank line.

Continued...

† Chaining appears in both columns as both Chaining for Reading and Chaining for Spelling are practiced in this lesson.

Unit 3, Cont. | 14–17 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
7	Sound /k/ Spelled 'c' Chaining: One-Syllable Short Vowel Sounds *	Use Common Prepositions		Handwriting 'c': Letter
8	Sound /g/ Spelled 'g' Chaining: One-Syllable Short Vowel Sounds	Use Common Prepositions		Handwriting 'g': Letter
9	Sound /i/ Spelled 'i' Chaining: One-Syllable Short Vowel Sounds*	Use Common Prepositions		Handwriting 'i': Letter and Word*
10	Review: Oral Blending and Sound Spelling Chaining: One-Syllable Short Vowel Sounds[1] *	Use Common Prepositions	Chaining: One-Syllable Short Vowel Sounds[1]	Review: Handwriting 'm', 'a', 't', 'd', 'o', 'c', 'g', 'i'—Letters and Words*
11	Chaining: One-Syllable Short Vowel Sounds[1] Reading Assessment *	Use Common Prepositions	Chaining: One-Syllable Short Vowel Sounds[1]	Word Writing: One- Syllable Short Vowel CVC Words (with Cues)
12	Chaining: One-Syllable Short Vowel Sounds[1] Reading Assessment	Use Common Prepositions	Chaining: One-Syllable Short Vowel Sounds[1]	Word Writing: One- Syllable Short Vowel CVC Words (with Cues)
13	Tricky Words: *one* and *two (Picture Reader)* Reading Assessment *	Use Common Prepositions	Circle Spelling: One-Syllable Short Vowel VC and CVC Words	Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
14	Tricky Word: *three* (Picture Reader) Reading Assessment *	Use Common Prepositions	Stomp and Spell: One-Syllable Short Vowel CVC Words	Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
Pausing Point	Review: Oral Blending and Sound Spelling		Chaining: One-Syllable Short Vowel Sounds	Review: Handwriting—Letters and Words Word Writing: One-Syllable Short Vowel CVC Words (with Cues)

* Additional practice offered with Take-Home Material. Occasionally, Take-Home Material consists of a review of prior content not practiced during the lesson it is correlated with. In such cases, the marker (*) appears on a blank line.

[1] Chaining appears in both columns as both Chaining for Reading and Chaining for Spelling are practiced in this lesson.

Unit 4 | 15–18 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
1	Sound /n/ Spelled 'n' Chaining: One-Syllable Short Vowel Words	Use Common Prepositions		Handwriting 'n': Letter and Words
2	Sound /h/ Spelled 'h'* Chaining: One-Syllable Short Vowel Words	Use Common Prepositions		Handwriting 'h': Letter and Words
3	Sound /s/ Spelled 's' Chaining: One-Syllable Short Vowel Words	Use Common Prepositions		Handwriting 's': Letter and Words

* Additional practice offered with Take-Home Material. Occasionally, Take-Home Material consists of a review of prior content not practiced during the lesson it is correlated with. In such cases, the marker (*) appears on a blank line.

Continued...

Unit 4, Cont. | 15–18 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
5	Practice Reading Words		Chaining: One-Syllable Short Vowel Words	
4	Sound /f/ Spelled 'f' Chaining: One-Syllable Short Vowel Words	Use Common Prepositions		Handwriting 'f': Letter and Words*
5	Practice Reading Words		Chaining: One-Syllable Short Vowel Words	
6	Sound /v/ Spelled 'v'* Chaining: One-Syllable Short Vowel Words	Use Common Prepositions		Handwriting 'v': Letter and Words*
7	Sound /z/ Spelled 'z'* Chaining: One-Syllable Short Vowel Words	Use Common Prepositions	Dictation: Sounds	Handwriting 'z', 'a', 'o', 'm', 't', 's', 'c': Letters
8	Sound /p/ Spelled 'p'* Chaining: One-Syllable Short Vowel Words	Use Common Prepositions		Handwriting 'p': Letter and Words
9	Sound /e/ Spelled 'e' Chaining: One-Syllable Short Vowel Words	Use Common Prepositions		Handwriting 'e': Letter and Words
10		Introduction to Phrases	Chaining: One-Syllable Short Vowel Words Dictation: Sounds*	
11	Practice Reading Phrases Reading Assessment *		Chaining: One-Syllable Short Vowel Words Dictation: Sounds	Review: Handwriting 'm', 'n', 'h', 's', 'f', 'v', 'z', 'p', 'e'—Letters
12	Demonstration Story Practice Reading Words Reading Assessment		Stomp and Spell	Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
13	Demonstration Story Practice Reading Words* Reading Assessment		Dictation: Sounds	Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
14	Tricky Word: *the (Picture Reader)* Practice Reading Words Reading Assessment		Dictation: Sounds	Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
15	Tricky Word: *a (Picture Reader)* Phrases and Wiggle Cards Practice Reading Words* Reading Assessment		Spelling Hopscotch	Word Writing: One-Syllable Short Vowel CVC Words (with Cues)*
Pausing Point	Review: Segmenting and Sound Spelling Practice Reading Words and Phrases Demonstration Story		Dictation: Sounds and One-Syllable Short Vowel CVC Words	Review: Handwriting—Letters and Words Word Writing: One-Syllable Short Vowel CVC Words (with Cues)

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Unit 5 | 16–19 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Spelling
1	Sound /b/ Spelled 'b'* Sound /d/ Spelled 'd'*		Chaining: One-Syllable Short Vowel Words	Handwriting 'b': Letter and Words Word Writing: One-Syllable Short Vowel CVC Words (with Cues)*
2	Sound /l/ Spelled 'l'*			Handwriting 'l': Letter and Words Word Writing: One-Syllable Short Vowel CVC Words (with Cues)*
3	Sound /r/ Spelled 'r'			Handwriting 'r': Letter and Words Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
4	Sound /u/ Spelled 'u'* Reading: Wiggle Cards			Handwriting 'u': Letter and Words* Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
5	Tricky Word: *blue* *(Picture Reader)*		Chaining: One-Syllable Short Vowel Words	Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
6	Sound /w/ Spelled 'w'		Chaining: One-Syllable Short Vowel Words	Handwriting 'w': Letter and Words Word Writing: One-Syllable Short Vowel CVC Words (with Cues)*
7	Sound /j/ Spelled 'j'			Handwriting 'j': Letter and Words Word Writing: One-Syllable Short Vowel CVC Words (with Cues)*
8	Sound /y/ Spelled 'y'* Tricky Word: *yellow* *(Picture Reader)*			Handwriting 'y': Letter and Words Word Writing: One-Syllable Short Vowel CVC Words (with Cues)*
9	Sound /x/ Spelled 'x' *		Chaining: One-Syllable Short Vowel Words	Handwriting 'x': Letter and Words Phrase Writing: One-Syllable Short Vowel CVC Words (with Cues)
10	Spelling Alternative for /k/ Spelled 'k' Practice Reading Words		Chaining: One-Syllable Short Vowel Words	Handwriting 'k': Letter and Words Phrase Writing: One-Syllable Short Vowel VC and CVC Words (with Cues) Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
11	Tricky Word: *look* *(Picture Reader)**	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation	Dictation: Sounds Practice Spelling Words: Stomp and Spell	Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
12	Reading Assessment *		Chaining: One-Syllable Short Vowel Words	Review: Handwriting 'b', 'l', 'r', 'u', 'w', 'k', 'y', 'x', 'j'—Letters
13	Demonstration Story Practice Reading Words Reading Assessment	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation	Chaining: One-Syllable Short Vowel Words	Word Writing: One-Syllable Short Vowel CVC Words (with Cues)
14	Demonstration Story Practice Reading Phrases Reading Assessment	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Word Writing: One-Syllable Short Vowel CVC Words (with Cues)*
15	Demonstration Story Reading Assessment	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Word Writing: One-Syllable Short Vowel CVC Words (with Cues)

* Additional practice offered with Take-Home Material. Occasionally, Take-Home Material consists of a review of prior content not practiced during the lesson it is correlated with. In such cases, the marker (*) appears on a blank line.

Continued...

Unit 5, Cont. | 16–19 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
16	Demonstration Story Practice Reading Phrases* Reading Assessment	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation	Dictation: Sounds Practice Spelling Words: Spelling Hopscotch	
Pausing Point	Review: Sound Spelling		Chaining: One-Syllable Short Vowel Words Review: Dictation—Sounds	Word Writing: One-Syllable Short Vowel CVC Words (with Cues) Review: Handwriting—Letters and Words

* Additional practice offered with Take-Home Material. Occasionally, Take-Home Material consists of a review of prior content not practiced during the lesson it is correlated with. In such cases, the marker (*) appears on a blank line.

Unit 6 | 15–18 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
1	Alphabet/Letter Names (lowercase) Tricky Word: *I (Picture Reader)* Demonstration Story *	Use Question Words Capitalize the First Word in a Sentence/Pronoun I	Chaining: One-Syllable Short Vowel Words with Consonant Clusters	
2	Alphabet/Letter Names Demonstration Story	Use Question Words Use Common Prepositions	Chaining Dictation: One-Syllable Short Vowel Words with Consonant Clusters	Word Writing: One-Syllable Short Vowel Words with Consonant Blends, Clusters, and/or Digraphs (with Cues)
3	Alphabet/Letter Names* Sound /z/ spelled 's' Demonstration Story*	Form Plural Nouns by adding /s/ or /es/ Use Question Words Use Common Prepositions	Chaining: One-Syllable Short Vowel Words with Consonant Clusters	Word Writing: One-Syllable Short Vowel VC and CVC Words (with Cues)
4	Sounds /s/ and /z/ Partner Reading	Form Plural Nouns by adding /s/ or /es/ Use Question Words		Word Writing: One-Syllable Short Vowel Words in which 's' > /s/ or /z/ (with Cues)*
5	Alphabet/Letter Names Demonstration Story Small Group Reading *	Use Question Words Use Common Prepositions		
6	Tricky Word: *are (Picture Reader)* *	/s/ and /z/ in Plural Nouns and Verbs	Chaining: One-Syllable Short Vowel CVC Words	
7	Reading: Wiggle Cards Small Group Reading* *	Use Question Words	Chaining: One-Syllable Short Vowel CVC, CCVC, and CVCC Words	
8	Demonstration Story Small Group Reading *	Use Question Words	Dictation: One-Syllable Short Vowel Words with Consonant Clusters	
9	Rhyming Words Small Group and Partner Reading* *		Chaining: One-Syllable Short Vowel CVC, CCVC, and CVCC Words	
10	Demonstration Story Small Group Reading* *	Use Question Words	Dictation: One-Syllable, Short-Vowel CVC, CCVC, and CVCC Words	

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Continued...

Unit 6, Cont. | 15–18 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
11	Review: Rhyming Words Tricky Word: *little (Picture Reader)*		Chaining: One-Syllable Short Vowel Words with Consonant Clusters	
12	Demonstration Story Small Group and Partner Reading*	Use Question Words	Tap and Spell: One-Syllable, Short-Vowel CVC, CCVC, and CVCC Words	
13	Review: Rhyming Words* Small Group and Partner Reading *	Use Question Words	Chaining: One-Syllable Short Vowel Words with Consonant Clusters	
14	Demonstration Story Small Group Reading Review: Letter Names and Rhyming Words *	Use Question Words Use Common Prepositions		
15	Review: Letter Names		Chaining: One-Syllable, Short-Vowel Words with Consonant Clusters	Word Writing: One-Syllable Short Vowel Words (with Cues)
16	Demonstration Story Small Group and Partner Reading	Use Question Words	Dictation: One-Syllable, Short-Vowel CVC, CCVC, and CVCC Words	
17	Assessment: Letter Names Assessment: Rhyming Words Assessment: Consonant Clusters Small Group and Partner Reading			Word Writing: One-Syllable Short Vowel Words (with Cues)
Pausing Point	Review: Sound Spelling, Letter Names, Rhyming Words* Demonstration Stories Partner Reading*		Chaining: One-Syllable Short Vowel Words with Digraphs Dictation: Words and Phrases	Word Writing: One-Syllable Short Vowel CVCC, CVCCC, and CCVCC Words (with Cues) Review: Handwriting—Letters and Words

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Unit 7 | (17–20 days)

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
1	Sound /ch/ Spelled 'ch'			Handwriting 'ch': Letters and Words Word Writing: One-Syllable Short Vowel CCVCC and CVCCC Words (with Cues)
2	Sound /sh/ Spelled 'sh'*		Chaining: One-Syllable Short Vowel Words with Digraphs	Handwriting 'sh': Letters and Words
3	Review: Sounds /ch/ Spelled 'ch' and /sh/ Spelled 'sh'* Tricky Word: *down (Picture Reader)* Reading: Wiggle Cards	Use Common Prepositions		

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Continued...

Unit 7, Cont. | (17–20 days)

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
4	Sound /th/ Spelled 'th'		Chaining: One-Syllable Short Vowel Words with Digraphs	Handwriting 'th': Letters and Words
5	Sound /th/ Spelled 'th'*			Handwriting 'th': Letters and Words
6	Review: Sounds /ch/ Spelled 'ch', /sh/ Spelled 'sh', /th/ Spelled 'th', and /th/ Spelled 'th'		Chaining: One-Syllable Short Vowel Words with Digraphs	Handwriting: One-Syllable Short Vowel Words Word Writing: One-Syllable Short Vowel Words with Digraphs (with Cues)
7	Sound /qu/ Spelled 'qu' *		Chaining: One-Syllable Short Vowel Words with Digraphs	Handwriting 'qu': Letters and Words
8	Sound /ng/ Spelled 'ng'			Handwriting 'ng': Letters and Words Word Writing: One-Syllable Short-Vowel Words with Digraphs (with Cues)
9	Tricky Word: out *(Picture Reader)* Practice: Segmenting into Phonemes Demonstration Story *	Use Question Words Use Common Prepositions		
10	Demonstration Story Partner Reading	Use Question Words	Dictation Identification: One-Syllable Short Vowel CCVC, CVCC, and CCVCC Words	Handwriting: One-Syllable Short Vowel CCVC, CVCC, and CCVCC Words
11	Tricky Word: of *(Picture Reader)* Reading Assessment Demonstration Story Small Group and Partner Reading* *	Use Question Words Use Common Prepositions		
12	Chaining: One-Syllable Short Vowel Words with Digraphs Reading Assessment Small Group and Partner Reading*	Use Question Words Use Common Prepositions		Word Writing: One-Syllable, Short-Vowel Words with Consonant Clusters and Digraphs (with Cues)
13	Demonstration Story Partner Reading	Use Question Words	Chaining: One-Syllable Short Vowel Words with Digraphs	
14	Reading Assessment Demonstration Story Small Group and Partner Reading*	Use Question Words		Word Writing: One-Syllable, Short-Vowel Words with Digraphs (with Cues)
15	Reading Assessment Small Group and Partner Reading* *		Practice: Tap and Spell	Word Writing: One-Syllable, Short-Vowel Words with Consonant Clusters and Digraphs (with Cues)

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Continued...

Unit 7, Cont. | (17–20 days)

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
16	Reading: Wiggle Cards Practice Reading Words Reading Assessment Demonstration Story Small Group and Partner Reading	Use Question Words		Word Writing: One-Syllable, Short-Vowel Words with Consonant Clusters and Digraphs (with Cues)
17	Review Tricky Words: *down, out, of* Practice Reading Phrases Reading Assessment Small Group and Partner Reading* *			
Pausing Point	Review: Sounds Spelling Practice Reading Words and Phrases* Demonstration Stories Partner Reading*			Review: Handwriting—Letters and Words Word Writing: One-Syllable, Short-Vowel Words with Consonant Clusters and Digraphs (with Cues)

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Unit 8 | 20–23 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
1	Tricky Word: *funny (Picture Reader)** Demonstration Story	Use Question Words Recognize End Punctuation		Word Writing: Tricky Word *funny** Generative Sentence Writing: Including Tricky Words Handwriting: Words Vocabulary: Pictorial Representations
2	Tricky Words: *all (Picture Reader)* Small Group and Partner Reading	Use Question Words Recognize End Punctuation		Word Writing: Tricky Word *all** Generative Sentence Writing: Including Tricky Words
3	Review: Tricky Words* Demonstration Story Small Group and Partner Reading	Use Question Words Recognize End Punctuation	Dictation: Tricky Words	Handwriting: Words, including Tricky Words Vocabulary: Pictorial Representations
4	Review: Tricky Words, Rhyming Words Small Group and Partner Reading			
5	Tricky Words: *from (Picture Reader)* Demonstration Story Partner Reading*	Use Question Words Recognize End Punctuation		Word Writing: One-Syllable Short Vowel Tricky Words (with Cues) Handwriting: Words Vocabulary: Pictorial Representations

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Continued...

Unit 8, Cont. | 20–23 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
6	Demonstration Story Small Group and Partner Reading*	Use Question Words Recognize End Punctuation	Chaining: One Syllable Short Vowel Words with Initial or Final Digraphs and/or Clusters	Handwriting: Words Vocabulary: Pictorial Representations
7	Small Group and Partner Reading		Dictation: One-Syllable Short-Vowel Words with Initial or Final Blends, Clusters, or Digraphs	Phrases Writing: Including One-Syllable Short Vowel Words with Digraphs (with Cues)
8	Tricky Word: *was (Picture Reader)** Demonstration Story Partner Reading	Use Question Words Recognize End Punctuation	Dictation: Tricky Words	Handwriting: Tricky Words
9	Review: Tricky Words and Rhyming Words Practice Reading Phrases *			
10	Double-Letter Spellings for Consonant Sounds Chaining: One-Syllable Short-Vowel Words with Initial or Final Blends, Clusters, or Consonant Digraphs Demonstration Story*	Use Question Words Recognize End Punctuation		Word Writing: One-Syllable Short Vowel Words with a Double Consonant Final Spelling (with Cues)
11	Chaining: One-Syllable Short Vowel Words with Initial or Final Blends, Clusters, or Consonant Digraphs Partner Reading		Dictation: Tricky Words	
12	Double-Letter Spellings for Consonant Sounds* Demonstration Story Whole Group Reading	Use Question Words Recognize End Punctuation		Vocabulary: Pictorial Representations
13	Practice Reading Sounds, Words, and Sentences Demonstration Story* *		Practice: Guess It and Spell It	Handwriting: Words Vocabulary: Pictorial Representations
14	Practice Reading Phrases Partner Reading*			Word Writing: One-Syllable Short Vowel Words with Double-Letter Spellings for Consonant Sounds (with Cues)
15	Word Recognition Assessment Demonstration Story Whole Group Reading	Recognize End Punctuation		Word Writing: One-Syllable Short Vowel Words with Double-Letter Spellings for Consonant Sounds (with Cues)
16	Lowercase Letter Name Assessment Small Group/Partner Reading Practice: Rhyming Words Reading Assessment			Word Writing: One-Syllable Short Vowel Words with Double-Letter Spellings for Consonant Sounds (with Cues)

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Continued...

Unit 8, Cont. | 20–23 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
17	Tricky Word Assessment Demonstration Story Practice Reading Phrases Code Knowledge Diagnostic Assessment *	Recognize End Punctuation Use apostrophe –s to Determine Meaning		Handwriting: Words Vocabulary: Pictorial Representations
18	Partner Reading* Story Reading Assessment Code Knowledge Diagnostic Assessment			Word Writing: One-Syllable Short Vowel Words with Double-Letter Spellings for Consonant Sounds (with Cues)
19	Demonstration Story Small Group and Partner Reading*	Use Question Words		Word Writing: One-Syllable Short Vowel Words with Double-Letter Spellings for Consonant Sounds (with Cues)
20	Review: Rhyming Words Small Group and Pattern Reading		Dictation: One-Syllable Short Vowel Words with Digraphs and Double-Letter Spellings for Consonant Sounds	Handwriting: Tricky Words
Pausing Point	Review: Sounds Spelling Practice Reading Words and Phrases* Demonstration Stories Partner Reading*			Word Writing: One-Syllable Short Vowel Words with Double-Letter Spellings for Consonant Sounds (with Cues) Review: Handwriting—Double-Letter Spellings for Consonant Sounds, Words—Tricky Words

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Unit 9 | 23–26 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
1	Tricky Words: *when, word** Uppercase Letters: 'A', 'B', 'C', 'D'	Use Question Words		Handwriting 'A' 'B' 'C' 'D'; Tricky Words: Letters and Words*
2	Tricky Words: *why, to* Whole Group Reading	Use Question Words Use Common Prepositions		Response to Text Vocabulary: Pictorial Representations
3	Uppercase Letters: 'E' 'F' 'G' 'H' Small Group Reading	Use Question Words		Handwriting 'E' 'F' 'G' 'H'; Tricky Words: Letters and Words* Vocabulary: Pictorial Representations
4	Review: Uppercase Letters Small Group and Partner Reading*	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Response to Text
5	Tricky Words: *where, no*	Use Question Words		Sentence Writing (with Cues Word Writing: Tricky Words (with Cues)

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Continued...

Unit 9, Cont. | 23–26 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
6	Uppercase Letters: 'I' 'J' 'K' 'L' 'M' Whole Group Reading	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Handwriting 'I' 'J' 'K' 'L' 'M'; Tricky Words: Letters and Words* Response to Text Vocabulary: Pictorial Representations
7	Tricky Words: *what, so* Uppercase Letters: 'N' 'O' 'P' 'Q' 'R'	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Handwriting 'N' 'O' 'P' 'Q' 'R'; Tricky Words: Letters and Words*
8	Review: Tricky Words Small Group and Partner Reading*	Use Question Words	Chaining: One-Syllable Short Vowel Words with Consonant Blends, Clusters, and/or Consonant Digraphs Dictation: Letters	
9	Review: Tricky Words Small Group and Partner Reading	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Word Writing: Tricky Words (with Cues) Response to Text
10	Tricky Word: *which* Uppercase Letters: 'S' 'T' 'U' 'V' 'W' Assessment: Tricky Word Recognition Small Group and Partner Reading*			
11	Review: Uppercase Letters Tricky Word: *once* Small Group and Partner Reading	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Response to Text *
12	Uppercase Letters: 'X' 'Y' 'Z' Partner Reading*	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Handwriting 'X' 'Y' 'Z'; Tricky Words: Letters and Words Word Writing: Tricky Words (with Cues) Response to Text
13	Tricky Words: said, says Small Group and Partner Reading	Use Question Words		Word Writing: Tricky Words
14	Small Group and Partner Reading*	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Review: Handwriting—Capital Letters Response to Text
15	Reading: Wiggle Cards Practice Reading Sentences			Word Writing: Tricky Words (with Cues)
16	Tricky Words: *were* Partner Reading*	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Response to Text Vocabulary: Pictorial Representations

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Continued...

Unit 9, Cont. | 23–26 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
17	Tricky Words: *here, there** Whole Group Reading	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Word Writing: Tricky Words Response to Text Handwriting: One-Syllable Short Vowel Words (with Cues) Vocabulary: Pictorial Representations
18	Review: Tricky Words Small Group and Partner Reading*	Use Question Words	Dictation: Phrases	Word Writing: Tricky Words (with Cues) Handwriting: One-Syllable Short Vowel Words (with Cues) Vocabulary: Pictorial Representations
19	Small Group and Partner Reading*	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Handwriting '?' '.' '!' Response to Text
20	Small Group and Partner Reading Practice Reading: Wiggle Cards Assessment: Tricky Word Recognition Assessment: Upper Case Letter Writing Assessment: Punctuation	Use Question Words		
21	Small Group and Partner Reading* Practice Reading: Wiggle Cards Reading Assessment	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Review: Handwriting— Capital Letters Handwriting: Tricky Words Sentence Writing (With Cues) Response to Text
22	Whole Group Reading* Practice Reading: Wiggle Cards Reading Assessment	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Response to Text Handwriting: One-Syllable Short Vowel Words (with Cues) Vocabulary: Pictorial Representations
23	Partner Reading* Reading Assessment	Use Question Words Recognize End Punctuation Capitalize the First Word in a Sentence/Pronoun I		Sentence Writing (with Cues) Response to Text Handwriting: One-Syllable Short Vowel Words (with Cues) Vocabulary: Pictorial Representations
Pausing Point	Review: Tricky Words, Uppercase Letters Partner Reading*		Review: Spelling Dictation	Response to Text Review: Handwriting— Capital Letters, Tricky Words Word Writing: Tricky Words (with Cues)

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Unit 10 | 29–32 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
1	Sound /ee/ Spelled 'ee' Small Group and Partner Reading	Use Question Words		Handwriting 'ee': Letters and Words Handwriting: One-Syllable Short Vowel Words Vocabulary: Pictorial Representations
2	Small Group and Partner Reading	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Word Writing: One Syllable 'ee' Words (with Cues)* Response to Text
3	Chaining: One-Syllable Long Vowel Words Tricky Words: *he, she, we* Small Group and Partner Reading	Use Question Words		
4	Small Group and Partner Reading	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Response to Text
5	Tricky Words: *be, me* Whole Group Reading*	Use Question Words Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Response to Text
6	Reading: Wiggle Cards Review: Tricky Words			Response to Text Word Writing: Tricky Words, Long 'e' Words
7	Sound /ae/ Spelled 'a_e' Small Group and Partner Reading*			Handwriting 'a_e': Words Writing the Spelling
8	Tricky Words: they, their Small Group and Partner Reading	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Response to Text *
9	Whole Group Reading*	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Response to Text Word Writing: One-Syllable Short Vowel Words (with Cues) Vocabulary: Pictorial Representations
10	Dictation Identification: One-Syllable Long and Short Vowel Words Partner Reading*	Use Question Words Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Word Writing: One-Syllable Long Vowel Words (with Cues) Response to Text
11	Sound /ie/ Spelled 'i_e' Small Group and Partner Reading*			Handwriting 'i_e': Words Word Writing: One-Syllable Long Vowel Words (with Cues) Vocabulary: Pictorial Representations
12	Small Group and Partner Reading	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Word Writing: One-Syllable Long Vowel Words (with Cues) Response to Text
13	Tricky Word: *my* Small Group and Partner Reading	Use Question Words	Chaining: One-Syllable Short and Long Vowel Words with the Final –e Spelling	Word Writing: One-Syllable Long Vowel Words (with Cues)* Vocabulary: Pictorial Representations

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Continued...

Unit 10 | 29–32 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
14	Practice: Reading Words with the Final –e Spelling Small Group and Partner Reading*	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Response to Text
15	Tricky Word: *by* Reading: Wiggle Cards Partner Reading *	Use Question Words Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Response to Text Vocabulary: Pictorial Representations
16	Review: Tricky Words *		Dictation: Tricky Words	Response to Text Word Writing: Tricky Words
17	Sound /oe/ Spelled 'o_e' Small Group and Partner Reading*	Use Question Words		Handwriting 'o_e': Words Vocabulary: Pictorial Representations
18	Small Group and Partner Reading	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Word Writing: One-Syllable Long Vowel Words (with Cues) Response to Text
19	Review: Sound Spelling Partner Reading*	Use Question Words Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Response to Text Word Writing: One-Syllable Short and Long Vowel Words Vocabulary: Pictorial Representations
20	Dictation Identification: One-Syllable, Long-Vowel Words Small Group and Partner Reading	Use Question Words		Word Writing: One-Syllable Long Vowel Words (with Cues) Vocabulary: Pictorial Representations
21	Small Group and Partner Reading*	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation	Chaining: One-Syllable Long and Short Vowel Words	Response to Text
23	Tricky Words: *you, your* Small Group and Partner Reading	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation	Chaining: One-Syllable Long Vowel Words with the Final –e Spelling	Response to Text *
24	Whole Group Reading*	Use Question Words	Chaining: One-Syllable Long Vowel Words with the Final –e Spelling	Response to Text Word Writing: One-Syllable Short Vowel Words (with Cues)
25	Reading: Wiggle Cards		Dictation: Tricky Words	Response to Text Word Writing: Tricky Words
26	End-of-the-Year Assessment: Word Reading Partner Reading*	Use Question Words Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation		Response to Text Word Writing: One-Syllable Short and Long Vowel Words (with Cues) Vocabulary: Pictorial Representations
27	Whole Group Reading* End-of-the-Year Assessment: Letter Sounds	Use Question Words Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation	End-of-the-Year Assessment: Sound Writing	End-of-the-Year Assessment: Sound Writing Response to Text Word Writing: One- Syllable Short and Long Vowel Words (with Cues)

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Continued...

Unit 10, Cont. | 29–32 days

Lesson	Phonics & Reading	Grammar/Language	Spelling	Writing
28	End-of-the-Year Assessment: Uppercase Letter Names Small Group and Partner Reading* End-of-the-Year Assessment: Letter Sounds	Use Question Words	Chaining: One-Syllable Long Vowel Words with the Final –e Spelling	End-of-the-Year Assessment: Writing Lowercase Letters
29	Small Group and Partner Reading*	Capitalize the First Word in a Sentence/Pronoun I Recognize End Punctuation	Chaining: One-Syllable Short and Long Vowel Words	Response to Text
Pausing Point	Review: Digraphs, Sound Spelling, Tricky Words Reading: Wiggle Cards Partner Reading*		Chaining: One-Syllable Long Vowel Words with the Final –e Spelling Dictation: One-Syllable Short and Long Vowel Words	Word Writing: One- Syllable Long Vowel Words (with Cues) Response to Text Handwriting: Tricky Words

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Elementary Curriculum

Grade K

- Needs of Plants and Animals
- Pushes and Pulls
- Sunlight and Weather

Grade 1

- Animal and Plant Defenses
- Light and Sound
- Spinning Earth

Grade 2

- Plant and Animal Relationships
- Properties of Materials
- Changing Landforms

Grade 3

- Balancing Forces
- Inheritance and Traits
- Environments and Survival
- Weather and Climate

Grade 4

- Energy Conversions
- Vision and Light
- Earth's Features
- Waves, Energy, and Information

Grade 5

- Patterns of Earth and Sky
- Modeling Matter
- The Earth System
- Ecosystem Restoration

AmplifyScience

authored by THE LAWRENCE HALL OF SCIENCE UNIVERSITY OF CALIFORNIA, BERKELEY

Middle School Curriculum
Domain Model

Earth and Space Science

- Launch: Geology on Mars
- Plate Motion
- Engineering Internship: Plate Motion
- Rock Transformations
- Earth, Moon, and Sun
- Ocean, Atmosphere, and Climate
- Weather Patterns
- Earth's Changing Climate
- Engineering Internship: Earth's Changing Climate

Life Science

- Launch: Microbiome
- Metabolism
- Engineering Internship: Metabolism
- Traits and Reproduction
- Populations and Resources
- Matter and Energy in Ecosystems
- Natural Selection
- Engineering Internship: Natural Selection
- Evolutionary History

Physical Science

- Launch: Harnessing Human Energy
- Force and Motion
- Engineering Internship: Force and Motion
- Magnetic Fields
- Thermal Energy
- Phase Change
- Engineering Internship: Phase Change
- Chemical Reactions
- Light Waves

AmplifyScience

authored by THE LAWRENCE HALL OF SCIENCE UNIVERSITY OF CALIFORNIA, BERKELEY

Scope and Sequence

In Amplify Science, each grade level has a set of units designed to completely address the Performance Expectations for that particular grade. The units also enable students to build knowledge across disciplines each year, so that past learning is connected to new concepts, applied to new phenomena, and further developed in each successive year.

Amplify Science K–5

Every year of Amplify Science K–5 consists of 3–4 units, with each unit containing 20 lessons plus two full-session assessments (a Pre-Unit Assessment and End-of-Unit Assessment). Kindergarten and grade 1 lessons are written for 45-minute sessions, and grades 2–5 lessons are written for 60-minute sessions — though teachers can expand or contract the timing to meet their needs.

Grade K

- Needs of Plants and Animals
- Pushes and Pulls
- Sunlight and Weather

Grade 1

- Animal and Plant Defenses
- Light and Sound
- Spinning Earth

Grade 2

- Plant and Animal Relationships
- Properties of Materials
- Changing Landforms

Grade 3

- Balancing Forces
- Inheritance and Traits
- Environments and Survival
- Weather and Climate

Grade 4

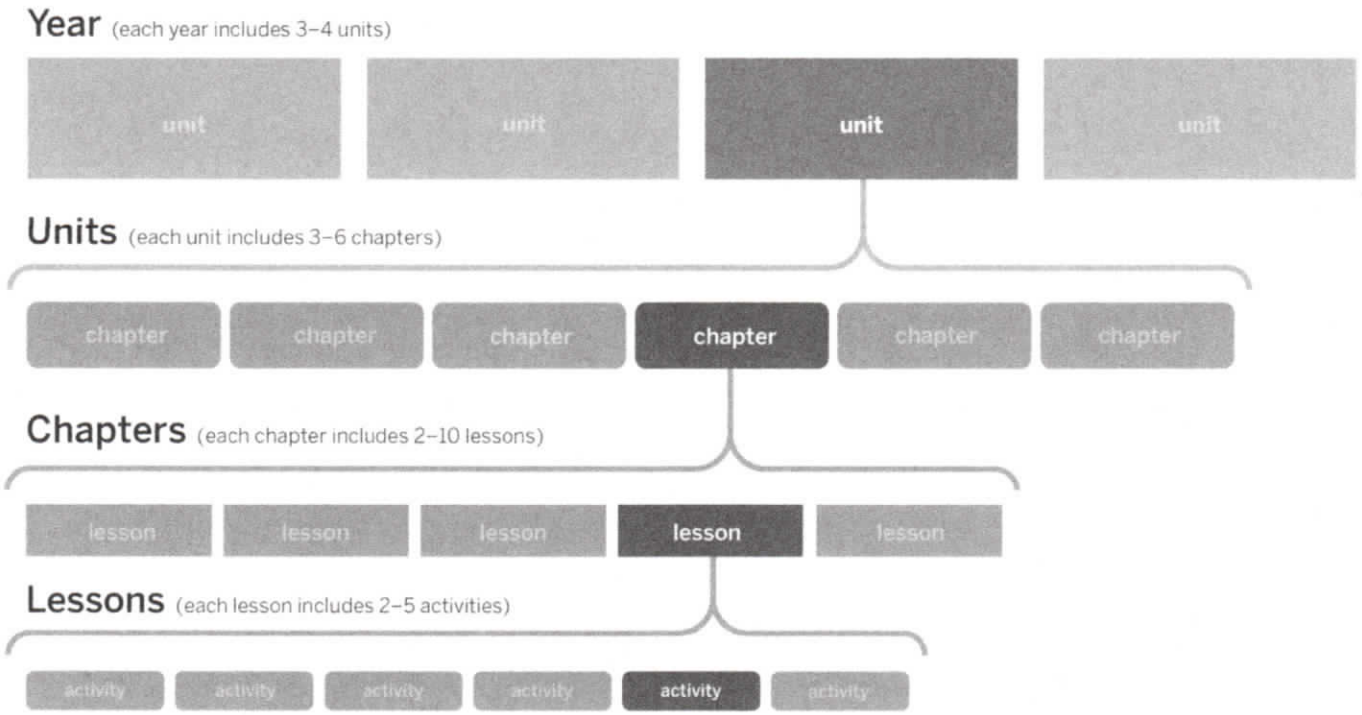
- Energy Conversions
- Vision and Light
- Earth's Features
- Waves, Energy, and Information

Grade 5

- Patterns of Earth and Sky
- Modeling Matter
- The Earth System
- Ecosystem Restoration

ELEMENTARY SCHOOL NAVIGATION STRUCTURE:

The Amplify Science curriculum is intuitively organized and was specifically designed to be easy to navigate. Each year contains units, which contains chapters, which contain lessons, which contain activities.



In each K–5 course, there is one unit that emphasizes **investigation**, one that emphasizes **modeling**, and one that emphasizes **design**. In addition, in grades 3–5, there is also one unit that emphasizes **argumentation**. See below for more information on each unit type.

More about units in kindergarten to 5th grade

Amplify Science 6–8

Each course (or "year") of Amplify Science for grades 6–8 consists of nine units. An example of how the units can be distributed amongst each of the grade levels is provided here, but schools have full discretion to order the units into any sequence that is appropriate for their district. Each unit contains 10–19 lessons, each of which was written for a 45-minute session — though teachers can expand or contract the timing to meet their needs. The number of lessons in a unit depends on the unit type, which is explained in more detail below.

Example integrated sequence:

Grade 6

- Launch: Microbiome
- Metabolism
- Engineering Internship: Metabolism
- Traits and Reproduction
- Thermal Energy
- Ocean, Atmosphere, and Climate
- Weather Patterns
- Earth's Changing Climate
- Engineering Internship: Earth's Changing Climate

Grade 7

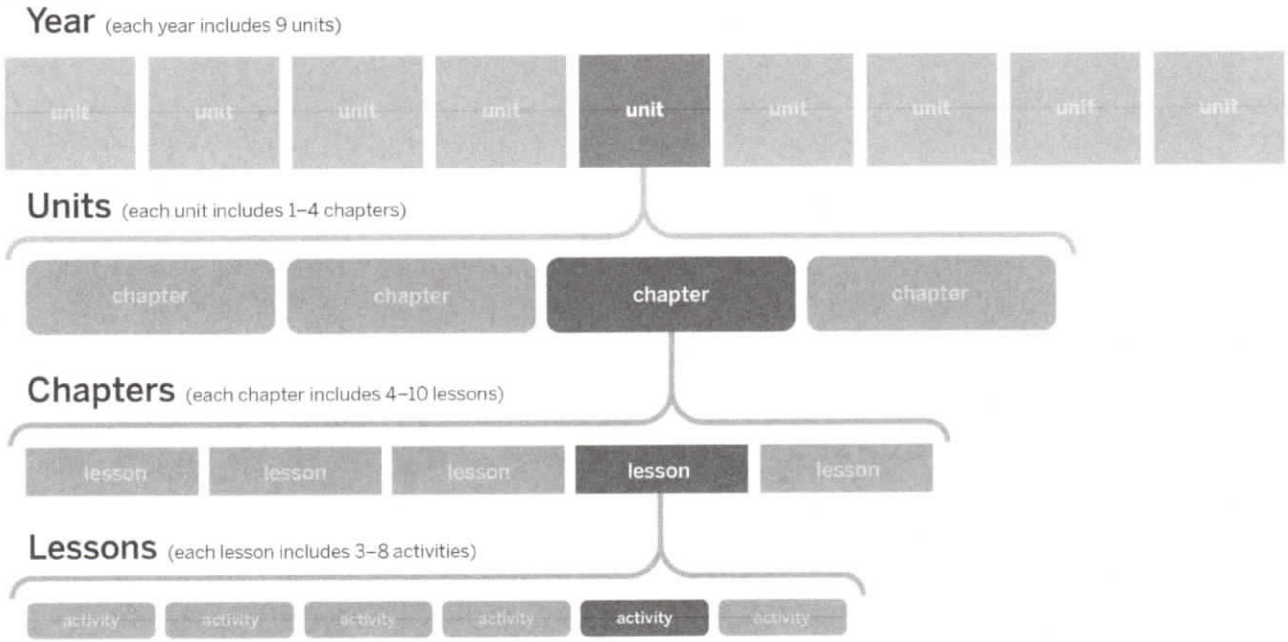
- Launch: Geology on Mars
- Plate Motion
- Engineering Internship: Plate Motion
- Rock Transformations
- Phase Change
- Engineering Internship: Phase Change
- Chemical Reactions
- Populations and Resources
- Matter and Energy in Ecosystems

Grade 8

- Launch: Harnessing Human Energy
- Force and Motion
- Engineering Internship: Force and Motion
- Magnetic Fields
- Light Waves
- Earth, Moon, and Sun
- Natural Selection
- Engineering Internship: Natural Selection
- Evolutionary History

NAVIGATION STRUCTURE:

The curriculum is intuitively organized and easy to navigate. Courses/Years contain units, which contain chapters, which contain lessons, which contain activities.



There are three types of units in Amplify Science grades 6–8: **Launch**, **Core**, and **Engineering Internships**. Each year has one Launch unit, six Core units, and two Engineering Internships.

LAUNCH UNITS

Launch units are the first unit taught in each year of Amplify Science. The goal of the Launch unit is to introduce students to norms, routines, and practices that will be built on throughout the year, such as argumentation and Active Reading, as well as the use of the Amplify Science technology. For example, rather than taking the time to explain the process of Active Reading in every unit in a given year, it is explained thoroughly in the Launch unit, thereby preparing students to do active reading in all subsequent units.

- Each Launch unit contains a total of eleven lessons.
- There is one Launch unit for each grade or domain.

Grade (suggested)	Launch unit
Grade 6	Microbiome
Grade 7	Geology on Mars
Grade 8	Harnessing Human Energy

CORE UNITS

The majority of units in a course are Core units, which guide students in constructing a deep understanding of important science concepts by using key practices of science and engineering. A Core unit begins by establishing the context of the unit by introducing students to the real-world problem they will be investigating.

As students move through lessons in a Core unit, they will figure out the unit's anchoring phenomena, gaining an understanding of the unit's disciplinary core ideas, developing experience with the science and engineering practices, and making linkages across topics through the crosscutting concepts as they do so. Students will be doing hands-on activities, recording observations from digital Simulations, annotating scientific articles, watching engaging media, crafting visualizations of their understanding via the modeling tools, participating in exciting classroom conversations, drafting persuasive scientific arguments, and completing a variety of formative assessments along the way, giving teachers insight into student growth over the course of the unit.

Each Core unit culminates with a Science Seminar and final writing activity, giving students the opportunity to apply what they've learned throughout the course of the unit. In these sequences, students explore a new real-world problem, collect and analyze evidence, and then debate which claims are best supported by evidence, all while making clear their reasoning that connects the evidence to the claims. Finally, each student individually crafts a final written argument.

- Each Core unit contains 16 lessons, which are divided between four chapters.
- In addition to the 16 lessons, each Core unit also includes three formal assessment days: a diagnostic Pre-Unit Assessment, a mid-unit Critical Juncture Assessment, and an End-of-Unit Assessment (i.e. 19 sessions total per Core unit). There are also numerous unobtrusive, formative assessments interspersed throughout the unit.

Grade (suggested)	Core units
Grade 6	Metabolism Traits and Reproduction Thermal Energy Ocean, Atmosphere, and Climate Weather Patterns Earth's Changing Climate
Grade 7	Plate Motion Rock Transformations Phase Change Chemical Reactions Populations and Resources Matter and Energy in Ecosystems
Grade 8	Force and Motion Magnetic Fields Light Waves Earth, Moon, and Sun Natural Selection Evolutionary History

ENGINEERING INTERNSHIP UNITS

21st-century science students need deep dives into the application of science in real life and how it is instrumental in addressing major challenges that confront society today. Each Engineering Internship unit of Amplify Science therefore asks students to design solutions for a real-world problem requiring them to figure out how to help those in need through the application of

engineering and design practices. The units emphasize compassion, sympathy, and the consideration of the needs of diverse peoples, from tsunami victims in Sri Lanka to the special needs of premature babies.

The Engineering Internship units invite students to take on the role of engineering interns in a fictional company called "Futura Engineering." In the first lesson, a fictional project director appears in a video to introduce students to their design challenge and to present them with essential background information. Importantly, this is also where students are introduced to the competing design criteria and limiting constraints they will need to balance in their designs. Students quickly learn that in the Engineering Internships, there is no one "right answer." Rather, they will need to work together to iteratively design the best solution that can be justified through the data they have collected.

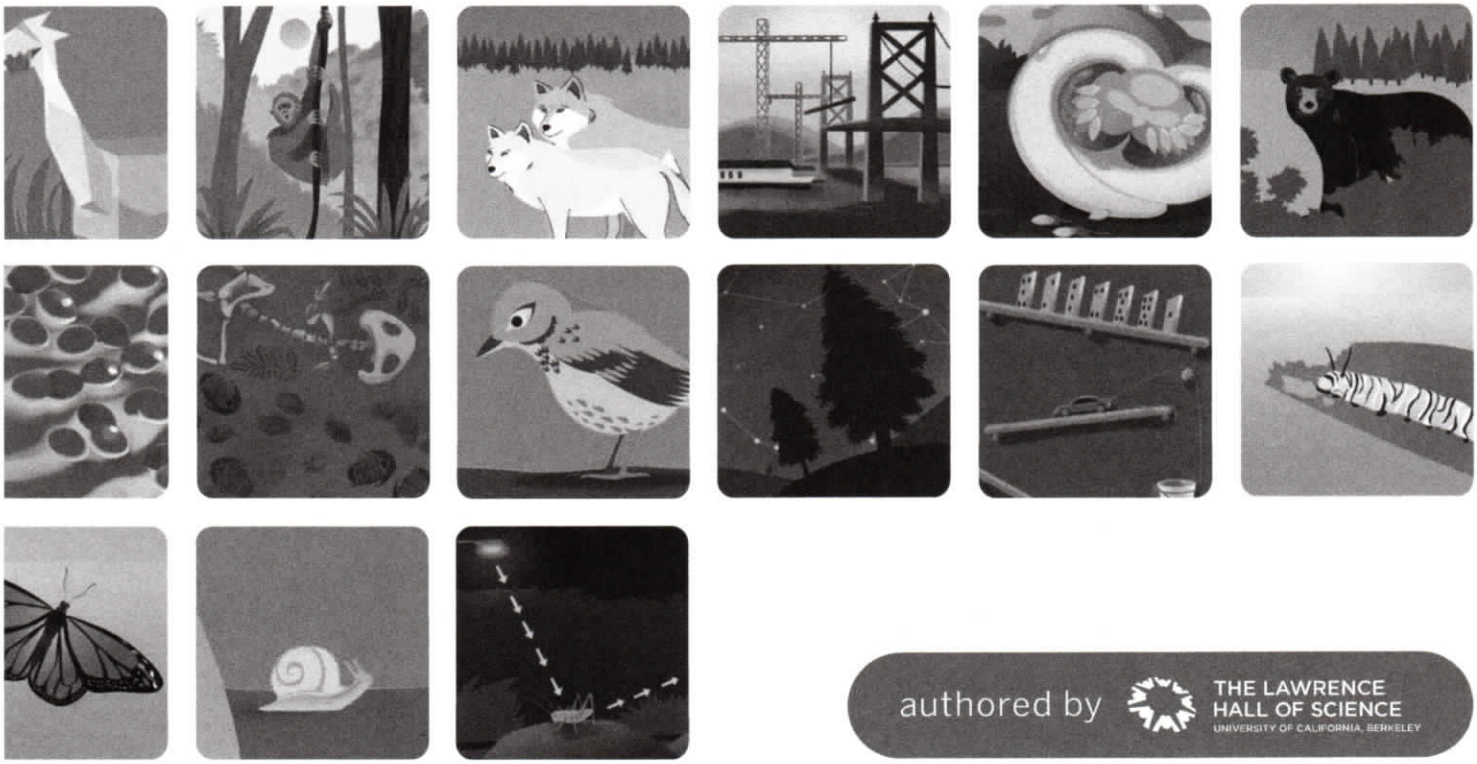
- Each Engineering Internship unit is designed to follow as associated Core unit. For example, the *Force and Motion Engineering Internship* would follow the *Force and Motion* Core unit, giving students an opportunity to apply what they learned about forces and collisions to an authentic problem—designing an emergency supply drop pod.
- The Engineering Internship units each contain a total of ten lessons.

Grade (suggested)	Engineering Internship units
Grade 6	Metabolism Engineering Internship Earth's Changing Climate Engineering Internship
Grade 7	Plate Motion Engineering Internship Phase Change Internship
Grade 8	Force and Motion Engineering Internship Natural Selection Engineering Internship

Amplify Science

Grade 5

Planning guide



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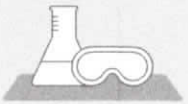
Program components

Student

Hands-on



Kit materials

Reading

Student Books for read-alouds, shared reading, and partner reading

Writing

Student Investigation Notebooks

Apps

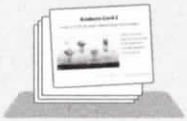
Student practice apps and digital simulations

Teacher

Instruction

Print Teacher's Guide

Digital Teacher's Guide



Display and hands-on materials (vocabulary cards, unit questions, key concepts, sorting cards, and more)

Planning for a year

Grade 5 scope and sequence

(88 days of instruction)

Patterns of Earth and Sky

20 60-minute lessons
2 dedicated assessment days

Focal NGSS Performance Expectations:

- 5-ESS1-1
- 5-ESS1-2
- 5-PS2-1

Focal Disciplinary Core Ideas:

- ESS1.A
- ESS1.B
- PS2.B

Modeling Matter

20 60-minute lessons
2 dedicated assessment days

Focal NGSS Performance Expectations:

- 5-PS1-1
- 5-PS1-2
- 5-PS1-3

Focal Disciplinary Core Ideas:

- PS1.A

The Earth System

20 60-minute lessons
2 dedicated assessment days

Focal NGSS Performance Expectations:

- 5-ESS2-1
- 5-ESS2-2
- 5-ESS3-1
- 5-PS1-1
- 5-PS1-2
- 5-PS1-4
- 3-5-ETS1-1
- 3-5-ETS1-2
- 3-5-ETS1-3

Focal Disciplinary Core Ideas:

- ESS2.A
- ESS2.C
- ESS3.C
- PS1.A
- PS1.B
- ETS1.A
- ETS1.B
- ETS1.C

Ecosystem Restoration

20 60-minute lessons
2 dedicated assessment days

Focal NGSS Performance Expectations:

- 5-LS1-1
- 5-LS2-1
- 5-PS1-1
- 5-PS3-1
- 5-ESS3-1

Focal Disciplinary Core Ideas:

- LS1.C
- LS2.A
- LS2.B
- ESS3.C
- PS1.A
- PS3.D

Amplify Science was built from the ground up for 3-dimensional learning. Access the Teacher's Guide to see the complete list of Disciplinary Core Ideas, Crosscutting Concepts, and Science and Engineering Practices addressed in each unit.

Scheduling options

No matter what your scheduling preference, Amplify Science will work in your classroom.

2x

"I teach science twice each week."

Each Amplify Science unit at grade 5 is made up of 22 60-minute lessons, which includes 2 lessons for pre- and post-assessment. With 2 scheduled 60-minute sessions each week, each Amplify Science unit will take between 2 and 2.5 months to complete.

3x

"I teach science three times each week"

The easiest option is to plan for 3 60-minute sessions each week. This way, each Amplify Science unit will take approximately 1.5 months. This plan will provide you the freedom to slow down the pace of instruction if your students need more time, or if you'd like to weave in additional experiences.

45-minute option
If you plan for sessions of less than 60 minutes, Amplify Science lessons can be spread out over more than one session. For instance, if you allocate 3 45-minute lessons per week, each Amplify Science unit will take approximately 2.25 months. This option will still provide time for you to address all four grade 5 units across the year.

5x

"I teach science every day."

It will take you approximately 5 weeks (22 school days) to complete each unit. If you plan for sessions shorter than 60 minutes, the units will take slightly longer to complete.

Planning for a unit

Each unit's Teacher's Guide has all the information you need to learn about that unit's content and structure, materials, storyline, and student learning objectives.

Planning options

1 hour per unit

If you want to thoroughly prepare for a unit, the most important resources to locate and read are:

Foundational:

- **Unit Overview:** A few paragraphs outlining the unit, including what the unit is about, why it was written this particular way, and how students experience the unit.
- **Unit Map:** A 1-page summary showing how the chapters build upon each other, what questions students will investigate, and what evidence sources they will use to figure those questions out.
- **Lesson Overview Compilation:** 1–2 pages on each lesson provide insight into each lesson's sequence of activities, intent, materials used, and how the lessons connect with and build upon each other.

Supporting:

- **Progress Build:** A thorough explanation of the unit's learning progression (called the "Progress Build"). Understanding and internalizing the Progress Build is key to understanding the embedded unit assessments.
- **Science Background:** A teacher-facing document that gives valuable science content information and calls out common student misconceptions and preconceptions. The Science Background resource provides all the context and subject matter knowledge needed to teach the unit.

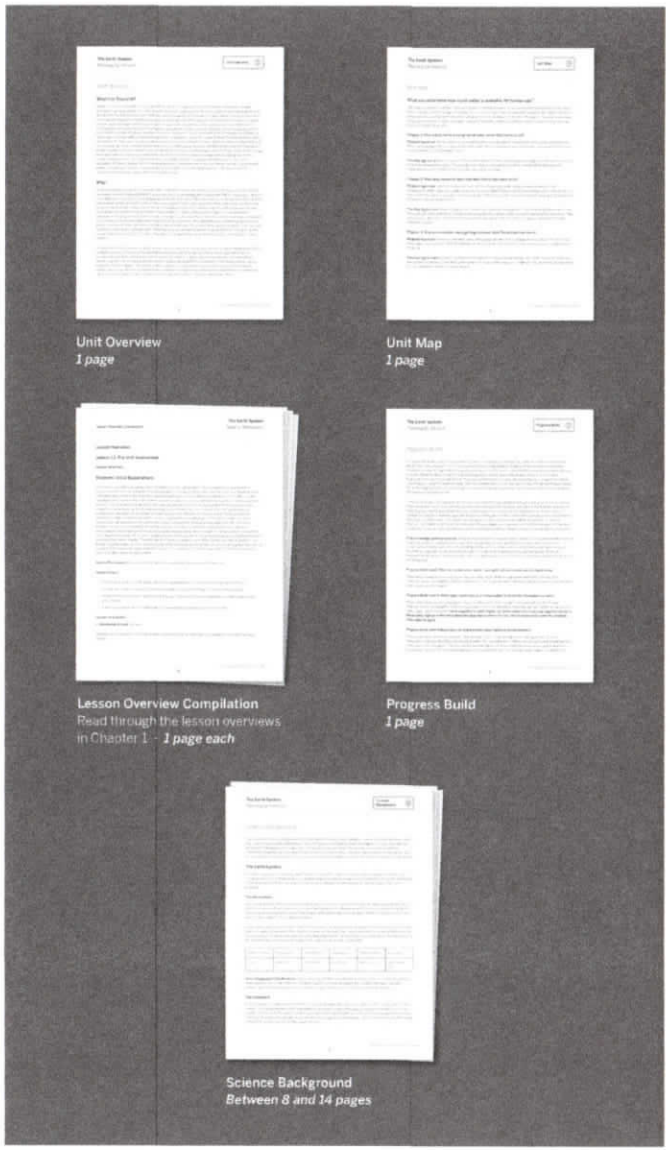
30 minutes per unit

If you're a bit strapped for time but still want to get the essentials, try to focus on:

- **Unit Overview**, 1 page
- **Unit Map**, 1 page
- **Lesson Overview Compilation**

5 minutes per unit

If you have only 5 minutes to familiarize yourself with the most essential aspects of the unit, skip right to the **Unit Overview** and **Unit Map**. At the very least, you'll understand the unit narrative and structure, and get a sense of the materials used.



> **NOTE**
>
> There's much more information available in the Teacher's Guide, including overviews of the unit's assessments, readings, student-facing technology, and standards.

Planning for a unit

Patterns of Earth and Sky
22 Lessons

Investigation focus

In *Patterns of Earth and Sky: Analyzing Stars on Ancient Artifacts*, students learn that stars are all around us in space, develop an understanding of scale and distance in the universe, and discover how the spin and orbit of our planet causes us to observe daily and yearly patterns of stars.

Student role and phenomena

In this unit, students take on the role of astronomers, helping a team of archaeologists at the fictional Museum of Archaeology figure out and explain the significance of the illustrations on a recently discovered thousand-year-old artifact with a missing piece.

Insights

Students observe and investigate patterns in the sky by day and by night with kinesthetic models, as well as using a digital simulation, and informational text. Students apply their understanding of why we see different stars at different times to explain what is shown on the artifact, and what might be on the missing piece.

Modeling Matter
22 Lessons

Modeling focus

In the *Modeling Matter: The Chemistry of Food* unit, students have the opportunity to delve deeply into understanding the particulate nature of matter and to apply it to explain phenomena at the macroscale (the observable scale).

Student role and phenomena

Students assume the role of food scientists working in the research lab at Good Food Production, Inc. to make observations of food mixtures.

Insights

By the end of the unit, students will understand that there is a connection between the observable properties of materials and the properties of the molecules of which those materials are composed.

The Earth System
22 Lessons

Engineering design focus

In *The Earth System: Investigating Water Shortages*, students learn about the Earth system so they can help figure out what is causing a water shortage. They also design ways to alleviate the effects of water shortages, including freshwater collection systems and proposals for using chemical reactions to treat wastewater.

Student role and phenomena

In the role of water resource engineers, students investigate what makes East Ferris, a city on one side of the fictional Ferris Island, prone to water shortages while a city on the other side is not.

Insights

Students use books, hands-on investigations, and *The Earth System* Simulation and Modeling Tool to figure out how water is distributed within the hydrosphere, how water moves between the hydrosphere and the atmosphere to cause rain, how the geosphere can interact with the hydrosphere and atmosphere to create patterns of rain, and how life forms in the biosphere depend on the hydrosphere.

Ecosystem Restoration
22 Lessons

Argumentation focus

In the *Ecosystem Restoration: Matter and Energy in a Rain Forest* unit, students explore what it means to grow and how living things get the matter and energy they need to grow.

Student role and phenomena

As ecologists working with Natural Resources Rescue, an organization dedicated to protecting Earth's fragile ecosystems, students work to explain why jaguars, sloths, and cecropia trees in a reforested section of a Costa Rican rain forest are not growing and thriving.

Insights

Throughout the unit, students engage in oral and written scientific argumentation about the source of the problem in the failing ecosystem. By the end of the unit, students present their final restoration plans, including a recommended course of action to restore the failing rainforest ecosystem to its original condition.

Planning for a lesson

Amplify Science makes lesson prep as easy as 1, 2, 3. You can use either the printed or digital Teacher's Guide.

1

Read the 1-page **Lesson Overview**, which contains:

- A **1-paragraph summary of the lesson**, including insights into the lesson's activities and any materials used.
- Clearly labeled **phenomena**.
- **Student learning objectives**
- **Lesson at a Glance**, which provides an outline of the lesson along with pacing suggestions.

Have some extra time? Read through the full step-by-step instructions for the lesson to see exactly where different materials are used, where projections are shown, and where to insert recommended teacher talk moments.

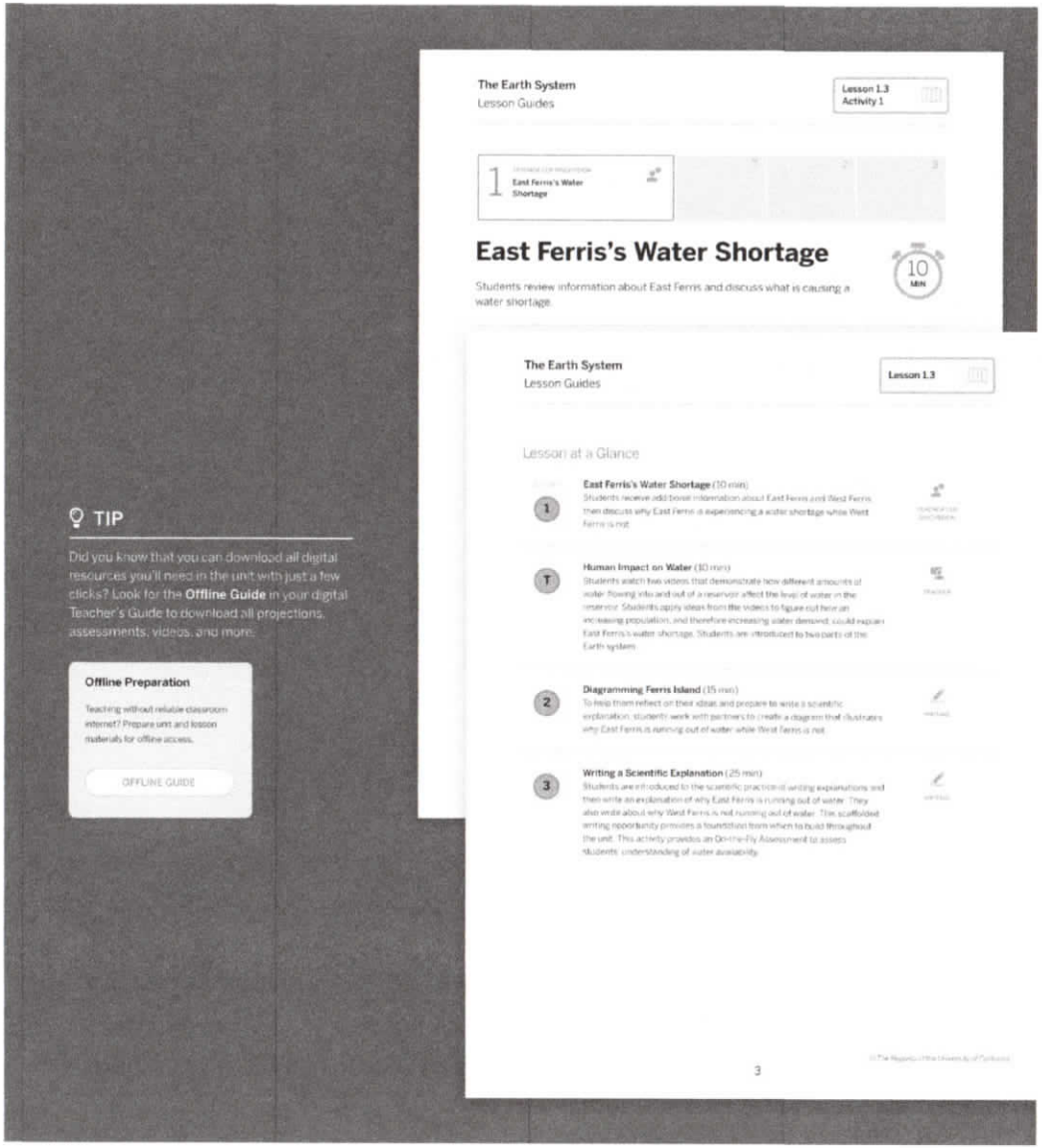
2

Every lesson includes a **Materials and Preparation** section, which clearly identifies all of the hands-on manipulatives, Student Books, printed classroom wall materials, and digital tools needed for the lesson. Remember: every lesson is different! Some lessons might call for Student Books; other lessons might call for setting up stations for hands-on investigations. Be sure to glance at the Materials and Preparation section to see what you need for your specific lesson.

You'll want to bookmark apps.learning.amplify.com/elementary before the first day of class.

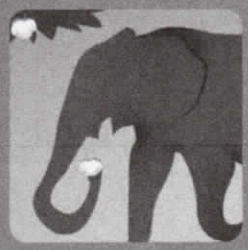
3

Download any **Digital Resources** needed for the lesson. For example, most lessons have projections that you can show to your students at specific parts in the lesson. Be sure to download the PDF of projections before class.



For more information on Amplify Science, visit **amplify.com/science**.

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THE LAWRENCE HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

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Phenomena, standards, and progressions

Kindergarten

The Amplify Science kindergarten program progressively builds students' abilities to meet all grade-level performance expectations through a three-dimensional instructional sequence. The following is an overview of the sequence of units, a description of the progression of student learning across the year, and a summary of how the sequence meets all performance expectations for kindergarten.

SEQUENCE OF UNITS

- *Needs of Plants and Animals*
- *Pushes and Pulls*
- *Sunlight and Weather*

NEEDS OF PLANTS AND ANIMALS

Anchor phenomenon

There are no monarch caterpillars in the Mariposa Grove community garden since vegetables were planted.

Student Role

Students take on the role of scientists in order to figure out why there are no monarch caterpillars in the community garden since vegetables were planted. They investigate how plants and animals get what they need to live and grow, and make a new plan for the community garden that provides for the needs of the monarch caterpillars in addition to producing vegetables for humans.

Focal performance expectations

- K-LS1-1: Survival Needs
- K-ESS2-2: Impacting Environment
- K-ESS3-1: Qualities of a Habitat

- K-ESS3-3: Reducing Impacts

Connections to other Performance Expectations

- K-2-ETS1-1: Defining the Problem
- K-2-ETS1-2: Developing Possible Solutions

PUSHES AND PULLS

Anchor phenomenon

Pinball machines allow people to control the direction and strength of forces on a ball.

Student Role

Students take on the role of pinball machine engineers as they investigate the effects of forces on the motion of an object. They conduct tests in their own prototypes (models) of a pinball machine and use what they learn to contribute to the design of a class pinball machine. Over the course of the unit, students construct a foundational understanding of why things move in different ways.

Focal performance expectations

- K-PS2-1: Pushes and Pulls
- K-PS2-2: Change Speed and Direction
- K-2-ETS1-1: Defining the Problem
- K-2-ETS1-2: Developing Possible Solutions
- K-2-ETS1-3: Comparing Different Solutions

SUNLIGHT AND WEATHER

Anchor phenomenon

Students at Carver Elementary School are too cold during morning recess, while students at Woodland Elementary School are too hot during afternoon recess.

Student Role

The principals of Woodland Elementary and Carver Elementary need student weather scientists to help them explain why Woodland's playground is warmer than Carver's at recess. Students gather *data from models* of the sun and Earth's surface and observe their own playgrounds to figure out how sunlight causes changes in the temperatures of different surfaces. Students then use models to figure out why Woodland's playground sometimes floods.

Focal performance expectations

- K-PS3-1: Sunlight on Earth's Surface
- K-PS3-2: Reducing Warming
- K-ESS2-1: Weather Patterns
- K-ESS3-2: Preparing for Severe Weather

Connections to other Performance Expectations

- K-2-ETS1-1: Defining the Problem
- K-2-ETS1-2: Developing Possible Solutions
- K-2-ETS1-3: Comparing Different Solutions

PROGRESSION AND ORGANIZATION

The units in the kindergarten course were designed and sequenced to build students' expertise with the grade-level disciplinary core ideas (DCIs), science and engineering practices (SEPs) and crosscutting concepts (CCCs) while simultaneously considering the dimensions of kindergartners' language, social-emotional, and physical development across the school year. Each unit has focal SEPs and CCCs, carefully selected to support students in figuring out the unit's focal DCIs.

Students begin the year with a focus on the survival needs of plants and animals in the ***Needs of Plants and Animals*** unit. Throughout the unit, students take on increasing responsibility for the focal SEP of Planning and Carrying Out Investigations as they conduct investigations to figure out, and construct an explanation about, what plants and animals need to survive in a place. The focal CCC of Systems and System Models supports students in understanding the interactions between different parts of a habitat system and how those parts contribute to plant and animal survival. In the ***Pushes and Pulls*** unit, students continue to plan and carry out investigations, but this time they

are focused on testing designs to meet a set of design goals for moving a pinball in a pinball machine. Students engage in iterative cycles of Designing Solutions, the unit's focal SEP, to apply what they have learned about the strength and direction of forces to their designs. A focus on the CCC of Cause and Effect helps students explain the relationships between forces and how an object moves. Finally, students end the year with the ***Sunlight and Weather*** unit, when nicer weather allows for observing and measuring temperatures outdoors. Students engage in the focal SEP of Developing and Using Models as they use physical models to investigate how light shining on surfaces changes the temperature of the surfaces and apply the focal CCC of Cause and Effect to construct explanations about why surfaces warm differently.

The DCIs emphasized in each unit work together to support deep explanations of the unit's anchor phenomenon. For example, in the ***Needs of Plants and Animals*** unit, investigating why there are no monarchs living in the garden leads students to construct ideas about LS1.C: Organization for Matter and Energy Flow in Organisms (DCI LS1.C), Human Impacts on Earth Systems (DCI ESS3.C), Biogeology (DCI ESS2.E), and Natural Resources (DCI ESS2.E).

DISCIPLINARY CORE IDEAS

● Focal ● Emphasized

	Needs of Plants and Animals	*Pushes and Pulls*	*Sunlight and Weather*
PS2.A: Forces and Motion (K-PS2-1, K-PS2-2)		●	
PS2.B: Types of Interactions (K-PS2-1)		●	
PS3.B: Conservation of Energy and Energy Transfer (K-PS3-1, K-PS3-2)			●
PS3.C: Relationship Between Energy and Forces (K-PS2-1)		●	
LS1.C: Organization for Matter and Energy Flow in Organisms (K-LS1-1)	●		
ESS2.D: Weather and Climate (K-ESS2-1)			●
ESS2.E: Biogeology (K-ESS2-2)	●		
ESS3.A: Natural Resources (K-ESS3-1)	●		
ESS3.B: Natural Hazards (K-ESS3-2)			●
ESS3.C: Human Impacts on Earth Systems (K-ESS3-3, K-ESS2-2)	●		
ETS1.A: Defining and Delimiting Engineering Problems (K-2-ETS1-1, K-PS2-2, K-ESS3-2)	●	●	●
ETS1.B: Developing Possible Solutions (K-2-ETS1-2, K-ESS3-3)	●	●	●
ETS1.C: Optimizing the Design Solution (K-2-ETS1-3)		●	

CROSSCUTTING CONCEPTS

● Focal ● Emphasized ○ Additional Opportunity

	Needs of Plants and Animals	*Pushes and Pulls*	*Sunlight and Weather*
Patterns	●		●
Cause and Effect		●	●
Scale, Proportion, and Quantity *This CCC is not identified in any kindergarten performance expectation.*	○	○	○
Systems and System Models	●		
Energy and Matter *This CCC is not identified in any kindergarten performance expectation.*			○
Structure and Function	●	●	
Stability and Change *This CCC is not identified in any kindergarten performance expectation.*			

SCIENCE AND ENGINEERING PRACTICES

● Focal ● Other Emphasized ○ Additional Opportunity

	Needs of Plants and Animals	*Pushes and Pulls*	*Sunlight and Weather*
Asking Questions and Defining Problems	●	●	●
Developing and Using Models	●	●	●
Planning and Carrying Out Investigations	●	●	●
Analyzing and Interpreting Data	●	●	●
Using and Mathematics and Computational Thinking	●	○	●
Constructing Explanations and Designing Solutions	●	●	●
Engaging in Argument from Evidence	●	●	●
Obtaining, Evaluating, and Communicating Information	●	●	●

Phenomena, standards, and progressions

Grade 1

The Amplify Science grade 1 program progressively builds students' abilities to meet all grade-level performance expectations through a three- dimensional instructional sequence. The following is an overview of the sequence of units, a description of the progression of student learning across the year, and a summary of how the sequence meets all performance expectations for grade 1.

SEQUENCE OF UNITS

- *Animal and Plant Defenses*
- *Light and Sound*
- *Spinning Earth*

ANIMAL AND PLANT DEFENSES

Anchor phenomenon

Spruce the Sea Turtle lives in an aquarium and will soon be released back into the ocean, where she will survive despite ocean predators.

Student Role

Students play the role of marine scientists. In their role, students apply their understanding of plant and animal defense structures to explain to aquarium visitors how a sea turtle and her offspring can defend themselves from ocean predators when they are released into the wild.

Focal performance expectations

- 1-LS1-1: Mimicking Organisms' Structures
- 1-LS1-2: Parents Promote Survival of Offspring
- 1-LS3-1: Young Organisms Resemble Parents

Connections to other Performance Expectations

- K-2-ETS1-1: Defining the Problem
- K-2-ETS1-2: Developing Possible Solutions

LIGHT AND SOUND

Anchor phenomenon

A puppet show company uses light and sound to depict realistic scenes in puppet shows.

Student Role

Students take on the role of light and sound engineers for a puppet show company as they investigate cause and effect relationships to learn about the nature of light and sound. They apply what they learn to design shadow scenery and sound effects for a puppet show.

Focal performance expectations

- 1-PS4-1: Sound and Vibration
- 1-PS4-2: Seeing Requires Light
- 1-PS4-3: Light Interaction with Materials
- 1-PS4-4: Light and Sound for Communication
- K-2-ETS1-1: Defining the Problem
- K-2-ETS1-2: Developing Possible Solutions
- K-2-ETS1-3: Comparing Different Solutions

SPINNING EARTH

Anchor phenomenon

The sky looks different to Sai and his grandma when they talk on the phone.

Student Role

As sky scientists, students explain why a boy living in a place near them sees different things in the sky than his grandma when he talks to her on the phone. Students record, organize, and analyze observations of the sun and other sky objects as they look for patterns and make sense of the cycle of daytime and nighttime.

Focal performance expectations

- 1-ESS1-1: Observable Patterns of Sky Objects
- 1-ESS1-2: Amount of Daylight

PROGRESSION AND ORGANIZATION

The units in grade 1 were designed and sequenced to build students' expertise with the grade-level disciplinary core ideas (DCIs), science and engineering practices (SEPs) and crosscutting concepts (CCCs) while simultaneously considering the dimensions of first graders' language, social-emotional, and physical development across the school year. Each unit has focal SEPs and CCCs, carefully selected to support students in figuring out the unit's focal DCIs.

Students begin the year engaging with the ***Animal and Plant Defenses*** unit and focus on how animals and plants use their body parts in different ways for survival. The focal CCC of Structure and Function supports students in understanding how the parts of an animal function to help an animal get what it needs to survive and to not get eaten. Students engage with the SEP of Developing and Using Models and build models that explain how shells, spines, and camouflage function as defenses. In the ***Light and Sound*** unit, students build on what they learned about developing and using models as they engage with the SEP of Designing Solutions to build a projection and sound effect that meet a set of design goals. The CCC of Cause and Effect supports students in understanding relationships between light sources, materials, and bright or dark surfaces, as well as the relationship between sound and vibration. In the final unit of the year, ***Spinning Earth***, when nicer weather allows for making observations of the Sun's position in the sky, students develop facility with planning and carrying out investigations. They also focus on the SEP of Analyzing and Interpreting Data as they organize and reorganize data to compare and understand their observations. Students use the CCC of Patterns when they analyze data to search for patterns to explain why it is daytime in some places on Earth while it is nighttime at the same time in other places on Earth.

The DCIs emphasized in each unit work together to support deep explanations of the unit's anchor phenomenon. For example, in the *Light and Sound* unit, investigating light and sound in order to design a projection and sound effects for a puppet show leads students to construct ideas about Wave Properties (DCI PS4.A), Electromagnetic Radiation (DCI PS4.B), Information Technologies and Instrumentation, (DCI PS4.C) and ETS1.A: Defining and Delimiting Engineering Problems (DCI ETS1.A), and Developing Possible Solutions (DCI ETS1.B).

DISCIPLINARY CORE IDEAS

◦ Focal ● Emphasized

	Animal and Plant Defenses	*Light and Sound*	*Spinning Earth*
PS4.A: Wave Properties (1-PS4-1)		◦	
PS4.B: Electromagnetic Radiation (1-PS4-2, 1-PS4-3)		◦	●
PS4.C: Information Technologies and Instrumentation (1-PS4-4)		◦	
LS1.A: Structure and Function (1-LS1-1)	◦		
LS1.B: Growth and Development of Organisms (1-LS1-2)	◦		
LS1.D: Information Processing (1-LS1-1)	◦		
LS3.A: Inheritance of Traits (1-LS3-1)	◦		
LS3.B: Variation of Traits (1-LS3-1)	◦		
ESS1.A: The Universe and its Stars (1-ESS1-1)			◦
ESS1.B: Earth and the Solar System (1-ESS1-2)			◦
ETS1.A: Defining and Delimiting Engineering Problems (K-2-ETS1-1)	●	◦	
ETS1.B: Developing Possible Solutions (K-2-ETS1-2)	●	◦	
ETS1.C: Optimizing the Design Solution (K-2-ETS1-3)		◦	

CROSSCUTTING CONCEPTS

● Focal ● Emphasized ○ Additional Opportunity

	Animal and Plant Defenses	*Light and Sound*	*Spinning Earth*
Patterns	●	●	●
Cause and Effect	●	●	●
Scale, Proportion, and Quantity *This CCC is not identified in any kindergarten performance expectation.*		○	
Systems and System Models			●
Energy and Matter *This CCC is not identified in any kindergarten performance expectation.*			
Structure and Function	●		
Stability and Change *This CCC is not identified in any kindergarten performance expectation.*			○

SCIENCE AND ENGINEERING PRACTICES

● Focal ● Other Emphasized ○ Additional Opportunity

	Animal and Plant Defenses	*Light and Sound*	*Spinning Earth*
Asking Questions and Defining Problems	●	●	●
Developing and Using Models	●	○	●
Planning and Carrying Out Investigations	○	●	●
Analyzing and Interpreting Data	●	●	●
Using and Mathematics and Computational Thinking	○	○	●
Constructing Explanations and Designing Solutions	●	●	●
Engaging in Argument from Evidence	●	●	●
Obtaining, Evaluating, and Communicating Information	●	●	●

Phenomena, standards, and progressions

Grade 2

The Amplify Science grade 2 program progressively builds students' abilities to meet all grade-level performance expectations (PEs) through a three-dimensional instructional sequence. The following is an overview of the sequence of units, a description of the progression of student learning across the year, and a summary of how the sequence meets all performance expectations for grade 2.

SEQUENCE OF UNITS

- *Plant and Animal Relationships*
- *Properties of Materials*
- *Changing Landforms*

PLANT AND ANIMAL RELATIONSHIPS

Anchor phenomenon

No new chalta trees are growing in the fictional Bengal Tiger Reserve in India.

Student Role

In their role as plant scientists, students work to figure out why there are no new chalta trees growing in the Bengal Tiger Reserve, which is part of a broadleaf forest. Students investigate what the chalta tree needs to survive, then collect and analyze qualitative and quantitative data to solve the mystery.

Targeted performance expectations

- 2-LS2-1: Sunlight and Water for Plants
- 2-LS2-2: Animals' Role in Seed Dispersal
- 2-LS4-1: Diversity of Life in Different Habitats

Connections to other Performance Expectations

- 2-ESS2-2: Earth's Systems

PROPERTIES OF MATERIALS

Anchor phenomenon

Different glue recipes result in glues that have different properties.

Student Role

As glue engineers, students are challenged to create a glue for use at their school that meets a set of design goals. Students present an evidence-based argument of why their glue mixture will be good for their school to use.

Focal performance expectations

- 2-PS1-1: Properties of Materials
- 2-PS1-2: Materials for Specific Purposes
- 2-PS1-3: Pieces Can be Made Into New Objects
- 2-PS1-4: Changes Caused by Heating and Cooling
- K-2-ETS1-1: Defining Problems
- K-2-ETS1-3: Developing Possible Solutions

CHANGING LANDFORMS

Anchor phenomenon

The cliff that Oceanside Recreation Center is situated on appears to be receding over time.

Student Role

The director of the Oceanside Recreation Center gets a scare when a nearby cliff collapses overnight. Research reveals that the distance between the Recreation Center's flagpole and the

edge of the cliff have changed over time. Students play the role of geologists and work to figure out why the cliff has changed over time. Based on what they learn about erosion, they advise on whether it is safe to keep the center open even though the cliff is changing.

Focal performance expectations

- 2-ESS1-1: Fast and Slow Earth Events
- 2-ESS2-1: Slowing the Erosion of Land Forms
- 2-ESS2-2: Landforms and Bodies of Water
- 2-ESS2-3: Water on Earth

Connections to other Performance Expectations

- K-2-ETS1-1: Defining Problems

PROGRESSION AND ORGANIZATION

The units in grade 2 were designed and sequenced to build students' expertise with the grade-level disciplinary core ideas (DCIs), science and engineering practices (SEPs) and crosscutting concepts (CCCs). Each unit has focal SEPs and CCCs, carefully selected to support students in figuring out the unit's focal DCIs.

Students begin the year with a focus on the interdependent relationships between plants and animals in the *Plant and Animal Relationships* unit. The focal CCC of Systems and System Models supports students in understanding the system of structures that help plants get what they need to survive, as well as the interaction between different parts of a habitat system. Throughout the unit, students take on increasing responsibility in the focal SEP of Planning and Carrying Out Investigations to figure out what plants need to grow and how seeds get dispersed. In the *Properties of Materials* unit, students continue to plan and carry out investigations, but this time they are focused on conducting fair tests of their glue designs. Students engage in iterative cycles of Designing Solutions, the unit's focal SEP, applying what they learn about the properties of materials to improve their solutions. A focus on the CCC of Cause and Effect helps students discern the effects of adding particular substances to mixtures and of heating and cooling mixtures. Students continue to consider cause and effect relationships as they move on to the final unit of the year, *Changing Landforms*. In this unit, students engage in the focal SEP of Developing and Using Models to figure out how water can cause landforms to change over time.

The unit also emphasizes the CCC of Scale, Proportion, and Quantity, supporting students to make sense of how tiny changes to landforms can add up to larger changes over long periods of time.

The DCIs emphasized in each unit work together to support deep explanations of the unit's anchor phenomenon. For example, in the ***Changing Landforms*** unit, investigating why the cliff by a recreation center has changed shape leads students to construct ideas about The History of Planet Earth (DCI ESS1.C), Earth Materials and Systems (DCI ESS2.A), Plate Tectonics and Large-Scale System Interactions (DCI ESS2.B), and The Roles of Water in Earth's Surface Processes (DCI ESS2.C).

DISCIPLINARY CORE IDEAS

● Focal ● Other Emphasized

	Plant and Animal Relationships	Properties of Materials	Changing Landforms
PS1.A: Structure and Properties of Matter (2-PS1-1, 2-PS1-2, 2-PS1-3)		●	
PS1.B: Chemical Reactions (2-PS1-4)		●	
LS2.A: Interdependent Relationships in Ecosystems (2-LS2-1, 2-LS2-2)	●		
LS4.D: Biodiversity and Humans (2-LS4-1)	●		
ESS1.C: The History of Planet Earth (2-ESS1-1)			●
ESS2.A: Earth Materials and Systems (2-ESS2-1)			●
ESS2.B: Plate Tectonics and Large-Scale Systems Interactions (2-ESS2-2)	●		●
ESS2.C: The Roles of Water in Earth's Surface Processes (2-ESS2-3)			●
ETS1.A: Defining and Delimiting Engineering Problems (K-2-ETS1-1)		●	●
ETS1.B: Developing Possible Solutions (K-2-ETS1-2, 2-LS2-2)		●	
ETS1.C: Optimizing the Design Solution (K-2-ETS1-2, 2-LS2-2)		●	

CROSSCUTTING CONCEPTS

● Focal ● Other Emphasized ○ Additional

	Plant and Animal Relationships	Properties of Materials	Changing Landforms
Patterns		●	○
Cause and Effect	○	●	●
Scale, Proportion, and Quantity *This CCC is not identified in any Grade 2 PE.*	●	○	●
Systems and System Models *This CCC is not identified in any Grade 2 PE.*	●		
Energy and Matter		●	
Structure and Matter	●		
Stability and Change			●

SCIENCE AND ENGINEERING PRACTICES

● Focal ● Other Emphasized ○ Additional

	Plant and Animal Relationships	Properties of Materials	Changing Landforms
Asking Questions and Defining Problems			
Developing and Using Models			
Planning and Carrying Out Investigations			
Analyzing and Interpreting Data			
Using and Mathematics and Computational Thinking			
Constructing Explanations and Designing Solutions			
Engaging in Argument from Evidence			
Obtaining, Evaluating, and Communicating Information			

Phenomena, standards, and progressions

Grade 3

The Amplify Science grade 3 program progressively builds students' abilities to meet all the grade-level performance expectations through a three-dimensional instructional sequence. The following is an overview of the sequence of units, a description of the progression of student learning across the year, and a summary of how the sequence meets all performance expectations for grade 3.

SEQUENCE OF UNITS

- *Balancing Forces*
- *Inheritance and Traits*
- *Environments and Survival*
- *Weather and Climate*

BALANCING FORCES

Anchor phenomenon

The town of Faraday is getting a new train that floats above its tracks.

Student Role

Students are challenged to figure out how a floating train works in order to explain it to the citizens of Faraday. Students develop models of how the train rises, floats, and then falls back to the track, and then write an explanation of how the train works.

Targeted performance expectations

- 3-PS2-1: Balanced and Unbalanced Forces
- 3-PS2-2: Predicting Motion
- 3-PS2-3: Non-Touching Forces
- 3-PS2-4: Solve Problem with Magnets

Connections to other Performance Expectations

- 3-5-ETS1-1: Defining the Problem
- 3-5-ETS1-2: Developing Possible Solutions

INHERITANCE AND TRAITS

Anchor phenomenon

An adopted wolf in Graystone National Park ("Wolf 44") has some traits that appear similar to one wolf pack in the park and other traits that appear to be similar to a different wolf pack.

Student Role

Students play the role of wildlife biologists working in Graystone National Park. They study two wolf packs and are challenged to figure out why an adopted wolf ("Wolf 44") in one of the packs has certain traits. Students observe variation between and within different species, investigate inherited traits and those that result from the environment, and explain the origin of several of the adopted wolf's traits.

Targeted performance expectations

- 3-LS1-1: Life Cycles and Life Stages
- 3-LS2-1: Animals' Social Interactions
- 3-LS3-1: Traits are Inherited and Vary
- 3-LS3-2: Traits can be Influenced by Environment

ENVIRONMENTS AND SURVIVAL

Anchor phenomenon

Over the last 10 years, a population of grove snails has changed: The number of grove snails with yellow shells has decreased, while the number of snails with banded shells has increased.

Student Role

In their role as biomimicry engineers, students work to figure out how the traits of grove snails affect their survival in different environments, then apply what they learn to designing solutions to different problems. They explore how the traits of different organisms make them more likely or less likely to survive, collecting and interpreting data to understand how organisms' traits affect their survival in different environments. Students then apply their understanding to a new challenge: Using the structural traits of giraffes as inspiration, they design effective solutions for the removal of invasive plants.

Targeted performance expectations

- 3-LS4-1: Fossils and Evidence of Environment
- 3-LS4-2: Adaptive and Non-Adaptive Traits
- 3-LS4-3: Biological Evolution: Unity and Diversity
- 3-LS4-4: Solutions to Environmental Changes
- 3-5-ETS1-1: Defining the Problem
- 3-5-ETS1-2: Developing Possible Solutions
- 3-5-ETS1-3: Improving Designs

Connections to other Performance Expectations

- 3-LS4-3: Survival Impact of Different Environments

WEATHER AND CLIMATE

Anchor phenomenon

Three different islands, each a contender for becoming an Orangutan reserve, experience different weather patterns.

Student Role

In their role as meteorologists, students gather evidence to decide where to build an orangutan reserve by analyzing patterns in weather data to determine which of three fictional islands has weather most like that of orangutans' existing habitats, Borneo and Sumatra. Students then determine what additional evidence they will need to make the strongest argument. After choosing the strongest evidence, students use data to make arguments about which island's

weather is most similar to orangutans' hot, rainy habitats. They then discern patterns in where natural hazards occur to figure out what natural hazards the Wildlife Protection Organization must prepare for.

Targeted performance expectations

- 3-ESS2-1: Represent Weather Patterns
- 3-ESS2-2: Describe Climates
- 3-ESS3-1: Reducing Impact of Weather Hazards
- 3-LS4-3: Biological Evolution: Unity and Diversity

Connections to other Performance Expectations

- 3-5-ETS1-1: Defining Problems
- 3-5-ETS1-2: Developing Possible Solutions
- 3-5-ETS1-3: Improving Solutions

PROGRESSION AND ORGANIZATION

The units in grade 3 were designed and sequenced to build students' expertise with the grade-level disciplinary core ideas (DCIs), science and engineering practices (SEPs) and crosscutting concepts (CCCs). Each unit has focal SEPs and CCCs, carefully selected to support students in figuring out the unit's focal DCIs.

Students begin the year by investigating balanced and unbalanced forces in the *Balancing Forces* unit. Students engage in the focal SEP of Developing and Using Models, using and creating various digital, physical, and diagram models to construct and explain ideas about forces. The focal CCC of Stability and Change supports students in thinking about the changes that occur when forces on an object become unbalanced. Students also look for patterns as they investigate with magnets in order to identify the relationship between the forces on an object and the object's movement. In the *Inheritance and Traits* unit, students extend their thinking about the CCC of Patterns as they analyze data to identify patterns that provide evidence of inheritance and variation in the traits of organisms.

Students consider what information can be gleaned from available data as they delve deeply into the SEPs of Asking Questions and Planning and Carrying Out Investigations, focusing in particular on asking investigable questions. Students' understanding of traits serves them well as they move

on to the ***Environments and Survival*** unit, in which they consider adaptive and non-adaptive traits. The focal CCC of Structure and Function helps students make sense of how different traits make it easier or harder for organisms to survive in different environments. Students also consider the relationship between structure and function as they engage in the focal SEP of Designing Solutions, drawing inspiration from the adaptive traits they studied. Finally, students end the year with the ***Weather and Climate*** unit, when the higher probability of nice weather allows for measuring weather conditions outdoors. Students apply and deepen their understanding of the CCC of Patterns as they collect, analyze, and interpret weather data, identifying patterns that reveal differences in the climate of different regions and enable them to predict future weather. Contrasting day to day variations in weather with longer term stability also helps students develop a more nuanced understanding of stability and change. Students use weather data and their knowledge of weather patterns as they engage in Arguing from Evidence, the unit's focal SEP. They also have a chance to apply what they learned about designing solutions to design structures that can withstand a simulated natural hazard.

The DCIs emphasized in each unit work together to support deep explanations of the unit's anchor phenomenon. For example, in the ***Inheritance and Traits*** unit, investigating why a wolf in one of two Greystone National Park wolf packs has the traits it does leads students to construct ideas about the Growth and Development of Organisms (DCI LS1.B), Social Interactions and Group Behavior (DCI LS2.D), Inheritance of Traits (DCI LS3.A), and Variation of Traits (DCI LS3.B).

DISCIPLINARY CORE IDEAS

● Focal ● Other Emphasized

	Balancing Forces	Inheritance and Traits	Environments and Survival	Weather and Climate
PS2.A: Forces and Motion (3-PS2-1, 3-PS2-2)	●	●		
PS2.B: Types of Interactions (3-PS2-1, 3-PS2-3, 3-PS2-4)	●	●		
LS1.B: Growth and Development of Organisms (3-LS1-1)				
LS2.C: Ecosystem Dynamics, Functioning, and Resilience (3-LS4-4)			●	
LS2.D: Social Interactions and Group Behavior (3-LS2-1)				
LS3.A: Inheritance of Traits (3-LS3-1, 3-LS3-2)				
LS3.B: Variation of Traits (3-LS3-1, 3-LS3-2)				
LS4.A: Evidence of Common Ancestry and Diversity (3-LS4-1)			●	
LS4.B: Natural Selection (3-LS4-2)			●	
LS4.C: Adaptation (3-LS4-3)			●	●
LS4.D: Biodiversity and Humans (3-LS4-4)			●	
ESS2.D: Weather and Climate (3-ESS2-1, 3-ESS2-2)				●
ESS3.B: Natural Hazards (3-ESS3-1)				●
ETS1.A: Defining and Delimiting Engineering Problems (3-5-ETS1-1)	●	●	●	○
ETS1.B: Developing Possible Solutions (3-5-ETS1-2, 3-5-ETS1-3)	●	●	●	○
ETS1.C: Optimizing the Design Solution (3-5-ETS1-3)			●	○

CROSSCUTTING CONCEPTS

● Focal ● Other Emphasized ○ Additional

	Balancing Forces	Inheritance and Traits	Environments and Survival	Weather and Climate
Patterns	●	●	○	◉
Cause and Effect	●	●	●	●
Scale, Proportion, and Quantity				●
Systems and System Models			●	
Energy and Matter *This CCC is not identified in any Grade 3 PE.*				
Structure and Function *This CCC is not identified in any Grade 3 PE.*			◉	
Stability and Change *This CCC is not identified in any Grade 3 PE.*	◉	◉		◉

SCIENCE AND ENGINEERING PRACTICES

◉ Focal ● Other Emphasized ○ Additional

	Balancing Forces	Inheritance and Traits	Environments and Survival	Weather and Climate
Asking Questions and Defining Problems	●	●	●	●
Developing and Using Models	◉	◉	●	●
Planning and Carrying Out Investigations	●	●	●	●
Analyzing and Interpreting Data	◉	◉	◉	◉
Using and Mathematics and Computational Thinking	●	●	●	◉
Constructing Explanations and Designing Solutions	◉	◉	◉	◉
Engaging in Argument from Evidence	●	●	●	◉
Obtaining, Evaluating and Communicating Information	◉	◉	◉	◉

Phenomena, standards, and progressions

Grade 4

The Amplify Science grade 4 program progressively builds students' abilities to meet all the grade-level performance expectations through a three-dimensional instructional sequence. The following is an overview of the sequence of units, a description of the progression of student learning across the year, and a summary of how the sequence meets all performance expectations for grade 4.

SEQUENCE OF UNITS

- *Energy Conversions*
- *Vision and Light*
- *Earth's Features*
- *Waves, Energy, and Information*

ENERGY CONVERSIONS

Anchor phenomenon

The fictional town of Ergstown experiences frequent blackouts.

Student Role

Students take on the role of systems engineers for Ergstown, a fictional town that experiences frequent blackouts, and explore reasons why an electrical system can fail. Students apply what they learned as they choose new energy sources and energy converters for the town, then write arguments for why their design choices will make the town's electrical system more reliable.

Targeted performance expectations

- 4-PS3-1: Relationship Between Speed and Energy
- 4-PS3-2: Energy can be Transferred
- 4-PS3-4: Design an Energy Converter
- 4-ESS3-1: Energy and Fuels

- 3-5-ETS1-1: Defining the Problem
- 3-5-ETS1-2: Developing Possible Solutions
- 3-5-ETS1-3: Improving Designs

Connections to other Performance Expectations

- 4-PS3-3: Collisions
- 4-ESS3-2: Earth and Human Activity

VISION AND LIGHT

Anchor phenomenon

The population of Tokay geckos in a rain forest in the Philippines has decreased since the installation of new highway lights.

Student Role

As conservation biologists, students work to figure out why a population of Tokay geckos has decreased since the installation of new highway lights in the rain forest. Students use their understanding of vision, light, and information processing to figure out why an increase in light in the geckos' habitat is affecting the population.

Targeted performance expectations

- 4-PS4-2: Light is Necessary for Sight
- 4-LS1-1: Internal and External Structures
- 4-LS1-2: Patterns to Transfer Information

EARTH'S FEATURES

Anchor phenomenon

A mysterious fossil is discovered in a canyon within the fictional Desert Rocks National Park.

Student Role

Playing the role of geologists, students help the director of Desert Rocks National Park explain how and when a particular fossil formed and how it came to be in its current location. Students figure out what the environment of the park was like in the past and why it has so many visible rock layers.

Targeted performance expectations

- 4-ESS1-1: Landscape Changes
- 4-ESS2-1: Evidence of Weathering or Erosion
- 4-ESS2-2: Patterns of Earth's Features
- 4-ESS3-1: Energy and Fuels
- 4-ESS3-2: Reduce Impacts of Earth Processes

WAVES, ENERGY, AND INFORMATION

Anchor phenomenon

Mother dolphins in the fictional Blue Bay National Park seem to be communicating with their calves when they are separated at a distance underwater.

Student Role

In their role as marine scientists, students work to figure out how mother dolphins communicate with their calves. They write a series of scientific explanations with diagrams to demonstrate their growing understanding of how sound waves travel. Then they apply what they've learned about waves, energy, and patterns in communication to figure out how to create patterns that can communicate information over distances. As they solve these problems, students construct a foundational understanding of how waves transfer information from one place to another.

Targeted performance expectations

- 4-PS3-2 Energy Can Be Transferred
- 4-PS3-3: Collisions
- 4-PS4-1: Waves

- 4-PS4-3: Patterns to Transfer Information
- 4ESS3-2: Reduce Impacts of Earth Processes

Connections to other Performance Expectations

- 4-LS1-2: Info, Senses and the Brain
- 3-5-ETS1-2: Developing Possible Solutions
- 3-5-ETS1-3: Improving Designs

PROGRESSION AND ORGANIZATION

The units in grade 4 were designed and sequenced to build students' expertise with the grade-level disciplinary core ideas (DCIs), science and engineering practices (SEPs) and crosscutting concepts (CCCs). Each unit has focal SEPs and CCCs, carefully selected to support students in figuring out the unit's focal DCIs. Students begin the year with a focus on concepts about energy sources, transfer, and conversion in the ***Energy Conversions*** unit. An emphasis on the CCC of Systems and System Models helps students make sense of how each part of an electrical system plays a role in the system's ability to function. Students apply what they learn as they engage in the focal SEP of Designing Solutions to design and evaluate solutions to strengthen an electrical system, and construct evidence-based arguments for the best solution. Students' understanding of systems helps them as they move on to the ***Vision and Light*** unit and consider how an an animal's internal and external structures must work together as part of system for the animal to sense its environment and meet its needs. In this unit, students ask questions and engage in the focal SEP of Planning and Conducting Investigations to make sense of how various structures in the eye function to help an organism see. In the ***Earth's Features*** unit, students build on their experience with investigation as they use models to investigate how rock formation and erosion happen, and how these processes can change a landscape over time. The CCC of Stability and Change supports students as they engage in Arguing from Evidence, the unit's focal SEP, about the geological history of a canyon with different layers of exposed rock. In the ***Waves, Energy, and Information*** unit, students dive more deeply into the practice of Developing and Using Models as they work to understand how sound travels as a wave and other patterns in communication. Students have a chance to apply ideas about energy transfer from the beginning of the year to make sense of the way that particle collisions transfer energy in a sound wave. This unit also provides another opportunity to design solutions, this time to complete a communication challenge to send a code across a distance. The DCIs emphasized in each unit work together to support deep explanations of the unit's anchor phenomenon. For example, in the ***Vision and Light***

unit, investigating why the tokay gecko population is declining in one particular area of a Philippine rain forest leads students to construct ideas about Structure and Function (DCI LS1.A), Information Processing (DCI LS1.D), and Electromagnetic Radiation (DCI PS4.B).

DISCIPLINARY CORE IDEAS

● Focal ● Other Emphasized

	Energy Conversions	Vision and Light	Earth's Features	Waves, Energy, and Information
PS3.A: Definitions of Energy (UE.PS3A.a, UE.PS3A.b)	●			●
PS3.B: Conservation of Energy and Energy Transfer (UE.PS3B.a, UE.PS3B.b, UE.PS3B.c)	●			●
PS3.C: Relationship Between Energy and Forces (UE.PS3C.a)				●
PS3.D: Energy in Chemical Processes and Everyday Life (UE.PS3D.a)	●			
PS4.A: Wave Properties (UE.PS4A.a, UE.PS4A.b)				●
PS4.B: Electromagnetic Radiation (UE.PS4B.a)		●		
PS4.C: Information Technologies and Instrumentation (4-PS4-3)				●
LS1.A: Structure and Function (UE.LS1A.a)		●		
LS1.D: Structure and Function Information Processing (UE.LS1D.a)		●		●
ESS1.C: The History of Planet Earth (UE.ESS1C.a)			●	
ESS2.A: Earth Materials and Systems (UE.ESS2A.a)			●	
ESS2.B: Plate Tectonics and Large-Scale System Interactions (UE.ESS2B.a)			●	
ESS2.E: Biogeology (UE.ESS2E.a)			●	
ESS3.A: Natural Resources (UE.ESS3A.a)	●			
ESS3.B: Natural Hazards (UE.ESS3B.a)	●		●	●

ETS1.A: Defining and Delimiting Engineering Problems (3-5-ETS1-1, 4-PS3-4)	●			
ETS1.B: Developing Possible Solutions to Engineering Problems (UE.ETS1B.d)	●			●
ETS1.C: Optimizing the Design Solution (UE.ETS1C.a)	●			●

CROSS CUTTING CONCEPTS

● Focal ● Other Emphasized

	Energy Conversions	Vision and Light	Earth's Features	Waves, Energy, and Information
Patterns	○	○	●	●
Cause and Effect	●	●	●	○
Scale, Proportion, and Quantity *This CCC is not identified in any grade 4 performance expectation.*				●
Systems and System Models	●	●		
Energy and Matter	●			●
Structure and Function *This CCC is not identified in any grade 4 performance expectation.*		●		
Stability and Change *This CCC is not identified in any grade 4 performance expectation.*	●		●	

SCIENCE AND ENGINEERING PRACTICES

● Focal ● Other Emphasized ○ Additional

	Energy Conversions	Vision and Light	Earth's Features	Waves, Energy, and Information
Asking Questions and Defining Problems	●	●	●	●
Developing and Using Models	●	●	●	●
Planning and Carrying Out Investigations	●	●	●	●
Analyzing and Interpreting Data	●	●	●	●
Using and Mathematics and Computational Thinking	●	○	○	●
Constructing Explanations and Designing Solutions	●	●	●	●
Engaging in Argument from Evidence	●	●	●	●
Obtaining, Evaluating and Communicating Information	●	●	●	●

Phenomena, standards, and progressions

Grade 5

The Amplify Science grade 5 program progressively builds students' abilities to meet all the grade-level performance expectations through a three-dimensional instructional sequence. The following is an overview of the sequence of units, a description of the progression of student learning across the year, and a summary of how the sequence meets the performance expectations for grade 5.

SEQUENCE OF UNITS

- *Patterns of Earth and Sky*
- *Modeling Matter*
- *The Earth's System*
- *Ecosystem Restoration*

PATTERNS OF EARTH AND SKY

Anchor phenomenon

An ancient artifact depicts what we see in the sky at different times — the sun during the daytime and different stars during the nighttime — but it is missing a piece.

Student Role

Playing the role of astronomers, students help a team of archaeologists figure out what the missing piece of a recently discovered artifact might have depicted. As they learn about the sun and other stars and the movement of Earth, students can explain what is shown on the artifact and what might be on the missing piece.

Targeted performance expectations

- 5-PS2-1: Gravity
- 5-ESS1-1: Apparent Brightness of Stars
- 5-ESS1-2: Patterns of Daily and Seasonal Changes

MODELING MATTER

Anchor phenomenon

Chromatography is a process for separating mixtures. Some solids dissolve in a salad dressing while others do not. Oil and vinegar appear to separate when mixed in a salad dressing.

Student Role

In the role of food scientists working for Good Food Production, Inc., students are introduced to the idea that all matter is made of particles too small to see, and that each different substance is made of particles (molecules) that are unique. They are then challenged to solve two problems: One problem requires them to separate a mixture, and the other requires them to make unmixable substances mix. Students are challenged to use the particulate model of matter to explain their work to the CEO of the company.

Targeted performance expectations

- 5-PS1-1: Matter is made of Particles
- 5-PS1-2: Matter and its Interactions
- 5-PS1-3: Properties of Materials

Connections to other Performance Expectations

- 5-PS1-4: Mixing Substances
- 3-5-ETS1-2: Developing Possible Solutions

THE EARTH SYSTEM

Anchor phenomenon

East Ferris, a city on one side of the fictional Ferris Island, is experiencing a water shortage, while West Ferris is not.

Student Role

The cities of East Ferris and West Ferris are located on different sides of a mountain on the fictional Ferris Island. East Ferris is having a water shortage while West Ferris is not. As water resource engineers, students learn about the Earth system to help figure out what is causing the water shortage problem and design possible solutions, including freshwater collection systems and proposals for using chemical reactions to treat wastewater.

Targeted performance expectations

- 5-ESS2-1: Interaction of Spheres
- 5-ESS2-2: Distribution of Water on Earth
- 5-ESS3-1: Protecting Earth
- 5-PS1-1: Matter is Made of Particles
- 5-PS1-2: Conservation of Matter
- 5-PS1-4: Mixing Substances
- 3-5-ETS1-1: Defining Problems
- 3-5-ETS1-2: Developing Possible Solutions
- 3-5-ETS1-3: Improving Solutions

Connections to other Performance Expectations

- 5-LS2-1: Ecosystems: Interactions
- 5-PS1-3: Properties of Materials

ECOSYSTEM RESTORATION

Anchor phenomenon

The jaguars, sloths, and cecropia trees in a reforested section of a Costa Rican rain forest are not growing and thriving.

Student Role

Students engage as ecologists as they figure out why the plants and animals in a failing area of the Costa Rican rain forest ecosystem aren't growing and thriving. They use what they know about

matter and energy flows in ecosystems to make arguments about the cause of the problems in the ecosystem and to make recommendations for ecosystem restoration.

Targeted performance expectations

- 5-LS1-1: Plant Materials from Air and Water
- 5-LS2-1: Matter Flows
- 5-ESS3-1: Protecting Earth
- 5-PS1-1: Matter is Made of Particles
- 5-PS3-1: Use and Origin of Energy in Food

Connections to other Performance Expectations

- 5-PS1-4: Matter and Its Interactions
- 3-5-ETS1-1: Defining the Problem
- 3-5-ETS1-2: Developing Possible Solutions

PROGRESSION AND ORGANIZATION

The units in grade 5 were designed and sequenced to build students' expertise with the grade-level disciplinary core ideas (DCIs), science and engineering practices (SEPs) and crosscutting concepts (CCCs). Each unit has focal SEPs and CCCs, carefully selected to support students in figuring out the unit's focal DCIs.

Students begin the year with a focus on patterns in the daytime and nighttime sky in the *Patterns of Earth and Sky* unit. Physical models and an initial focus on scale help students make sense of the vast distances to the stars, and the focal CCC of Patterns supports students' identification of and sense-making about patterns in the sky. Students use a digital simulation as they engage in the focal SEP of Planning and Carrying Out Investigations to gather evidence to support their ideas about sky patterns. Next, students turn their attention from the tremendous scale of outer space to the nanoscale of the particles that make up matter in the *Modeling Matter* unit. By delving more deeply into the practice of Developing and Using Models and focusing on the CCC of Scale, Proportion, and Quantity, students develop a nuanced understanding of how properties of matter at the nanoscale affect observable scale phenomena. Students also extend their experience with investigations as they conduct hands-on investigations of substances and mixtures.

In *The Earth System* unit, students build on their understanding of matter and the relationship between nanoscale and observable scale phenomena. The context of a water shortage pushes students to delve deeper into ideas about the properties of matter and chemical reactions, as well as concepts related to Earth system interactions, water distribution, and human impact on the environment. Students apply their understanding of these interdisciplinary ideas as they engage in the focal SEP of Designing Solutions, iteratively designing solutions to a water shortage problem. A focus on the CCC of Systems and System Models supports students to construct an understanding of how the hydrosphere, atmosphere, and geosphere interact, and students apply a systems lens to engineering design. Finally, in the *Ecosystem Restoration* unit, students gain further experience with the nature of matter, human impact on the environment, and engineering and design, but with a focus on the movement of matter and energy in ecosystems. The focal CCC of Energy and Matter supports students in understanding the necessary and limiting role that energy and matter flows play in an ecosystem. Students also build on their learning about systems and system models as they use systems thinking to analyze ecosystems. By engaging in the focal SEP of Engaging in Argument from Evidence, which has been introduced in the year's earlier units, students make sense of what is causing a rain forest ecosystem to fail and what should be done about it.

The DCIs emphasized in each unit work together to support deep explanations of the unit's anchor phenomenon (or phenomena). For example, in the *Patterns of Earth and Sky* unit, investigating why an ancient artifact seems to show patterns in the daytime and nighttime sky leads students to construct ideas about The Universe and its Stars (DCI ESS1.A), Earth and the Solar System (DCI ESS1.B), and Types of Interactions (DCI PS2.B).

DISCIPLINARY CORE IDEAS

● Focal ● Other Emphasized

	Patterns of Earth and Sky	*Modeling Matter*	*The Earth System*	*Ecosystem Restoration*
PS1.A: Structure and Properties of Matter (5-PS1-1, 5-PS1-2, 5-PS1-3)		●	●	●
PS1.B: Chemical Reactions (5-PS1-4, 5-PS1-2)			●	●
PS2.B: Types of Interactions (5-PS2-1)	●			
PS3.D: Energy in Chemical Processes and Everyday Life (5-PS3-1)				●
LS1.C: Organization for Matter and Energy Flow in Organisms (5-LS1-1, 5-PS3-1)				●
LS2.A: Interdependent Relationships in Ecosystems (5-LS2-1)				●
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems (5-LS2-1)			●	●
ESS1.A: The Universe and its Stars (5-ESS1-1)	●			
ESS1.B: Earth and the Solar System (5-ESS1-2)	●			
ESS2.A: Earth Materials and Systems (5-ESS2-1)			●	
ESS2.C: The Roles of Water in Earth's Surface Processes (5-ESS2-2)			●	
ESS3.C: Human Impacts on Earth Systems (5-ESS3-1)			●	●
ETS1.A: Defining and Delimiting Engineering Problems (3-5-ETS1-1)			●	●
ETS1.B: Developing Possible Solutions (3-5-ETS1-2, 3-5-ETS1-3)		●	●	●
ETS1.C: Optimizing the Design Solution (3-5-ETS1-3)			●	

CROSSCUTTING CONCEPTS

● Focal ● Other Emphasized ○ Additional Opportunity

	Patterns of Earth and Sky	*Modeling Matter*	*The Earth System*	*Ecosystem Restoration*
Patterns	●	●	○	○
Cause and Effect	●	●	●	●
Scale, Proportion, and Quantity	●	●	●	●
Systems and System Models	●	○	●	●
Energy and Matter		●	●	●
Structure and Function *This CCC is not identified in any Grade 5 PE.*		●		
Stability and Change *This CCC is not identified in any Grade 5 PE.*	○	●	○	○

SCIENCE AND ENGINEERING PRACTICES

● Focal ● Other Emphasized ○ Additional Opportunity

	Patterns of Earth and Sky	*Modeling Matter*	*The Earth System*	*Ecosystem Restoration*
Asking Questions and Defining Problems	●	●	●	●
Developing and Using Models	●	●	●	●
Planning and Carrying Out Investigations	●	●	●	●
Analyzing and Interpreting Data	●	●	●	●
Using and Mathematics and Computational Thinking	●	○	○	●
Constructing Explanations and Designing Solutions	●	●	●	●
Engaging in Argument from Evidence	●	●	●	●
Obtaining, Evaluating and Communicating Information	●	●	●	●

Phenomena, standards, and progressions

Grade 6

The Amplify Science units can be arranged at the discretion of the individual school, but suggested sequences are available. The grade 6 program in the suggested sequence below progressively builds students' abilities to meet all the Next Generation Science Standards (NGSS) grade-level performance expectations through a three-dimensional instructional sequence. The following is an overview of the sample sequence of units, a description of the progression of student learning across the year, and a summary of how the sequence meets all NGSS performance expectations for grade 6.

Scroll down to see the phenomenon, student role, and performance expectations by unit, or click to jump to the **Progression and Organization**, **Disciplinary Core Ideas**, **Crosscutting Concepts Core Ideas**, or **Science and Engineering Practices**.

SEQUENCE OF UNITS

- *Microbiome*
- *Metabolism*
- *Metabolism Engineering Internship*
- *Traits and Reproduction*
- *Thermal Energy*
- *Ocean, Atmosphere, and Climate*
- *Weather Patterns*
- *Earth's Changing Climate*
- *Earth's Changing Climate Engineering Internship*

MICROBIOME

Anchor phenomenon −

The presence of 100 trillion microorganisms living on and in the human body may keep the body healthy.

Student Role

Student Role: As microbiological researchers, students must figure out why a fecal transplant cured a patient suffering from a deadly C. difficile infection. In the process, they learn about cells and about interactions among organisms.

Focal performance expectations

- LS1-1: Living Things Made of Cells
- LS1-2: Cell Parts
- LS1-3: Body Systems

Connections to other performance expectations

- LS2-1: Resources and Populations
- LS2-2: Ecosystem Relationships

METABOLISM

Anchor phenomenon

Elisa, a young patient, feels tired all the time.

Student Role

Students take on the role of medical researchers, and diagnose a patient whose body systems aren't working. They learn about cellular respiration and how body systems work together to get molecules to the cells.

Focal performance expectations

- LS1-1: Living Things Made of Cells
- LS1-2: Cell Parts
- LS1-3: Body Systems
- LS1-7: Cellular Respiration

- LS1-8: Sensory Receptors

METABOLISM ENGINEERING INTERNSHIP

Anchor phenomenon

Designing health bars with different molecular compositions can effectively meet the metabolic needs of patients or rescue workers.

Student Role

As food engineer interns, students apply their knowledge of human metabolism, as well as engineering and design concepts, to design a recipe for an energy bar that meets the needs of populations in areas devastated by natural disasters.

Focal performance expectations

- ETS1-1: Criteria and Constraints
- ETS1-2: Evaluating Solutions
- ETS1-3: Analyzing Results
- ETS1-4: Modeling and Iterative Testing

Connections to other performance expectations

- LS1-7: Cellular Respiration

TRAITS AND REPRODUCTION

Anchor phenomenon

Darwin's bark spider offspring have different silk flexibility traits, even though they have the same parents.

Student Role

Working as biomedical scientists, students investigate the causes of surprising variation in spider silk flexibility. Students learn why organisms — even parents, offspring, and siblings — vary in their traits.

Focal performance expectations

- LS1-2: Cell Parts
- LS1-4: Behaviors and Structures: Reproduction
- LS1-5: Growth
- LS3-1: Gene, Protein, Trait, and Mutations
- LS3-2: Sexual vs. Asexual Reproduction

Connections to other performance expectations

- LS1-3: Body Systems
- LS4-5: Artificial Selection and Genetic Engineering

THERMAL ENERGY

Anchor phenomenon

One of two proposed heating systems for Riverdale School will best heat the school.

Student Role

In their role as thermal scientists, students evaluate competing proposals for heating a school, applying what they learn about matter, energy, and temperature.

Focal performance expectations

- PS3-3: Thermal Energy Transfer
- PS3-4: Energy and Temperature
- PS3-5: Motion and Energy Transfer

Connections to other performance expectations

- PS1-1: Atomic Theory/Molecules
- PS1-4: Phase Change
- PS2-1: Newton's 3rd Law (Equal and Opposite Forces)

OCEAN, ATMOSPHERE, AND CLIMATE

Anchor phenomenon

During El Niño years, the air temperature in Christchurch, New Zealand is cooler than usual.

Student Role

As climatologists, students must explain the pattern of temperature changes in El Niño years, which are impacting agriculture around the Pacific. They learn about how sunlight, ocean, and atmosphere interact to produce regional climate.

Focal performance expectations

- ESS2-6: Climate Patterns

Connections to other performance expectations

- PS1-4: Phase Change
- PS3-3: Thermal Energy Transfer
- ESS2-3: Evidence for Plate Motion
- ESS2-5: Air Masses
- ESS3-2: Natural Hazards

WEATHER PATTERNS

Anchor phenomenon

In recent years, rainstorms in Galetown have been unusually severe.

Student Role

Students play the role of forensic meteorologists who must explain why powerful storms have increased after a manmade lake was built. They learn how air masses, water, and energy from the Sun produce weather phenomena.

Focal performance expectations

- ESS2-4: The Water Cycle
- ESS2-5: Air Masses

Connections to other performance expectations

- PS1-4: Phase Change
- PS3-3: Thermal Energy Transfer
- ESS2-1: Earth's Materials
- ESS2-6: Climate Patterns
- ESS3-2: Natural Hazards

EARTH'S CHANGING CLIMATE

Anchor phenomenon

The ice on Earth's surface is melting.

Student Role

In their role as climatologists, students must explain why Earth's ice is melting. They learn about how changes in the atmosphere are affecting the energy balance in the Earth's system, and about humans' role in these changes.

Focal performance expectations

- ESS3-3: Designs to Minimize Impact
- ESS3-4: Human Population
- ESS3-5: Factors for Global Temperature

Connections to other performance expectations

- LS2-1: Resources and Populations
- LS2-4: Changes Affect Populations
- ESS3-2: Natural Hazards
- ESS3-4: Human Population

EARTH'S CHANGING CLIMATE ENGINEERING INTERNSHIP

Anchor phenomenon

Designing rooftops with different modifications can reduce a city's impact on climate change.

Student Role

As civil engineering interns, students apply design and engineering concepts as they create a plan for making changes to building rooftops. Their goal is to make a city more energy efficient, and thus reduce the carbon dioxide produced from combustion.

Focal performance expectations

- ESS3-3: Designs to Minimize Impact
- ETS1-1: Criteria and Constraints
- ETS1-2: Evaluating Solutions
- ETS1-4: Modeling and Iterative Testing
-

Connections to other performance expectations

- PS4-2: Waves Interact with Materials
- ESS3-5: Factors for Global Temperature

PROGRESSION AND ORGANIZATION

The units in grade 6 are designed and sequenced to build students' expertise with the grade- level disciplinary core ideas (DCIs), science and engineering practices (SEPs) and crosscutting concepts (CCCs). The year begins with a launch unit, *Microbiome*, where students are introduced to essential practices, routines, and approaches that will serve as touchstones for each following unit. An important example of this is the SEP of Engaging in Argument from Evidence. Students are introduced to the practice of scientific argumentation in the launch unit, then build on this understanding through the year, with each unit focusing more in-depth on one aspect of the practice. The *Microbiome* unit also has an emphasis on the CCC of Scale, Proportion, and Quantity which students will draw upon in the *Metabolism*, *Metabolism Engineering Internship, Traits and Reproductio*n, and *Thermal Energy* units as they make sense of phenomena at the macro scale with causes at a much smaller scale.

Concepts and practices are connected across grade 6. For example, across the sequence of the *Microbiome*, *Metabolism*, and *Traits and Reproduction* units, students are introduced to cells, and deepen their understanding about cells' functions and how they get what they need. (They will continue this learning in grade 7.) Across the sequence of the *Thermal Energy*; *Ocean, Atmosphere, and Climate*; *Weather Patterns*; *Earth's Changing Climate*; and *Earth's Changing Climate Engineering Internship* units, students build a deepening understanding of energy transfer and its effects on Earth systems. The *Metabolism Engineering Internship* unit follows the *Metabolism* unit and requires students to apply what they learned in the *Metabolism* unit to design a solution to an engineering problem. The same is true of the *Earth's Changing Climate Engineering Internship* unit and the *Earth's Changing Climate* unit.

Each unit has a particular emphasis on certain DCIs, CCC's, and SEP's, with combinations that work together to support deep explanations of the anchor phenomena of each unit. For example, in the *Weather Patterns* unit, investigating the cause of more frequent severe storms leads students to construct ideas about Cycling of Water through Earth's Systems (DCI ESS2-4) and Air Masses

and Weather Patterns (DCI ESS2-5). The use of the SEP of modeling and the CCC of Stability and Change serve to help students better understand something difficult to observe directly: the way energy transfers between air parcels, then reaches equilibrium.

Unit abbreviations: *Microbiome* (MB), *Metabolism* (MET), *Metabolism Engineering Internship* (MET EI), *Traits and Reproduction* (TR), *Thermal Energy* (TE), *Ocean, Atmosphere, and Climate* (OAC), *Weather Patterns* (WP), *Earth's Changing Climate* (ECC), *Earth's Changing Climate Engineering Internship* (ECC EI).

DISCIPLINARY CORE IDEAS

● Focal ● Other Emphasized

	MB	MET	MET EI	TR	TE	OAC	WP	ECC	ECC EI
LS1.A: Structure and Function (MS-LS1-1, MS-LS1-2, MS-LS1-3)	●	●		●					
LS1.B: Growth and Development of Organisms (MS-LS1-4, MS-LS3-2)				●					
LS1.D: Information Processing (MS-LS1-8)		●							
LS3.A: Inheritance of Traits (MS-LS3-2)				●					
LS3.B: Variation of Traits (MS-LS3-2)				●					
ESS2.C: The Roles of Water in Earth's Surface Processes (MS-ESS2-4, MS-ESS2-5, MS-ESS2-6)						●	●		
ESS2.D: Weather and Climate (MS-ESS2-5, MS-ESS2-6)						●	●		
ESS3.C: Human Impacts on Earth Systems (MS-ESS3-3)								●	●
ESS3.D: Global Climate Change (MS-ESS3–5)								●	●
PS3.A: Definitions of Energy (MS-PS3-3, MS-PS3-4)					●	●	●		
PS3.B: Conservation of Energy and Energy Transfer (MS-PS3-3, MS-PS3-4, MS-PS3–5)					●	●	●		
ETS1.A: Defining and Delimiting an Engineering Problem (MS-ETS1-1, MS-PS3-3)			●						●
ETS1.B: Developing Possible Solutions (MS-ETS1-4, MS-PS3-3)			●						●
ETS1.C: Optimizing the Design Solution (MS-ETS1-3, MS-ETS1-4)			●						●

CROSSCUTTING CONCEPTS

● Focal ● Other Emphasized ○ Additional

	MB	MET	MET EI	TR	TE	OAC	WP	ECC	ECC EI
Patterns	○		●		○	●			
Cause and Effect	●		●	●		●	●	●	●
Scale, Proportion, and Quantity	●	●	●	○	●	●			●
Systems and System Models		●			●			●	●
Energy and Matter		●	●		●	●	●	●	○
Stability and Change	○				●		●	●	
Structure and Function				●					

SCIENCE AND ENGINEERING PRACTICES

● Focal ● Other Emphasized ○ Additional

	MB	MET	MET EI	TR	TE	OAC	WP	ECC	ECC EI
Asking Questions and Defining Problems	●	●	●	●	●	●	●	●	●
Developing and Using Models	●	●	●	●	●	●	●	●	●
Planning and Carrying Out Investigations	●	●	●	●	●	●	●	●	●
Analyzing and Interpreting Data	●	●	●	○	●	●	●	●	●
Using and Mathematics and Computational Thinking	●	○	●	○	●	○	●	●	●
Constructing Explanations and Designing Solutions	●	●	●	●	●	●	●	●	●
Engaging in Argument from Evidence	●	●	●	●	●	●	●	●	●
Obtaining, Evaluating and Communicating Information	●	●	●	●	●	●	●	●	●

Amplify Reading | 6–8

Scope and Sequence

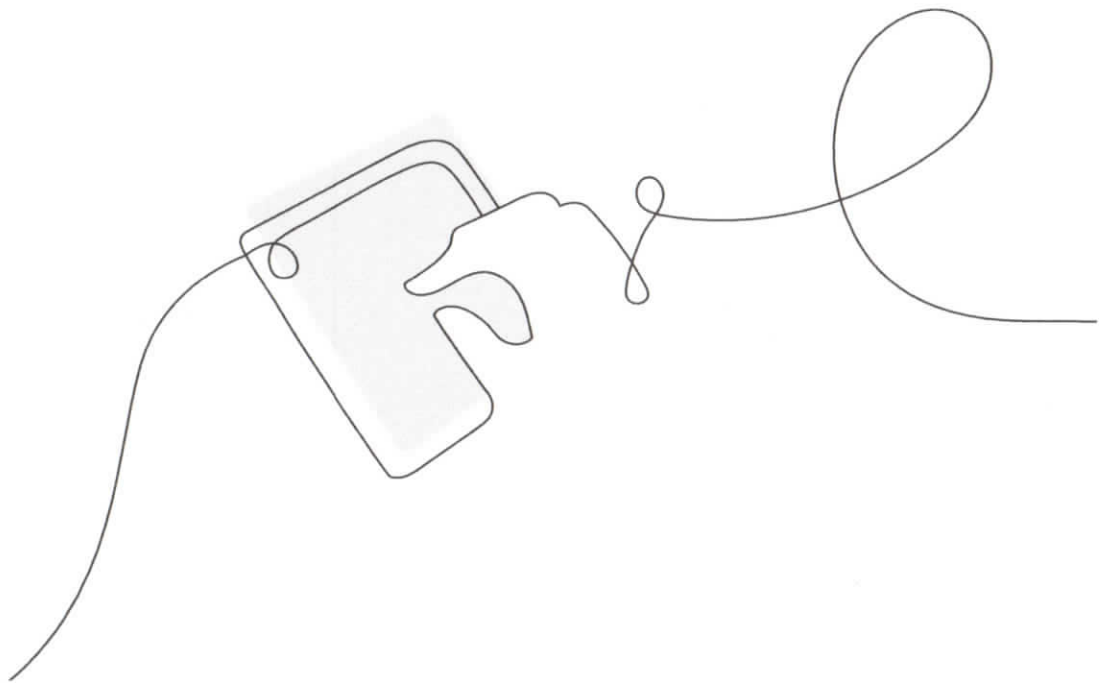


Table of contents

Chapter 1: Arguments and Their Structure

Students learn to build arguments using claims, evidence, and reasons.

Student activities

Phase 1 (Interactive instruction)

- Identify claims, evidence, and reasons in short arguments.
- Write a short argument.
- Fix broken arguments.
- Match evidence and reasons to sub-claims in a longer argument.

Phase 2 (Guided close reading)

- Analyze a longer argument line by line, identifying the parts of the argument and identifying weaknesses.

Phase 3 (Creative application)

- Create a longer argument to transmit on billboards that attempts to convince humans that we can't trust the Machines.

Featured texts

Phase 1 (Interactive instruction)

All levels

- Several short texts written from the perspective of the Machines, with claims such as:
  - The Dome is the perfect place for humans
  - Security-Bots are your friends
  - Human comfort is a primary goal of Machines
- A five-paragraph text arguing that fantasy was the most interesting genre before the Machine takeover

Phase 2 (Guided close reading)

All levels

- A six-paragraph argument written by a citizen of the Dome: Machines make humans less smart.

Chapter 2: Setting and Mood

Students learn to analyze how descriptions of setting evoke mood for the reader.

Student activities

Phase 1 (Interactive instruction)

- Define setting and mood.
- Identify language that reveals setting and language that creates mood.
- Use a "Mood Mapper" to evaluate where words should be placed on two different axes: positive/negative and high energy/low energy.
- Use precise language to describe the mood created by a description of a setting.

Phase 2 (Guided close reading)

- Read a literary passage that describes two similar settings; analyze word choices to contrast the two moods.

Phase 3 (Creative application)

- Choose a secret hideout and write a message describing it, using as much mood-creating language as you can. Make a "beacon video" for your hideout.

Featured texts

Phase 1 (Interactive instruction)

Core

- A paragraph from *Where the Red Fern Grows* by Wilson Rawls
- Two one-paragraph texts describing contrasting settings in the Dome
- Paragraphs from *Paul Clifford* by Edward George Bulwer-Lytton and *White Fang* by Jack London

Extra Support

- Short descriptions of settings in the Dome

Phase 2 (Guided close reading)

Core

- An excerpt from *Wuthering Heights* by Emily Brontë

Extra Support

- Two excerpts from *Harry Potter and the Sorcerer's Stone* by J.K. Rowling

Chapter 3: Pathos

Students learn to evaluate methods of persuasion in pathos arguments.

Student activities

Phase 1 (Interactive instruction)

- Define pathos.
- Use a model to map how pathos works: speaker's message → audience's feelings → audience's reaction.
- Identify devices used in propaganda and other short pathos messages.

Phase 2 (Guided close reading)

- Analyze an author's use of devices to target specific audiences in a longer speech; explain what effects those devices were designed to create.

Phase 3 (Creative application)

- Create a video message using pathos devices to create a desired effect in an audience; transmit it on LifeScreens.

Featured texts

Phase 1 (Interactive instruction)

All levels

- Short pathos arguments found in the Dome
- Propaganda posters created by the Machines
- Propaganda posters from WWII

Phase 2 (Guided close reading)

All levels

- An abridged version of President Reagan's *Challenger* speech

Chapter 4: Word Choice and Tone

Students learn to analyze word choices to determine tone.

Student activities

Phase 1 (Interactive instruction)

- Define tone.
- Identify which of two words creates a more positive or negative tone in a sentence.
- Use a "Tone Mapper" to evaluate where words should be placed on two different axes: positive/negative and strong/weak.
- Use precise language to describe the tone evoked by an author's word choices.
- Make word choices to convey a particular tone.

Phase 2 (Guided close reading)

- Contrast the tone of two different characters toward the same subject using the "Tone Tessellator."

Phase 3 (Creative application)

- In a choose-your-own adventure, make choices about how to engage with C3RB3RUS, an AI guarding an ancient library. Convey the right tone to gain access to the library.

Featured texts

Phase 1 (Interactive instruction)

Core

- Short descriptions of characters, situations, and ideas
- Machines' descriptions of humans

Extra Support

- Short descriptions of characters, situations, and ideas

Phase 2 (Guided close reading)

Core

- An excerpt from the Prometheus myth as told by Bernard Evslin

Extra Support

- Two excerpts from *Animal Farm*

Chapter 5: Logos

Students learn to identify, analyze, evaluate, and create logos arguments.

Student activities

Phase 1 (Interactive instruction)

- Define logos, generalization, and key components of generalization logos arguments.
- Distinguish arguments that use logos from arguments that use another type of reasoning.
- Identify claims, evidence, and explicit or implicit reasons in generalizations.
- Evaluate whether generalizations are strong or hasty, fair or biased.

Phase 2 (Guided close reading)

- Identify claims, evidence, and explicit or implicit reasons in the generalizations made by the Machines.
- Evaluate whether the Machines' generalizations are strong or hasty, fair or biased.

Phase 3 (Creative application)

- Gather evidence from various documents collected by the Last Readers and write a logical argument about what kind of new technology has been used to create the villain known as "the New Machine." Is it a hologram, an android, or a hybrid?

Featured texts

Phase 1 (Interactive instruction)

Core

- Short arguments about Robodogs, hoverboarding, and other aspects of life in the Dome
- Short arguments about life before the Dome

Extra Support

- Short arguments about Robodogs, hoverboarding, and other aspects of life in the Dome
- Short arguments about life before the Dome

Phase 2 (Guided close reading)

Core

- Three scientific documents composed by the Machines, each consisting of observations and conclusions about humans and plans to develop new technologies

Extra Support

- A confidential document that includes observations from five Dome doctors about how human bodies are similar to and different from Machines

Phase 3 (Creative application)

All levels

- Various documents collected by the Last Readers, including reports and interviews about a new technology being developed by the Machines

Chapter 6: Figurative Language

Students learn to analyze and use figurative language.

Student activities

Phase 1 (Interactive instruction)

- Distinguish between literal and figurative language.
- Identify metaphors, similes, and personification.
- Analyze what an extended metaphor or simile conveys about its tenor and vehicle.
- Write an extended simile that provides insight into an experience.

Phase 2 (Guided close reading)

- Analyze a poet's use of extended metaphor to develop a concrete description of an abstract idea.

Phase 3 (Creative application)

- Create a message using figurative language to appeal to the human side of a human-machine hybrid.

Featured texts

Phase 1 (Interactive instruction)

Core

- Quotes from Martin Luther King, Jr.'s "I Have a Dream" speech; F. Scott Fitzgerald's *The Great Gatsby*; William Wordsworth's "I Wandered Lonely as a Cloud;" William Shakespeare's *Romeo and Juliet*, *Macbeth*, and *As You Like It*; Foreigner's "Cold as Ice;" Sharon Hendricks' "Dinnertime Chorus;" and Winston Groom's *Forrest Gump*

Extra Support

- Quotes from Roald Dahl's *The Twits* and *Fantastic Mr. Fox*, James Joyce's *Ulysses*, Neil Gaiman's *The Sandman*, William Shakespeare's *Romeo and Juliet* and *As You Like It*, Foreigner's "Cold as Ice," Sharon Hendricks' "Dinnertime Chorus," Winston Groom's *Forrest Gump*, Kanye West's "Diamonds from Sierra Leone" (featuring Jay-Z), Radiohead's "The Numbers," and "Let It Go" from *Frozen*

Phase 2 (Guided close reading)

Core

- Emily Dickinson's "'Hope' is the thing with feathers"

Extra Support

- Langston Hughes' "Mother to Son"

Chapter 7: Ethos

Students learn to identify, analyze, and create ethos arguments.

Student activities

Phase 1 (Interactive instruction)

- Define ethos.
- Distinguish arguments that use ethos from arguments that use logos or pathos.
- Identify visual and textual devices used to convey competence or likability.
- Analyze how authors demonstrate expertise, acknowledge counterarguments, appear relatable, or demonstrate good character as a way of building ethos.

Phase 2 (Guided close reading)

- Analyze how a speaker uses ethos devices to gain the audience's trust in a speech on an important topic.

Phase 3 (Creative application)

- Create a message using ethos to convince citizens of the Dome to take to the streets and defend humanity from the Machines.

Featured texts

Phase 1 (Interactive instruction)

Core

- LifeScreen messages and advertisements
- Descriptions of pre-Dome messages and advertisements
- Short arguments about Robodogs
- Excerpt from Charles Robb's "They Died for That Which Can Never Burn"
- Excerpt from Patrick Henry's "Give Me Liberty or Give Me Death"

Extra Support

- LifeScreen messages and advertisements
- Descriptions of pre-Dome messages and advertisements
- Short arguments about Robodogs
- Excerpt from Barack Obama's immigration reform speech (January 29, 2013)
- Excerpt from Jimmy Carter's "A Crisis of Confidence" speech (July 15, 1979)

Phase 2 (Guided close reading)

All levels

- Barack Obama's address to the nation on Syria (September 10, 2013)

Chapter 8: Review and Synthesis

Students review what they've learned in the past seven lessons and apply their knowledge to create an original protest text.

Student activities

Phase 1 (Interactive instruction)

- Review all key concepts from chapters 1–7.

Phase 2 (Guided close reading)

- Analyze a text to discover rhetorical and literary devices that can be used in an original text.

Phase 3 (Creative application)

- Create a speech, manifesto, or poem using multiple devices to convince citizens of the Dome to fight against the Machines.

Featured texts

Phase 1 (Interactive instruction)

- Short messages and arguments

Phase 2 (Guided close reading)

All levels

- Options include:
  - Speech—"I Have a Dream" by Martin Luther King, Jr.
  - Manifesto—The Declaration of Independence
  - Poem—"Sympathy" by Paul Laurence Dunbar
  - Song—"Workers of the World, Unite!" by Walquist

Chapter 1: Narrative Arguments

Students learn to analyze the use of narratives in arguments.

Student activities

Phase 1 (Interactive instruction)

- Identify important elements in narratives: characters, setting, plot, and point of view.
- Identify the claim, evidence, and reason in narratives that function as arguments.
- Analyze the effects of narrative techniques (such as second-person POV).

Phase 2 (Guided close reading)

- Analyze the effects of narrative techniques and the use of argument in E.B. White's letter about why he wrote *Charlotte's Web*.

Phase 3 (Creative application)

- Write a narrative argument that can be used to convince the Captain of the Deep Sands Fleet to take you on a journey, and complete a short reflective piece.

Featured texts

Phase 1 (Interactive instruction)

Core

- A short fable
- Short ethos arguments found in the Dome
- A short description of Mars
- An article about how the brain reacts to reading descriptions of experiences

Extra Support

- Adapted version of the short fable from Core
- A short argument about Captain O'Malley
- Adapted version of the short description of Mars
- Adapted version of the article about how the brain reacts to reading descriptions of experiences

Phase 2 (Guided close reading)

Core

- "A Book is a Sneeze" by E. B. White

Extra Support

- "A Book is a Sneeze" by E. B. White: original text and adapted version

Chapter 2: Characterization

Students learn to identify different types of characterization and make inferences from indirect characterization.

Student activities

Phase 1 (Interactive instruction)

- Define and identify examples of characterization (direct and indirect), character traits, and character motivations.
- Infer the character traits that are implied by examples of indirect characterization.

Phase 2 (Guided close reading)

- Analyze a primary character's traits, motivations, and tone toward another character.

Phase 3 (Creative application)

Core

- Help an Element of the Sequence discover his unique character by answering a series of questions to gather textual evidence and then attaching traits to this evidence in a character map. Then write a short adventurous tale that brings the character to life.

Extra Support

- Over the course of six chapters (2, 4–8), brainstorm, draft, and finalize an original story. In this chapter, brainstorm the character for the story and create a character map using the types of indirect characterization taught in the chapter.

Featured texts

Phase 1 (Interactive instruction)

Core

- Short descriptions of characters in *The Last Readers*
- Short excerpts from "Raymond's Run" by Toni Cade Bambara, *Great Expectations* by Charles Dickens, "Super-Frog Saves Tokyo" by Haruki Murakami, *The Catcher in the Rye* by J. D. Salinger, "The Most Dangerous Game" by Richard Connell, *The Bad Beginning* by Lemony Snicket, and *Homegoing* by Yaa Gyasi

Extra Support

- Short descriptions of Falstaff
- Video clips from *Alice in Wonderland* (1915)
- Excerpts from *Alice in Wonderland* by Lewis Carroll
- Short excerpts from *The Catcher in the Rye* by J. D. Salinger and *The Bad Beginning* by Lemony Snicket

Phase 2 (Guided close reading)

Core

- The first part of "The Interlopers" by Saki (Hector Munro)

Extra Support

- Excerpt from *The Wizard of Oz* by L. Frank Baum

Chapter 3: Description in Arguments

Students learn to identify sensory language and analyze its use in arguments.

Student activities

Phase 1 (Interactive instruction)

- Define sensory language and identify which senses are appealed to in examples.
- Analyze an author's use of sensory language in arguments and rhetorical appeals.
- Explain the effects of sensory language and other word choices on the reader.
- Use sensory language in original descriptions.

Phase 2 (Guided close reading)

- Closely read an ancient Aquan text and analyze it to determine which factions' interpretation of it is more convincing.

Phase 3 (Creative application)

- Explore an Aquan setting and describe it through three different sensory perspectives: human, Machine, and Aquan.

Featured texts

Phase 1 (Interactive instruction)

Core

- Short descriptions of Last Readers' experiences
- Short descriptions of settings in the Wasteland
- An Aquan restaurant review

Extra Support

- Short descriptions of an Aquan and a human childhood
- Short descriptions of settings in the Dome
- Adapted version of the Aquan restaurant review

Phase 2 (Guided close reading)

Core

- A narrative describing the beginning of the great Storm in the Wasteland

Extra Support

- Adapted version of the narrative describing the beginning of the great Storm in the Wasteland

Chapter 4: Conflict and Character Change

Students learn to identify different types of conflict and analyze how characters change in response to conflict.

Student activities

Phase 1 (Interactive instruction)

- Define and identify examples of person vs. person conflict, person vs. nature conflict, person vs. society conflict, and internal conflict.
- Analyze multi-part texts to explain how conflict can lead to character change.

Phase 2 (Guided close reading)

- Analyze the second part of a short story. Create maps of character traits and motivations and use them to substantiate a claim about character change.

Phase 3 (Creative application)

Core

- Answer a series of questions in a choose-your-own-adventure experience to reveal the nature of your character. Then develop these ideas in a short creative writing activity.

Extra Support

- Over the course of six chapters (2, 4–8), brainstorm, draft, and finalize an original story. In this chapter, use the character maps from Chapter 2 to develop the story's conflict.

Featured texts

Phase 1 (Interactive instruction)

Core

- Short excerpts from "The Sniper" by Liam O'Flaherty, "The Open Boat" by Stephen Crane, "The Bracelet" by Yoshiko Uchida, and "Eleven" by Sandra Cisneros
- A three-part short story about an important character's childhood

Extra Support

- Two short excerpts about a man who faces a conflict with a Last Reader

Phase 2 (Guided close reading)

Core

- The first and second parts of "The Interlopers" by Saki (Hector Munro)

Extra Support

- Second excerpt from *The Wizard of Oz* by L. Frank Baum

Chapter 5: Causal Reasoning

Students learn to analyze, evaluate, and create causal arguments.

Student activities

Phase 1 (Interactive instruction)

- Identify cause and effect in short causal arguments.
- Evaluate causal arguments by applying three rules of cause and effect.
- Write cause and effect explanations for everyday occurrences.
- Construct causal chains to demonstrate complex cause and effect relationships.

Phase 2 (Guided close reading)

- Use causal chains to determine the perpetrator in a Wasteland whodunit.

Phase 3 (Creative application)

Core

- Over the course of four chapters (5–8), brainstorm, draft, and finalize an original story. In this chapter, create a causal chain to map out the events of the story's plot.

Extra Support

- Over the course of six chapters (2, 4–8), brainstorm, draft, and finalize an original story. Use character maps and brainstorming from Chapters 2 and 4 to create a causal chain of the story's plot.

Featured texts

Phase 1 (Interactive instruction)

Core

- Short causal arguments about everyday occurrences
- A short article about why cutting onions makes people cry
- A short article about Wasteland flora and fauna

Extra Support

- Short causal arguments about everyday occurrences
- Video clip from "Health and Safety for You" (1950s)
- A short article about the Wasteroach

Phase 2 (Guided close reading)

All levels

- A multi-part whodunit told by Wasteland characters

Chapter 6: Themes

Students learn to use analysis of character change to determine and express the theme of a literary work.

Student activities

Phase 1 (Interactive instruction)

- Distinguish between topics and themes.
- Follow four steps to express the theme of a literary work:
  - Describe how a main character transforms over the course of the story.
  - Identify 1–2 related topics.
  - Write a statement connecting the character arc to the topic(s).
  - Generalize the statement to make it about life or human nature.

Phase 2 (Guided close reading)

- Analyze character change over the course of a short story and apply it to determine the story's theme.

Phase 3 (Creative application)

Core

- Over the course of four chapters (5–8), brainstorm, draft, and finalize an original story. In this chapter, create before and after character maps to plan the main character's arc. Then choose a related topic and write a thematic statement.

Extra Support

- Over the course of six chapters (2, 4–8), brainstorm, draft, and finalize an original story. In this chapter, use the brainstorming from Chapters 2, 4, and 5 to write a draft of the story.

Featured texts

Phase 1 (Interactive instruction)

Core

- Quotes from "Two Kinds" by Amy Tan; "To Build a Fire" by Jack London; *You're a Good Man, Charlie Brown* by Clark Gesner; and *The Adventures of Tom Sawyer* by Mark Twain
- Summary of *Romeo and Juliet*
- Summary of *A Christmas Carol*
- An Aquan narrative

Extra Support

- Two short excerpts from *The Bad Beginning* by Lemony Snicket
- Video clip from *Alice in Wonderland* (1915)
- Excerpts from *Alice in Wonderland* by Lewis Carroll
- Adapted Aquan narrative from Core

Phase 2 (Guided close reading)

Core

- The first, second, and third parts of "The Interlopers" by Saki (Hector Munro)

Extra Support

- Third excerpt from *The Wizard of Oz* by L. Frank Baum

Chapter 7: Evaluating Arguments and Fallacies

Students learn to evaluate pathos, logos, and ethos arguments by checking for completeness and coherence and identifying common fallacies.

Student activities

Phase 1 (Interactive instruction)

- Evaluate whether arguments are complete and coherent.
- Evaluate the strength of arguments and explain what makes them strong or weak.
- Identify evidence that could strengthen or weaken an argument.
- Identify common fallacies in logos, pathos, and ethos arguments,
- Explain how different kinds of fallacies weaken arguments.

Phase 2 (Guided close reading)

- Evaluate the arguments and identify fallacies in a series of notebook entries about the Wasteland.

Phase 3 (Creative application)

Core

- Over the course of four chapters (5–8), brainstorm, draft, and finalize an original story. In this chapter, write a somebody-wanted-but-so summary of the story and then write a complete rough draft.

Extra Support

- Over the course of six chapters (2, 4–8), brainstorm, draft, and finalize an original story. In this chapter, complete a rough draft of the story.

Featured texts

Phase 1 (Interactive instruction)

Core

- Short arguments about Wasteland characters
- Rebuttals to short arguments about Wasteland characters
- A multi-paragraph argument in favor of studying a found artifact

Extra Support

- Short arguments about the Wasteland
- Short arguments and rebuttals about Dome characters
- An argument in favor of studying a found artifact

Phase 2 (Guided close reading)

Core

- A series of notebook entries making arguments about the Wasteland

Extra Support

- Adapted version of a series of notebook entries making arguments about the Wasteland

Chapter 8: Review and Synthesis

Students review what they've learned in the past seven chapters and apply their knowledge to putting the finishing touches on an original text.

Student activities

Phase 1 (Interactive instruction)

- Review all key concepts from chapters 1–7.
- Identify literary and rhetorical devices in texts.
- Analyze the effects of literary and rhetorical devices in texts.
- Evaluate the strength of arguments.

Phase 2 (Guided close reading)

- Over the course of four chapters (5–8), brainstorm, draft, and finalize an original story. In this chapter, read and annotate the rough draft, noting places to be developed further.

Phase 3 (Creative application)

- Put the finishing touches on an original story and offer it to the Storm.

Featured texts

Phase 1 (Interactive instruction)

Core

- Quotes from *Red Scarf Girl* by Ji-li Jiang, *Boy: Tales of Childhood* by Roald Dahl, *The Narrative of the Life of Frederick Douglass*, an *American Slave* by Frederick Douglass, and *Frankenstein* by Mary Shelley
- A short fable
- Two passages from A *Christmas Carol* by Charles Dickens
- A short argument presented by a Wasteland character
- An excerpt from *The Secret of the Yellow Death: A True Story of Medical Sleuthing* by Suzanne Jurmain
- An Aquan restaurant review

Extra Support level is in development and will be available soon!

Chapter 1: Complex Arguments

Students learn to map out and analyze complex argument structures.

Student activities

Phase 1 (Interactive instruction)

- Identify claims, reasons, evidence, subclaims, and support in complex arguments.
- Map out the structures of complex arguments.
- Recognize and discriminate between four kinds of complex argument structures.
- Analyze complex arguments by mapping out their individual components.

Phase 2 (Guided close reading)

- Analyze Marlowe's speech, identifying complex argument structures, mapping them out, and evaluating their validity.

Phase 3 (Creative application)

- Construct and map out an argument that will distract trailing security bots.

Featured texts

Phase 1 (Interactive instruction)

All levels

- Short, complex propaganda arguments, disguised as public service announcements, for the new, oppressive dictates of the Dome
- Short, complex arguments composed by the Machines to advertise new products

Phase 2 (Guided close reading)

All levels

- An argumentative speech by Marlowe attempting to persuade the Machines to give her power, consisting of several complex arguments

Chapter 2: Narrative Voice

Students learn to identify the narrative point of view in a text and analyze the purpose and effects of narrative voice.

Student activities

Phase 1 (Interactive instruction)

- Define and distinguish between narrator and author.
- Identify the narrative point of view of short passages.
- Analyze the purpose and effects of different narrative voices.

Phase 2 (Guided close reading)

- Compare and contrast the use of narrative voice in a pair of short stories.

Phase 3 (Creative application)

- Analyze surveillance data to assess a report about a possible betrayal of the Last Readers. Investigate and write reports in the narrative voice of two different characters to evaluate the original report's accuracy.

Featured texts

Phase 1 (Interactive instruction)

All levels

- "The Miser" by Aesop
- Excerpts from *The Once and Future King* by T.H. White, *Watership Down* by Richard Adams, *Ender's Game* and *Ender's Shadow* by Orson Scott Card, *A Diary of a Young Girl* by Anne Frank, *Jane Eyre* by Charlotte Brontë, *The Adventures of Sherlock Holmes* by Arthur Conan Doyle, *We Have Always Lived in the Castle* by Shirley Jackson, *The Curious Incident of the Dog in the Night-time* by Mark Haddon, and *If on a Winter's Night a Traveler* by Italo Calvino

Phase 2 (Guided close reading)

All levels

- Excerpts from the short stories "The Secret Life of Walter Mitty" by James Thurber, and "The Eyes Have It" by Philip K. Dick

Chapter 3: Arguments by Analogy

Students learn to analyze and evaluate arguments by analogy.

Student activities

Phase 1 (Interactive instruction)

- Define and identify arguments by analogy.
- Analyze arguments by analogy by identifying the tenor and vehicle.
- Analyze arguments by analogy by identifying claim, evidence, reason, and support.
- Evaluate arguments by analogy by identifying the fallacy of false analogy.
- Analyze a visual analogy.
- Build an argument by analogy.

Phase 2 (Guided close reading)

- Analyze and evaluate Quintilian's written argument by analogy and Gilray's visual argument by analogy.

Phase 3 (Creative application)

- Demonstrate worth as a debate referee by creating an argument by analogy. Then evaluate arguments by dueling Last Readers.

Featured texts

Phase 1 (Interactive instruction)

All levels

- A variety of written arguments by analogy from the world of the Dome
- A variety of visual arguments by analogy from propaganda

Phase 2 (Guided close reading)

- An extended argument by analogy written by a Last Reader
- A political cartoon titled "The Plumb-Pudding in Danger;–or–State Epicures Taking un Petit Souper" by James Gillray

Phase 3 (Creative application)

- Arguments by Falstaff and Quintilian making comparisons to convey what it's like to rebel against an oppressive force

Chapter 4: Style

Students learn to identify the elements of style and analyze how they are used to achieve an author's purpose.

Student activities

Phase 1 (Interactive instruction)

- Identify the elements of style—details and description, words and language, and sentence structure—in a text and determine their effects.
- Determine an author's purpose and analyze how the elements of style work together to create a style that achieves the author's purpose.
- Compare and contrast the style of different authors.
- Identify the elements of film style—camera angles, facial expressions and gestures, and music—in a film and determine their effects.
- Analyze how the elements of film style work together to achieve a filmmaker's purpose.

Phase 2 (Guided close reading)

- Analyze how the elements of style in Churchill's "We Shall Fight on the Beaches" speech and Capra's *Why We Fight: Prelude to War* work to achieve each of their unique purposes.

Phase 3 (Creative application)

- Inspire C3RB3RUS's sister, C3RB3RUS-GAMMA, to wake from her slumber and join the rebellion by choosing a rhetorical strategy and the appropriate elements of written and visual style.

Featured texts

Phase 1 (Interactive instruction)

All levels

- Short excerpts of descriptions of settings from a variety of works by Ernest Hemingway and F. Scott Fitzgerald
- Machine arguments from the first days of the Dome, written in different styles with different purposes for different audiences
- Short excerpts from *Stuart Little* by E.B. White and *The Book Thief* by Markus Zusak
- Film excerpt from *The Cabinet of Dr. Caligari*, directed by Robert Wiene and written by Hans Janowitz and Carl Mayer

Phase 2 (Guided close reading)

All levels

- An excerpt from "We Shall Fight on the Beaches," a speech by Winston Churchill
- A film excerpt from *Why We Fight: Prelude to War*, directed by Frank Capra

Chapter 5: Dialectic

Students learn to participate in dialectics by using logos arguments and crafting appropriate counterpoints.

Student activities

Phase 1 (Interactive instruction)

- Distinguish between rhetoric and dialectic.
- Identify appropriate moves in a dialectic by using only logos and avoiding pathos and ethos.
- Identify and analyze arguments from definition and arguments by example.
- Differentiate among types of logos arguments, including generalizations, causal arguments, arguments from analogy, arguments from definition, and arguments by example.
- Craft appropriate counterpoints to common weaknesses in each type of logos argument.

Phase 2 (Guided close reading)

- Analyze a dialectic by identifying the types of arguments and counterpoints used.

Phase 3 (Creative application)

- Participate in a dialectic choose-your-own adventure arguing that Marlowe can or cannot be saved.

Featured texts

Phase 1 (Interactive instruction)

All levels

- Excerpt from Michael Palin and John Cleese's "The Argument Clinic" sketch on "Monty Python's Flying Circus" series (1972)
- A variety of dialectical arguments on topics including:
  - the idea that people in the Dome need more choices
  - the idea that work leads to reading growth
  - Last Readers folklore and objects

Phase 2 (Guided close reading)

All levels

- *Gorgias [revised]*—A remix of an excerpt from *Gorgias' Dialogue with Socrates*

Phase 3 (Creative application)

All levels

- An extended dialectic between Chip, Garbage-Bot, Falstaff, and our Hero, concerning whether or not Marlowe can be saved

Chapter 6: Review and Synthesis

Students review the literary and argumentative tools they've learned throughout the three books and apply them to creating an effective rhetorical message.

Student activities

Phases 1–2

- Review key concepts from all three books.
- Identify literary and rhetorical devices in texts.
- Analyze the effects of literary and rhetorical devices in texts.
- Evaluate the strength of arguments.

Phase 3: Send a message challenge

- Use any combination of literary and argumentative tools to create a rhetorical message inspiring the Dome dwellers to tear apart the walls and floors of the Dome in order to access the Dome's lock.

Phase 4: Dialectic with Flint

- Write an explanation to Flint about the true value of reading.

Featured texts

Phases 1–4

All levels

- Arguments that make up a Last Readers security protocol for unlocking Marlowe's old Lifescreen, including:
  - a visual analogy
  - an argument from from an old library supervision program
  - snippets of arguments that Marlowe wrote in the past
  - fallacious arguments about the need for silence

All levels

- Texts found on Marlowe's old Lifescreen, including a message from Falstaff, passages from Marlowe's journal, a report from Nova, and an intelligence briefing from the Last Readers Council

All Amplify Reading 6–8 lessons feature a wide range of activities and text-dependent questions that give students practice developing the skills they need to meet the lesson objectives.

	Book 1 chapters								Book 2 chapters								Book 3 chapters					
Standard	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6
CCSS.ELA-LITERACY.CCRA.R.1 Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CCSS.ELA-LITERACY.CCRA.R.2 Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.				✓		✓	✓	✓	✓			✓		✓		✓		✓			✓	✓
CCSS.ELA-LITERACY.CCRA.R.3 Analyze how and why individuals, events, or ideas develop and interact over the course of a text.						✓		✓		✓		✓		✓	✓	✓	✓		✓	✓	✓	✓
CCSS.ELA-LITERACY.CCRA.R.4 Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓		✓
CCSS.ELA-LITERACY.CCRA.R.5 Analyze the structure or texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.	✓		✓		✓		✓	✓	✓		✓		✓		✓	✓	✓		✓		✓	✓

Standard	Book 1 chapters								Book 2 chapters								Book 3 chapters					
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	3	4	5	6
CCSS.ELA-LITERACY.CCRA.R.6 Assess how point of view or purpose shapes the content and style of a text.			✓	✓				✓	✓		✓			✓		✓		✓		✓		✓
CCSS.ELA-LITERACY.CCRA.R.7 Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.			✓		✓		✓	✓											✓	✓		✓
CCSS.ELA-LITERACY.CCRA.R.8 Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.	✓				✓		✓	✓	✓		✓		✓		✓	✓	✓		✓		✓	✓
CCSS.ELA-LITERACY.CCRA.R.9 Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.		✓		✓					✓		✓	✓			✓			✓		✓		
CCSS.ELA-LITERACY.CCRA.R.10 Read and comprehend complex literary and informational texts independently and proficiently.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

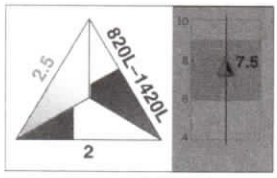
Grade overviews

Progression of content and skills

The following grade overviews illustrate how the Amplify ELA curriculum has been carefully designed to meet the needs of middle school students. To develop and refine the scope and sequence of the content, skills, and texts, Amplify paid close attention to three parts of text complexity and conducted significant classroom testing to understand the impact of these texts on adolescent readers. In addition to designing a path of growing text complexity, Amplify ELA sequenced and grouped texts to intentionally build students' knowledge and skills as they progress throughout each grade and the whole program.

Path of text complexity

To help teachers and administrators quickly see the way that content, skills, and text complexity build in our ELA curriculum, Amplify has represented this information graphically. For the purposes of this guide, the triangle, commonly used to represent the three parts of text complexity for one text, here aggregates the text complexity for a whole unit. This approach makes it easy to make comparisons from unit to unit and grade to grade.



Sample unit: 7C Brain Science
Quantitative measure
Qualitative measure
Reader and task measure

The **quantitative measure** in red reflects the Lexile band, based on the Lexile scores of the range of texts within the unit. Lexile scores are based on a measurement of vocabulary word frequency and sentence complexity.

Band 1 —Lexile 450–790
Band 2—Lexile 770–980
Band 3—Lexile 955–1155
Band 4—Lexile 1080–1305
Band 5—Lexile 1215–1355

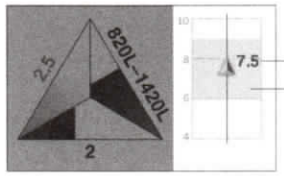
The **qualitative measure** in yellow reflects the texts' structural and stylistic complexity, the layers of meaning, and the background knowledge required to understand the text. The scale is from 0–5, with 5 indicating the highest level of complexity.

Grade overviews

The **reader and task measure** in blue reflects the demands the activities make on students in the lessons in Amplify ELA, with consideration of both a) their place in the curriculum sequence and the cumulative knowledge and skills they have gained by this time, as well as b) how much support and scaffolding they receive to understand both literal and deeper layers of meaning. The scale is from 0–5, with 5 indicating the highest level of complexity.

The Amplify Complexity Index

To better assess the combined impact of these three factors, Amplify developed a Complexity Index, which assesses each unit's overall complexity. The Complexity Index reflects the aggregate score within the context of the grade 6–9 band. While we recognize that no single metric can fully capture the nuanced lesson-to-lesson, unit-to-unit progression of a curriculum, we use the Complexity Index as a guideline to present appropriate curriculum materials and track students' paths through each grade.



Sample unit: 7C Brain Science

The texts in the Amplify curriculum balance literary and informational text, and include a rich representation of genres: novels, plays, poetry, biographies, and other full-length texts.

In the following pages, units and subunits are also labeled with the below icons to indicate whether they are informational or literary texts.

(I) **Informational texts**

(L) **Literary texts**

Grade overviews

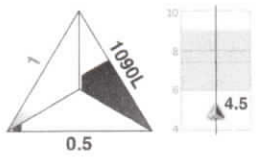
GRADE 6 OVERVIEW

(I) Info (L) Lit

6A **Dahl & Narrative**

Sub-Unit **6A.1 Welcome!**
6A.2 Get Started
6A.3 *Boy: Tales of Childhood* by Roald Dahl
6A.4 Write an Essay

Character & Narrator: Observe how an author creates a character
Writing: Focus on a moment in the text and develop a unique perspective about it
Text Structure: Sensory and figurative language
Content: Early 20th century British boarding school experience

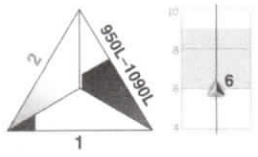


Genre (I)

6B **Tom & Sherlock**

Sub-Unit **6B.1 *The Adventures of Tom Sawyer* by Mark Twain**
6B.2 "The Speckled Band" by Sir Arthur Conan Doyle
6B.3 "The Red-Headed League" by Sir Arthur Conan Doyle
6B.4 Write an Essay 6B.5 Tom & Sherlock Reading Assessment
Quest ***Tom Sawyer, Treasure Hunter***

Character & Narrator: Describe how a character builds across many scenes
Writing: Make connections between two or three moments in the text to show change
Text Structure: Figurative language and dialect; plot development
Content: 19th century rural America; 19th century London

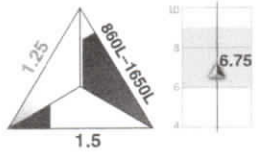


Genre (L)

6C **The Chocolate Collection**

Sub-Unit **6C.1 Information Literacy**
6C.2 Scavenger Hunt and Internet Research
6C.3 Argumentative Writing and Collection Research
6C.4 Debate and Internet Research
6C.5 Write an Essay 6C.6 The Chocolate Collection Reading Assessment

Character & Narrator: Identify various sources' perspectives on a topic
Writing: Synthesize information from several sources to develop an argument
Text Structure: Various types of historical and cultural documents
Content: The evolving economic and cultural significance of a product in societies

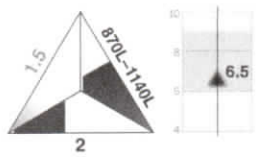


Genre (I) (L)

6D **The Greeks**

Sub-Unit **6D.1 Prometheus**
6D.2 Odysseus
6D.3 Arachne
6D.4 Write an Essay
6D.4 The Greeks Reading Assessment

Character & Narrator: Analyze what symbolic characters show about human nature
Writing: Argue a claim about the fairness of a character's decision
Text Structure: Multiple tellings of a tale in different genres
Content: Ancient Greece

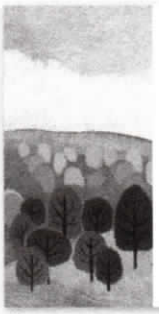


Genre (L)

Grade overviews

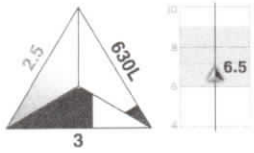
GRADE 6 OVERVIEW

(I) Info (L) Lit



6E **Reading the Novel**

Sub-Unit
- **6E.1** ***M.C. Higgins, the Great*** **by Virginia Hamilton**
- **6E.2 Write an Essay**
- **6E.3 Reading the Novel Reading Assessment**

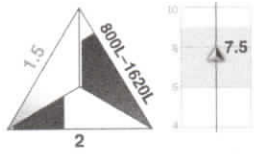


Character & Narrator: Analyze a complex character's growth across a multi-layered novel
Writing: Trace patterns of consistency and inconsistency throughout the novel
Text Structure: Narrative with temporal shifts and ambiguous resolution
Content: Mid-20th century Appalachia; strip-mining and environmental destruction

Genre (L)

6F **The *Titanic* Collection**

Sub-Unit
- **6F.1 Information Literacy**
- **6F.2 Scavenger Hunt and Internet Research**
- **6F.3 Passport and Collection Research**
- **6F.4 Socratic Seminar and Internet Research**
- **6F.5 Write an Essay**



Character & Narrator: Compare and contrast perspectives on a single event
Writing: Develop a question, conduct research, and create a multi-media project
Text Structure: Various types of historical and cultural documents
Content: 20th century social and class structure revealed by a famous tragedy

Genre (I) (L)

6G **Beginning Story Writing**

Sub-Unit
- **6G.1 Creating a Believable Character**
- **6G.2 Experimenting With A Second Character**
- **6G.3 Writing a Short Story**

Character & Narrator: Create a believable character
Writing: Write an original short story
Text Structure: Dialogue; plot structure
Content: Creative writing

6H **Grammar**

Sub-Unit
- **6H.1 What is a Complete Sentence?**
- **6H.2 Expanding the Complete Sentence**
- **6H.3 Understanding the Pronoun**
- **6H.4 Pronoun Usage: Agreement and Reference**
- **6H.5 Verb Tense**
- **6H.6 Verb Moods, Modals, and Voice**

Writing: Writing prompt aligned to sub-unit skill
Content: Grammar instruction

Appendix K-6 ELA Instructional Program, Assessment, and Resources

Course Components	Explanation
Interactive Read Aloud (Grades K-2)	Teachers will read aloud high-quality trade books to students. Students will circle up to discuss the meaning of the text while teacher moderate the discussions by asking questions to make students deeply analyze the text. (25 minutes, 4 days a week)
Reading Workshop (Grades K-2)	Teachers will teach a reading strategy, skill, and/or concept beginning of the reading workshop and let students use those strategies during independent reading. Teachers will circulate and the reading workshop will begin with a small lesson that teaches a reading strategy, skill or concept that students then apply to independent-level texts. During independent reading, the teacher circulates to answer student questions (25 minutes, 4 days a week)
Guided Reading & Targeted Word Work (Grades K-2)	Teachers will group the students into three and rotate students between the sections Guided Reading and Targeted Word Work, Phonics-based Reading, and Independent Study using Computer. Teachers will coach students to master strategies to understand the strategically chosen instructional text during Guided Reading and Targeted Word Work session. (25 minutes)
Phonics-based Reading (Grades K-2)	Phonics-based Reading is the second part of student rotation. Phonics-based Reading teaches students how to decode and read fluently. (25 minutes)
Independent IPad and Chromebook Station (Grades K-2)	Independent IPad and Chromebook Station is the third part of student rotation. While their peers are engaged in Guided Reading or Phonics-based Reading, third group of children will use a web-based computer reading program or read independently. Frequency of student participation in specific rotation groups will be decided by teacher based on students reading level. (25 minutes)
Text Study (Grades 3-6)	Students use 50 minutes every day reading strategies to comprehend the meaning of the texts, integrate information and write what the students' understood from the reading. It is exposed to all grade levels. Having teacher and co-teacher support in the classroom students work on rigorous text materials.
Reading Comprehension, Independent & Guided Reading (Grades 3-6)	Every day 50 minutes, students have the opportunity to read independently and instructional readings. By this way, students experience a workshop-style course which begins with a brief mini-lesson then followed with Guided Reading instruction. Students have frequent one-on-one reading conferences with the teacher and co-teacher and students are grouped and called as targeted group reading instruction.
Literature Circles (Grades 5-6)	Letting students choose books as small group then discuss the read book among their peers motivates them, and creates ownership in their readings which improves their discussion skills and improves comprehension
Word Study: programs vary according to RTI (at-risk students)	Tier 1 Students who do not receive pull-out instruction for RtI (Response to Intervention), participate in 20 minutes of vocabulary instruction and practice 4 days a week using Language Literacy Intervention. Tier 2 and Tier 3 students who are pulled out of class for support receive research-based intervention programming for 30 minutes every day.
Close Reading (Grades 5-6)	Students read grade appropriate fiction and nonfiction in alignment with the National Common Core Standards Students learn and apply strategies for making meaning as well as analyzing and comprehending; student engage in small group and whole class discussions centered on metacognition.
Writer's Workshop (Grades K-6)	Students receive direct instruction in Writing Workshop. Teacher demonstrates the skill and provides students with a brief interval of guided practice using it. Students will have the opportunity to apply the repertoire of skills and strategies they've learned on their own. Students in grades K-6 will have 50 minutes of writing every day, which includes a concise grammar routine at the start of every lesson, followed by Writing Workshop.
Writing (Grades 5-6)	Students compose and write essays grade-level texts they read during reading lessons. Writing lessons target specific area in expository, narrative and argumentative writing components of effective analytical writing: finding & citing

	logical text evidence, composing assertions, and providing commentary that indicates how text evidence supports the assertion. Students will keep a Portfolio Product of all polished, full-length piece of literary analysis.
Vocabulary (Grades 5-6)	Students learn and practice applying (in class daily including homework) 40 new academic vocabulary terms every 9 weeks. During class, teachers combine vocabulary instruction with grammar concepts by creating discrete practice opportunities that require students using words in a meaningful way to compose original sentences / paragraphs using words in a meaningful way.
Grammar (Grades 5-6)	Students learn, practice and improve grammar skills with an overarching focus on creating clear essays. Teachers introduce and solidify grammar concepts by requiring students to analyze well-written essays and texts. Teachers will take advantage of Holt's Elements of Language, which offers clarity for instructors on the specific rules attached to concepts, as well as additional practice opportunities.

Appendix K-6 Math Instructional Programs, Assessment, and Resources

Math Instructional Programs	Explanation
Eureka Math and GoMath (Grades K-6)	Primary curriculum is aligned with the North Carolina Standard Course of Study (NCSOS). Teacher will prepared sequenced lesson plans using school curriculum and other materials from Cengage Learning, Inc and GoMath will provide students' opportunities to develop conceptual and analytical understanding of the elementary math concepts.
Number Stories	Number Stories develop and refine student's problem-solving skills. In each lesson, students will independently solve a problem and then make connections to the strategies their peers took. Students learn about the variety of strategies to solve problems through their peers.
Fluency Routines	In Fluency Routines, students will engage activities such as counting circles, counting jars, games, calendar math, and number manipulation to develop flexibility, efficiency, and accuracy of numerical fluency.
General Math (Grades 5-6)	In math classes (ten periods a week) students will be exposed to grade level concepts aligned to and sequenced according to Common Core and NC Essential Standards. Teachers will work in collaborative groups to tackle, solve and analyze complex word problems and build conceptual math knowledge.

Math Assessments	Math Resources
▪ State Tests (Grades 3-6) ▪ basic math skills) (Grades K-1) ▪ Amplify Reading (Grades 1-2) ▪ Eureka Math (Grades 1-6)	▪ Common Core Curriculum ▪ NCSOS ▪ GoMath ▪ Accelerated Math ▪ Math Manipulative ▪ IPads and Chromebooks w/ headphones ▪ Classroom materials, such shapes, counting materials, etc.

Grades K-6 Physical Education/Health Curriculum: At CSA students will focus on physical education, health and well-being. Moreover, the curriculum is designed to maximize teamwork, cooperation and enhance leadership abilities. Benefits of PE in schools include: stronger peer relationships, improved self-confidence, goal setting experience, self-discipline and improved academics.

CSA STEM Collaboration Opportunities (Partial Listing)

National Girls Collaborative Project http://www.ngcproject.org

Tech Talent South www.techtalentsouth.com

Central Piedmont Community College STEM Experience http://www.stemsummerexperience.com/
Full and half day camps at both campuses. Themes range from "Build Your Own Bio-Mechanical Hand" to "Computer Crimes."

Engineering Camp Charlotte
http://engineeringcampcharlotte.com/engineering-camp-program-details/
Queens University of Charlotte will host the NC State University (NCSU) College of Engineering's Youth Summer Program at its main campus in Myers Park

Camp Invention http://www.campinvention.org/
Week long camps focused on creativity, innovation and problem solving. A national program, with multiple locations and dates in Charlotte.

Project Scientist http://www.projectscientist.org
Engaging and empowering girls with a passion, talent and aptitude for science, technology, engineering, and math (STEM).

Drive, Inc. http://drivenminds.org/
A non-profit helping bridge the technology skills gap with a multidimensional learning experience designed to inspire the next generation of entrepreneurs.

National Education Association
http://www.nea.org/tools/lessons/stem-resources.html

Resources geared mainly towards educators but downloads, ideas, and links that can be useful for parents as well.

Discover Engineering http://www.discovere.org/
DiscoverE's mission is to help "unite, mobilize, and support the engineering and technology volunteer communities." This website supplies activities, resources and downloads for parents and teachers.

STEM Resources from PBS http://www-tc.pbs.org
For grades K-12, learn how to incorporate STEM via PBS.

STEM-Works http://stem-works.com
Articles, activities, and interactive to get parents, teachers, and kids interested and eager to learn more about STEM and it's relevancy in the world.

Engineer Girl http://www.engineergirl.org
Stories, links, and contests designed to bring attention to the exciting opportunities in the engineering world for women and girls.

Discovery Education- Connect the Dots
http://www.discoveryeducation.com/STEM/connect-the-dots.cfm?CFID=53608987&CFTOKEN=71733463

Appendix A: Foreign Language Curriculum

Curriculum Guide K-2

Teacher: _____

Class: Arabic / Chinese / Spanish

Unit Name: Welcome

Amount Of Time Needed: _____

Unit Objectives	Objectives	Vocabulary	Structures	Resources
▪ Introducing themselves ▪ Telling and asking who they are ▪ Telling and asking where they are from ▪ Describing themselves and others ▪ Identifying body parts and telling how they feel • Identifying objects ▪ Using numbers when giving their own phone numbers and when recreating basic conversation ▪ Spelling the new Language ▪ names	Listening: Hear and respond on topic Speaking: Memorize words and gestures Reading: Responding, wording a phrase and the target language Writing: Write, memorize word phrases and the target language Culture: Compare theirs to other cultures.	Greetings and terms for politeness Descriptive adjectives Names of places Numbers Body parts Language first names Alphabet Classroom objects	Formation and place of adjectives Verb to be To be from Negative structures Indefinite articles	Books Video Bingo game Pantomime Flashcards Exercise sheets Homework sheets

Appendix _D_: [Yearly Academic Calendar]

[Clara Science Academy]

2021-2022 School Calendar

AUGUST

M	T	W	T	F	S	S
						1
2	△ 3	△ 4	△ 5	△ 6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

1st Day for Teachers August 2

1st Day for Students August 9

Early Release Days for PLC Professional Development

FEBUARY

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
◇ 14	15	16	17	18	19	20
21	22	23	24	25	26	27
△ 28						

Early Release Day February 14

Teacher Workday February 28

SEPTEMBER

M	T	W	T	F	S	S
		1	2	3	4	5
⬭ 6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Labor Day September 6

MARCH

M	T	W	T	F	S	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
△ 21	22	23	24	25	26	27
Q	29	⬭ 30	⬭ 31			

Teacher Workday March 21

End of 3rd Quarter March 23

Spring Break March 30 – April 3

OCTOBER

M	T	W	T	F	S	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	◇ 15	16	17
△ 18	Q	20	21	22	23	24
25	26	27	28	29	30	31

Columbus Day 11

Early Release October 15

Teacher Workday October 18

1st Quarter Ends October 19

APRIL

M	T	W	T	F	S	S
				⬭ 1	⬭ 2	3
◇ 4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

Annual Leave Days April 8-11

NOVEMBER

M	T	W	T	F	S	S
1	2	3	4	5	6	7
8	9	10	⬭ 11	12	13	14
15	16	17	18	◇ 19	20	21
22	23	24	⬭ 25	⬭ 26	27	28
29	30					

Early Release November 19

Veteran's Day November 11

Thanksgiving Day Holiday November 24-26

MAY

M	T	W	T	F	S	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
⬭ 30	31					

Annual Leave Days May 19-20

Memorial Day May 30

DECEMBER

M	T	W	T	F	S	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	⬭ 23	24	⬭ 25	26
⬭ 27	28	29	30	31		

Winter Break Holiday December 23-January 3

JUNE

M	T	W	T	F	S	S
		1	⬭ 2	△ 3	4	5
6	7	8	9	10	11	12
13	14	Q	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

1st Qtr: 50

2nd Qtr: 45

3rd Qtr: 45

4th Qtr: 50

TOTAL DAYS= 195

End of Year Assessments June 8-12

Last Day of School June 24

JANUARY

M	T	W	T	F	S	S
					⬭ 1	2
3	4	5	6	7	8	9
10	△ 11	Q	13	14	15	16
⬭ 17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

End of 2nd Quarter January 15

Dr. Martin Luther King, Jr. Holiday January 17

Mid Term Assessments January 9 - 13

Teacher Workday January 11

	First Day for Teachers
	First Day for Students
△	**Teacher Workday**
Q	**End of Quarter**
⬭	**Holidays**
◇	**Early Release Days**
	Annual Leave Days
	School Hours: 7:30am – 3:45 pm

CLARA SCIENCE ACADEMY CHARTER SCHOOL

P.O. Box 33204 Charlotte, NC 28233 | 704.904.7180 | http://www.clarascienceacademy.com/

Appendix _E_: [Daily and Weekly Schedule for Each Grade Band the School Will Ultimately Serve]

[Clara Science Academy]

Appendix E

Sample Daily & Weekly Schedule for Grades K-2

CLASS TIMES	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30	A. Early Drop Off B. Breakfast C. Jump Start	Early Drop Off	Early Drop Off	Early Drop Off	Early Drop Off
8:00 – 8:15	Morning Mindfulness Announcement Etc.				
1ST PERIOD 8:15 – 9:05 (50 MINUTES)	ELA	ELA	ELA	ELA	ELA
2ND PERIOD 9:10 – 10:00	Social Studies	Writing	Social Studies	Writing	Writing
3RD PERIOD 10:05 – 11:05 (50 MINUTES)	Science	Science	Science	Science	Science
11:05-11:25	Teacher Planning time/Recess	Teacher Planning Time/Recess	Teacher Planning time/ Recess	Teacher Planning time/ Recess	Teacher Planning time/ recess
11:30-11:50 (20 MINUTES)	Lunch/Teacher Planning Time	Lunch/Teacher Planning Time	Lunch/Teacher planning Time	Lunch/Teacher Planning Time	Lunch/Teacher Planning Time
11:50-12:15 (20 MINUTES)	Recess/Teacher Planning Time	Recess/Teacher Planning Time	Recess/Teacher Planning Time	Recess/Teacher Planning Time	Recess/Teacher Planning Time
4TH PERIOD 12:20-1:10 (50 MINUTES)	ELA Centers	Guided reading	ELA Centers	Guided Reading	ELA Centers
5TH PERIOD 1:15-2:10 (50 MINUTES	Math	Math	Math	Math	Math
6TH PERIOD 2:15-3:10	PE	Art	Music	Language Special	Guided Reading
7TH PERIOD 3:15-4:05 (50 MINUTES)	Math Centers	Math Centers	Math Centers	Math Centers	Math Centers
4:10	Dismissal	Dismissal	Dismissal	Dismissal	Dismissal
4:00 – 5:30	**AFTER SCHOOL**	**AFTER SCHOOL**	**AFTER SCHOOL**	**AFTER SCHOOL**	**AFTER SCHOOL**

Sample Daily Schedule for Grades 3-5th

3-5th Grade	1st period 8:00am	2nd period 8:15-9:00am	3rd period 9:00-9:45am	4th period 9:49-10:34am	5th period 10:38-11:23am	6th period 11:27-12:12pm	7th period 12:12-12:43pm	8th period 12:43-1:28pm	9th period 1:32-2:17pm	10th period 2:21-3:06pm	11th period 3:10-3:55pm
Monday	Check-in	STEM inquiry	Math	Math	Science	English	Lunch	English	Social studies	Music	Music
Tuesday	Check-in	STEM inquiry	Math	Math	Science	English	Lunch	English	Social studies	Computer	PE
Wednesday	Check-in	STEM inquiry	Math	Math	Science	English	Lunch	English	Social studies	Art	PE
Thursday	Check-in	STEM inquiry	Math	Math	Science	English	Lunch	English	Social studies	Computer	Character Education
Friday	Check-in	STEM inquiry	Math	Math	Science	English	Lunch	English	Social studies	Language acquisition	PE

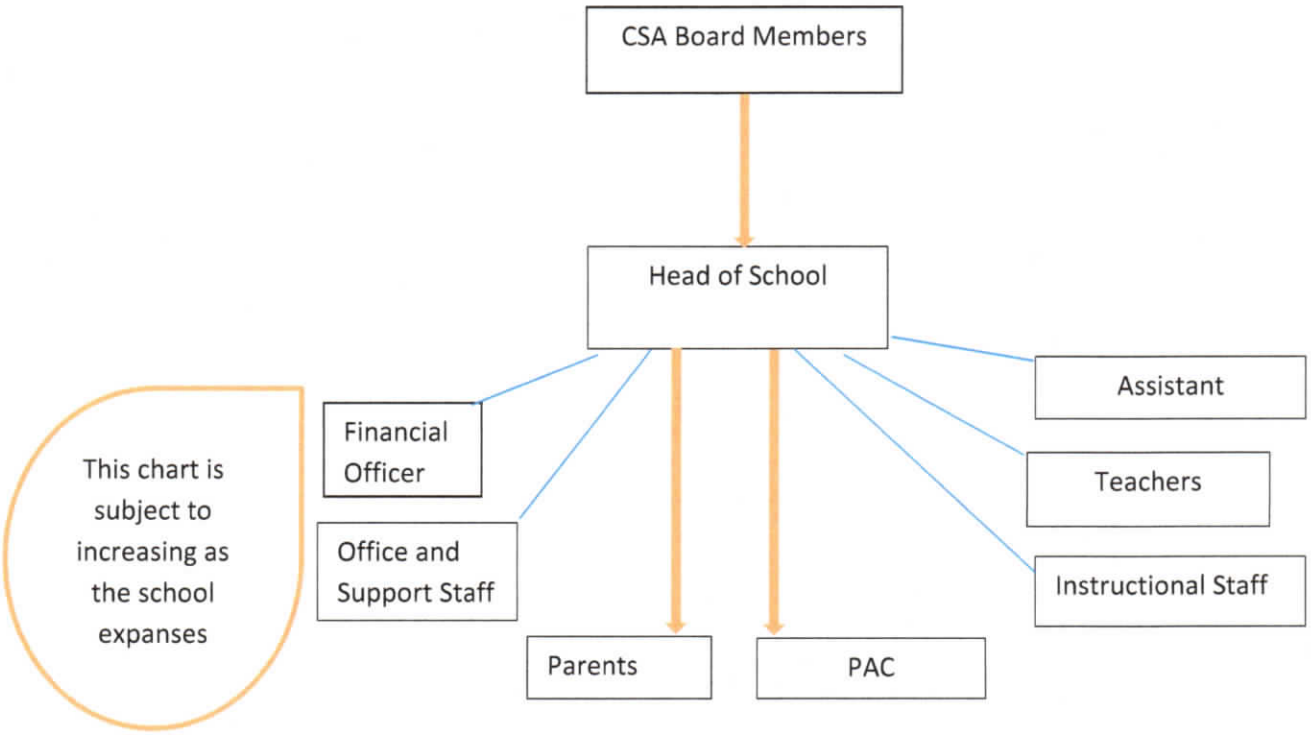
Sample Daily Schedule for Grades 6

6th grade	1st period 8:00am	2nd period 8:15-9:00am	3rd period 9:00-9:45am	4th period 9:49-10:34am	5th period 10:38-11:23am	6th period 11:27-12:12pm	7th period 12:12-12:43pm	8th period 12:43-1:28pm	9th period 1:32-2:17pm	10th period 2:21-3:06pm	11th period 3:10-3:55pm
Monday	Check-in	STEM inquiry	Reading &research	Algebra	Global	English	Lunch	Studio art	Earth science	PE	Language acquisition
Tuesday	Check-in	STEM inquiry	Reading &research	Algebra	Global	English	Lunch	Studio art	Earth science	Health	Language acquisition
Wednesday	Check-in	STEM inquiry	Reading &research	Algebra	Global	English	Lunch	Studio art	Earth science	PE	Language acquisition
Thursday	Check-in	STEM inquiry	Reading &research	Algebra	Global	English	Lunch	Studio art	Earth science	Health	Language acquisition
Friday	Check-in	STEM inquiry	Reading &research	Algebra	Global	English	Lunch	Studio art	Earth science	PE	Language acquisition

Appendix _G_: [Organizational Chart]

[Clara Science Academy]

Clara Science Academy Organization Chart



Appendix _H_: [Charter School Board Member Response and Resume]

[Clara Science Academy]

Charter School Board Member Information Form

Note: *To be completed individually by each proposed founding charter school board member. All forms must be signed by hand.*

Serving on a public charter school board is a position of public trust and as a board member of a North Carolina public charter school; you are responsible for ensuring the quality of the school's entire program, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its charter.

As part of the application for a new charter school, the State Board of Education requests that each prospective board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the applicant team behind each school proposal in advance of the applicant interview, in order to be better prepared for the interview; and 2) to encourage board members to reflect individually as well as collectively on their common mission, purposes, and obligations at the earliest stage of school development.

Background

1. Name of charter school on whose Board of Directors you intend to serve: Clara Science Academy

2. Full name: Dr. Mohammad Alghorani

Home Address: 5706 Joshua Cain Road, Charlotte, NC 28213
Business Name and Address: Intellicor International Academy, 4301 Shamrock Drive, Charlotte, NC 28215
Telephone No.: 704-9538647
E-mail address: AL3DNAAN@gmail.com

3. Brief educational and employment history.
   2016-Present: Founder and Principal, Intellicor International Academy, Charlotte, NC, USA
   2003-2015: Chair and Associate Professor of School Psychology, UAE University, UAE

4. Have you previously served on a board of a school district, another charter school, a non-public school or any not-for-profit corporation?

   No: X Yes: ☐

5. How were you recruited to join this Board of Directors? Why do you wish to serve on the board of the proposed charter school?
   I was individually approached by Mr. omar muhammad.

6. What is your understanding of the appropriate role of a public charter school board member?
   State-funded, outsourced educational options for all children

7. Describe any previous experience you have that is relevant to serving on the charter school's board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.
   I have founded two private schools in the USA.

8. Describe the specific knowledge and experience that you would bring to the board.
   I have a Bachelor of Education in Psychology, Graduate Diploma in Counseling Psychology, Master of Arts in Educational Psychology, and a Ph.D. in School Psychology

School Mission and Program

1. What is your understanding of the school's mission and guiding beliefs?
   The mission of Clara Science Academy will allow students access to a positive, STEM learning environment. The academy wants to elevate high academic achievement, self-respect and to demonstrate critical thinking.

2. What is your understanding of the school's proposed educational program?
   The academy's purpose is to create leaders for the future by having a positive learning environment. This environment is to amplify the characters of Clara girls and boys who will eventually turn into men and women. The educational program is for all children without favoring their intellectual ability or measure.

3. What do you believe to be the characteristics of a successful school?
   I believe the characteristics to be as follows: promoting inclusion, providing rigor, and core values.

4. How will you know that the school is succeeding (or not) in its mission?
   I will know by being an active participant in the school's community, by examining the test scores and input from parents and teachers alike.

Governance

1. Describe the role that the board will play in the school's operation.
   The board will recruit, hire and supervise lead administrators, financial support, staffing, approve salaries, providing meals, security, psychological services and all other duties.

2. How will you know if the school is successful at the end of the first year of operation?
   We will know the school is successful by evaluating whether or not we reached the desired outcomes.

3. How will you know at the end of five years of the schools is successful?
   We will know after 5 years if the school is successful by assessing and evaluating our long-term goals and if the desired outcomes were reached.

4. What specific steps do you think the charter school board will need to take to ensure that the school is successful?
   The board will need to receive detailed feedback from school leadership and staff and be a part of the day to day activities. By establishing excellent leadership and a strong academic program

5. How would you handle a situation in which you believe one or more members of the school's board were acting unethically or not in the best interests of the school?
   By holding the leaders accountable in regard to student outcomes and complying with local laws and regulations. I believe All stakeholders need to be involved in the discussion and decisions about a leader's further participation within the schools community regarding unethical situations.

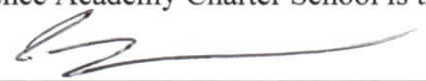
*Please include the following with your Information Form

- a ***one page*** resume
- a national criminal background check

*If you responded within the application that disciplinary action has been taken against any past or present professional licenses, provide a detailed response below outlining the disciplinary action taken and the license validity.

Certification

I, _Mohammad Alghorani_____, certify to the best of my knowledge and ability that the information I am providing to the North Carolina State Board of Education as a prospective board member for ___Clara Science Academy Charter School is true and correct in every respect.



Signature

8/07/19

Date

Charter School Board Member Information Form

Note: *To be completed individually by each proposed founding charter school board member. All forms must be signed by hand.*

Serving on a public charter school board is a position of public trust and as a board member of a North Carolina public charter school; you are responsible for ensuring the quality of the school's entire program, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its charter.

As part of the application for a new charter school, the State Board of Education requests that each prospective board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the applicant team behind each school proposal in advance of the applicant interview, in order to be better prepared for the interview; and 2) to encourage board members to reflect individually as well as collectively on their common mission, purposes, and obligations at the earliest stage of school development.

Background

1. Name of charter school on whose Board of Directors you intend to serve: Clara Science Academy

2. Full name: Leroy Wray

Home Address: 7809 Pope Farm Road
Business Name and Address:
Telephone No.: 7049964447
E-mail address: llwrayjr@gmail.com

3. Brief educational and employment history.

   Attached please see resume

4. Have you previously served on a board of a school district, another charter school, a non-public school or any not-for-profit corporation?

   No: Yes: X☐

5. How were you recruited to join this Board of Directors? Why do you wish to serve on the board of the proposed charter school?

   I wish to serve on the board to continue to empower educating and engaging the students, parents and teachers.

6. What is your understanding of the appropriate role of a public charter school board member?

   The appropriate role of a board member is to oversee the school's academic success, operations, compliance, and financial requirements.

7. Describe any previous experience you have that is relevant to serving on the charter school's board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.

NORTH CAROLINA PTA, North Carolina • 2018 – present
Board of Directors

ASSOCIATION OF FUNDRAISING PROFESSIONAL NC, CHARLOTTE CHAPTER • 2018
Member

WING HAVEN, Charlotte, North Carolina • 2013 – 2017
Board of Directors

ARTS AND SCIENCE COUNCIL, Charlotte, North Carolina • 2011 – 2016
Cultural Leader Training

NEW OPPORTUNITY MENTORING, Charlotte, North Carolina • 2011-2016?
Board of Directors

8. Describe the specific knowledge and experience that you would bring to the board.

I have a vast array of experience as an educator, advisor, and philanthropist, including experiences as an elementary classroom teacher; an elementary, middle, and district administrator for Title I; adjunct professor; consultant; executive director and board director of several non-profit organizations.

School Mission and Program

1. What is your understanding of the school's mission and guiding beliefs?

   Clara Science Academy mission is to increase scholars' access to a STEM learning environment and promote high academic achievement through scientific inquiry, reasoning, and investigative learning.

2. What is your understanding of the school's proposed educational program?

   The proposed program focus is to deliver a high-quality STEM-based education to under- served communities in our area, the vision of CSA is that a STEM foundation will increase college and career readiness for our scholars and prepare them for success through rigorous standards of high academic achievement.

3. What do you believe to be the characteristics of a successful school?

   I believe the following are characteristics of a successful school.
   A clear and shared focus;
   High standards and expectations for all students;
   Effective school leadership;
   High levels of collaboration and communication;
   Curriculum, instruction and assessments aligned with state standards;
   Frequent monitoring of learning and teaching;
   Focused professional development.

4. How will you know that the school is succeeding (or not) in its mission?

   Review and analyze the data from students, parents, teachers and stakeholders

Governance

1. Describe the role that the board will play in the school's operation.

   The appropriate role of a board member is to oversee the school's academic success, operations, compliance, and financial requirements.

2. How will you know if the school is successful at the end of the first year of operation?

   Through the review and data dives from students, parents, teachers and stakeholders

3. How will you know at the end of five years of the schools is successful?

   I will know if the school is successful if we are doing the following: building the scholarly habits, attitudes, and skills students need to succeed in college, in their communities, and in life; integrating parents into their children's learning while providing a strong academic foundation; creating field-based, experiential learning activities and developing project-based learning experiences where creativity, arts, and leadership are a focus

4. What specific steps do you think the charter school board will need to take to ensure that the school is successful?

   To make sure the school is successful. I must acts strategically, recruits an exceptional school leaders, raises and uses resources wisely, and fulfills all compliance expectations. I must manage myself by investing in proven governance best practices regarding board composition, committee structure, meetings, and dynamics.

5. How would you handle a situation in which you believe one or more members of the school's board were acting unethically or not in the best interests of the school?

   Situations that are consider unethical should come before the board with a vote.

*Please include the following with your Information Form

- a ***one page*** resume
- a national criminal background check

*If you responded within the application that disciplinary action has been taken against any past or present professional licenses, provide a detailed response below outlining the disciplinary action taken and the license validity.

Certification

I, Leroy Wray , certify to the best of my knowledge and ability that the information I am providing to the North Carolina State Board of Education as a prospective board member for ___Clara Science Academy Charter School is true and correct in every respect.

Leroy L. Wray 8/26/2019

Signature Date

Charter School Board Member Information Form

Note: *To be completed individually by each proposed founding charter school board member. All forms must be signed by hand.*

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As part of the application for a new charter school, the State Board of Education requests that each prospective board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the applicant team behind each school proposal in advance of the applicant interview, in order to be better prepared for the interview; and 2) to encourage board members to reflect individually as well as collectively on their common mission, purposes, and obligations at the earliest stage of school development.

Background

1. Name of charter school on whose Board of Directors you intend to serve: Clara Science Academy

2. Full name: Tariq T. Raheem

Home Address: 25 Eastern Parkway, Newark, NJ 07106
Business Name and Address:
Telephone No.: 973-752-8951
E-mail address: tariqtraheem@gmail.com

3. Brief educational and employment history.
From 1998-2019 Served as a Social Studies Teacher, with the exception of 2016-2018 where I served as a Dean of Families and Culture at an urban charter school. Throughout the years I served a wide range of academic leadership positions not limited to teacher training and curriculum writing.

4. Have you previously served on a board of a school district, another charter school, a non-public school or any not-for-profit corporation?

No: Yes: X I serve on the Executive Board of Tri-City Peoples Corporation, of East Orange, NJ 07018

5. How were you recruited to join this Board of Directors? Why do you wish to serve on the board of the proposed charter school? I was invited to be a part based on my years of experience in education throughout the community beyond traditional public schooling. I believe my background and balance will help the staff of the charter school to stay on mission; which will be to raise the academic performance of our inner-city youth.

6. What is your understanding of the appropriate role of a public charter school board member?
Public trust is the primary role of the board member, and then to advance the mission of the charter school with an ethical and steady hand.

7. Describe any previous experience you have that is relevant to serving on the charter school's board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.
I reviewed the CEO's report and budget. We also work to raise potential funds to support the efforts of the organization, and we will make recommendations to the Director based on the data gathered by staff. I served a s a principal at Sister Clara Muhammed Elementary School (a weekend school) for 9 years, SO I know some of the challenges regarding staffing and student population issues that come up.

8. Describe the specific knowledge and experience that you would bring to the board.
I bring years of coaching and mentoring new teachers to the board. I can recommend strategies for teacher retention, which is a big issue for charter schools nationwide.

School Mission and Program

1. What is your understanding of the school's mission and guiding beliefs?
My understanding of the mission is that, we will do what it takes to establish equity and equality of education for a population that has been traditionally stifled by traditional public education, when compared to neighboring communities that have quality education.

2. What is your understanding of the school's proposed educational program?
I know it is designed to reach elementary aged students and will improve standardized test results for every student.

3. What do you believe to be the characteristics of a successful school?
A school that is clean, safe for students and staff so that learning is consistent, a school that shows evidence of high parental engagement, and that retains teachers and leaders for 3 or more years at a high rate is deemed to some of the benchmarks characteristics of a successful school.

4. How will you know that the school is succeeding (or not) in its mission?
If there is improvement of test score results that are comparable or better that the state average for that demographic population then I would say we are successful.

Governance

1. Describe the role that the board will play in the school's operation.
The board will meet with school leaders on a monthly basis to discuss efforts, accomplishments and challenges of the school and present supports if needed.

2. How will you know if the school is successful at the end of the first year of operation?
We would have an attendance ratio by students and staff that is better than the state average for public schools. We would have retained 85% or better of our teaching staff, and where needed have promotions from within the institution.

3. How will you know at the end of five years of the schools is successful?
We would have very little turnover of staff and when we look at the data for standardized testing , we would have exceeded the benchmarks we created for the school when we started the school.

4. What specific steps do you think the charter school board will need to take to ensure that the school is successful?

Not only must we interact with the school leaders through regular executive meeting, we also have to engage the community of stakeholders around the school. Stakeholders would parents, business owners and even homeowners around the school with surveys and action plans that will show that the school is a vital institution in the community for all.

5. How would you handle a situation in which you believe one or more members of the school's board were acting unethically or not in the best interests of the school?
   We will hold them to the standard laid out in our by-laws and the laws of the state. There are consequences that can range from verbal warnings, to sanctioning the infracting board member, to holding an emergency session seeking the removal of the member to preserve ethics.

*Please include the following with your Information Form

- a ***one page*** resume
- a national criminal background check

*If you responded within the application that disciplinary action has been taken against any past or present professional licenses, provide a detailed response below outlining the disciplinary action taken and the license validity.

Certification

I, _Tariq Raheem_____, certify to the best of my knowledge and ability that the information I am providing to the North Carolina State Board of Education as a prospective board member for ___Clara Science Academy Charter School is true and correct in every respect.

Tariq Raheem 8/10/2019

Signature Date

Charter School Board Member Information Form

Note: *To be completed individually by each proposed founding charter school board member. All forms must be signed by hand.*

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As part of the application for a new charter school, the State Board of Education requests that each prospective board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the applicant team behind each school proposal in advance of the applicant interview, in order to be better prepared for the interview; and 2) to encourage board members to reflect individually as well as collectively on their common mission, purposes, and obligations at the earliest stage of school development.

Background

1. Name of charter school on whose Board of Directors you intend to serve: Clara Science Academy

2. Full name: Omar Muhammad

Home Address: 13106 Autumn Trace Dr., Huntersville NC
Business Name and Address:
Telephone No.: 704-904-7180
E-mail address: omuhammad_v@yahoo.com

3. Brief educational and employment history.
   I have a business degree and a master's in organizational leadership. I worked for non-profits, for profit and government agencies.

4. Have you previously served on a board of a school district, another charter school, a non-public school or any not-for-profit corporation?

   No: ☐ Yes: X

5. How were you recruited to join this Board of Directors? Why do you wish to serve on the board of the proposed charter school?
   I'm one of the founders.

6. What is your understanding of the appropriate role of a public charter school board member?
   To review policy and make sure they are in compliance with the law.

7. Describe any previous experience you have that is relevant to serving on the charter school's board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.

I have never served on a school board. I have advised on policy, IRS compliance, and government regulations.

8. Describe the specific knowledge and experience that you would bring to the board.
   Research, grant writing, and fundraising

School Mission and Program

1. What is your understanding of the school's mission and guiding beliefs?
   The mission of Clara Science Academy will increase students access to a STEM learning environment and promote high academic achievement through scientific inquiry, reasoning, and investigative learning.
   I believe the guiding belief is to educate young innovative minds to compete globally.

2. What is your understanding of the school's proposed educational program?
   Proficiency base education program

3. What do you believe to be the characteristics of a successful school?
   Great leadership

4. How will you know that the school is succeeding (or not) in its mission?
   I will know when the school is succeeding in its mission when the goals are met and school leadership has produced great young minds.

Governance

1. Describe the role that the board will play in the school's operation.
   The board will play a role in making sure the school is in compliance with state education laws

2. How will you know if the school is successful at the end of the first year of operation?
   Once goals and milestones are accomplish

3. How will you know at the end of five years of the schools is successful?
   Once goals and milestones are accomplish

4. What specific steps do you think the charter school board will need to take to ensure that the school is successful?
   Recruitment, fundraising and a great educational curriculum

5. How would you handle a situation in which you believe one or more members of the school's board were acting unethically or not in the best interests of the school?
   Follow the by-laws and confront it.

*Please include the following with your Information Form

- a ***one page*** resume
- a national criminal background check

*If you responded within the application that disciplinary action has been taken against any past or present professional licenses, provide a detailed response below outlining the disciplinary action taken and the license validity.

Certification

I, _____Omar Muhammad_____, certify to the best of my knowledge and ability that the information I am providing to the North Carolina State Board of Education as a prospective board member for ___Clara Science Academy Charter School is true and correct in every respect.

Omar Muhammad 7/1/19

Signature Date

Charter School Board Member Information Form

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As part of the application for a new charter school, the State Board of Education requests that each prospective board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

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Background

1. Name of charter school on whose Board of Directors you intend to serve: Clara Science Academy

2. Full name: Jawwaad A. Rasheed

Home Address: P.O. Box 4896 Rome, NY 13442
Business Name and Address:
Telephone No.: 315 416-5550
E-mail address:

3. Brief educational and employment history.
   I'm a graduate with a law degree. I'm a adjunct professor and I work for the New York State office of court administration.

4. Have you previously served on a board of a school district, another charter school, a non-public school or any not-for-profit corporation?

   No: Yes: X

5. How were you recruited to join this Board of Directors? Why do you wish to serve on the board of the proposed charter school?
   I was recruited while directing Junior Frontier Organization.

6. What is your understanding of the appropriate role of a public charter school board member?
   Support the development and implementation of the school and all programs associated with the school.

7. Describe any previous experience you have that is relevant to serving on the charter school's board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.
   I'm a trustee of SANY (Science Academy of New York) charter school.

8. Describe the specific knowledge and experience that you would bring to the board.

I have legal experience, I have served on many boards in the field of education. I understand education from various perspectives and I believe in the empowerment of youth.

School Mission and Program

1. What is your understanding of the school's mission and guiding beliefs?
   The mission of Clara Science Academy will increase students access to a STEM learning environment and promote high academic achievement through scientific inquiry, reasoning, and investigative learning.

2. What is your understanding of the school's proposed educational program?
   The founders core philosophy evolved through the life of gallant women and the work their lives inspired, signifying a symbol of change, an advocate for education, and leaving a legacy of excellence. Clara, Latin name "Clarus" signifies clear, bright and famous. The underlying purpose of The Clara Science Academy is to replicate the Clara women and men of the twenty first century by providing a strong educational environment for all children without regard to their intellectual ability, measure.

3. What do you believe to be the characteristics of a successful school?
   The characteristics of a successful school are as follows: Encourages Free Thought. Promotes Inclusion, Provides Rigor, Fosters Community Building, and Nurtures the Whole Child.

4. How will you know that the school is succeeding (or not) in its mission?
   I will know the school is achieving this being a active part of the school community and evaluating expected progress.

Governance

1. Describe the role that the board will play in the school's operation.
   The board will perform the following duties: recruit hire and supervise lead administrator, land acquisition, building purchase, financial support, enter into contracts, staffing, approve salaries and all other duties.

2. How will you know if the school is successful at the end of the first year of operation?
   We will know the school is successful by evaluating whether or not we reached the desired outcomes.

3. How will you know at the end of five years of the schools is successful?
   We will know after 5 years if the school is successful by assess and evaluating our long-term goals and if the desired outcomes were reached.

4. What specific steps do you think the charter school board will need to take to ensure that the school is successful?
   The board will need to observe day-to-day operation and be apart of the decision making process. The board will also need to receive feedback from school leadership and staff.

5. How would you handle a situation in which you believe one or more members of the school's board were acting unethically or not in the best interests of the school?
   When dealing with situations with regards to ethics, all stakeholders need to be involved in the discussion and decisions about their further participation need to handled expeditiously.

*Please include the following with your Information Form

- a ***one page*** resume
- a national criminal background check

*If you responded within the application that disciplinary action has been taken against any past or present professional licenses, provide a detailed response below outlining the disciplinary action taken and the license validity.

Certification

I, _Jawwaad Rasheed_____, certify to the best of my knowledge and ability that the information I am providing to the North Carolina State Board of Education as a prospective board member for ___Clara Science Academy Charter School is true and correct in every respect.

Jawwaad Rasheed 8/12/19

Signature Date

Charter School Board Member Information Form

Note: *To be completed individually by each proposed founding charter school board member. All forms must be signed by hand.*

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As part of the application for a new charter school, the State Board of Education requests that each prospective board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the applicant team behind each school proposal in advance of the applicant interview, in order to be better prepared for the interview; and 2) to encourage board members to reflect individually as well as collectively on their common mission, purposes, and obligations at the earliest stage of school development.

Background

1. Name of charter school on whose Board of Directors you intend to serve: Clara Science Academy

2. Full name: James F. Cyrus

Home Address: 10710 Walnut Springs Dr.
Business Name and Address: 725 E. Trade St. Suite 120
Telephone No.: 704-200-9040
E-mail address: jcyruslaw@gmail.com

3. Brief educational and employment history.
   I earned a Bachelor of Arts degree from The University of North Carolina (UNC) in the fields of Political Science and Latin American studies, I studied at the London School of Economics and Political Science in London, and enrolled in North Carolina Central University School of Law (NCCU-Law)
   I was offered a position at The Law Offices of James D. Williams Jr., P.A. as an Associate Attorney.
   In 2010, The Law Offices of James F. Cyrus IV PLLC., also known as The Cyrus Law Firm, was established in Charlotte, NC.

4. Have you previously served on a board of a school district, another charter school, a non-public school or any not-for-profit corporation?

   No: ☐ Yes: X

5. How were you recruited to join this Board of Directors? Why do you wish to serve on the board of the proposed charter school?
   I was recruited by Omar Muhammad.

6. What is your understanding of the appropriate role of a public charter school board member?
   - Responsibility is to make sure the school performs.
   - Properly manage and be accountable for the public funds allotted to the school
   - Each month critically review the financial statements of the school and formally approve needed changes to line items

- Develop and Uphold charter school policies which are lawful, fair, and provide protection for all the school's constituents
- Ensure that students are learning and meeting the academic performance criteria set by Clara Science Academy, and the school is adhering to its State Board Approved Educational Plan.

1. Describe any previous experience you have that is relevant to serving on the charter school's board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.
   I'm a current board member of the Jazz Art Initiative of Charlotte

2. Describe the specific knowledge and experience that you would bring to the board.
   I would bring my knowledge and experience of finance and legal expertise.

School Mission and Program

1. What is your understanding of the school's mission and guiding beliefs?
   The mission of Clara Science Academy will increase students access to a STEM learning environment and promote high academic achievement through scientific inquiry, reasoning, and investigative learning.
   I understand the guiding belief is for Clara Science Academy to prepare each student to compete globally in the STEM field.
2. What is your understanding of the school's proposed educational program?
   My understanding of the school's proposed educational program is that Clara Science Academy will focus on STEM through project base learning.

3. What do you believe to be the characteristics of a successful school?
   The characteristics of a successful school is one who applies its mission, provides great teachers & curriculum, and understand their budget.

4. How will you know that the school is succeeding (or not) in its mission?
   I will know that the school is succeeding in its mission when milestones are met and goals have been achieved.

Governance

1. Describe the role that the board will play in the school's operation.
   Board Member

2. How will you know if the school is successful at the end of the first year of operation?
   Once enrollment is met and the budget is balance.

3. How will you know at the end of five years of the schools is successful?
   I will know the school success in the fifth year by the student enrollment, financial stability and the progress scores from the state.

4. What specific steps do you think the charter school board will need to take to ensure that the school is successful?
   The review of the policy & procedures along with the financial statements

5. How would you handle a situation in which you believe one or more members of the school's board were acting unethically or not in the best interests of the school?

I would ask the board to investigate their conduct and if they are found acting unethically, I will present a motion to dismiss the board member.

*Please include the following with your Information Form

- a ***one page*** resume
- a national criminal background check

*If you responded within the application that disciplinary action has been taken against any past or present professional licenses, provide a detailed response below outlining the disciplinary action taken and the license validity.

Certification

I, __James Cyrus_____, certify to the best of my knowledge and ability that the information I am providing to the North Carolina State Board of Education as a prospective board member for _Clara Science Academy_ Charter School is true and correct in every respect.

James Cyrus 8/09/19

Signature Date

Charter School Board Member Information Form

Note: *To be completed individually by each proposed founding charter school board member. All forms must be signed by hand.*

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The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the applicant team behind each school proposal in advance of the applicant interview, in order to be better prepared for the interview; and 2) to encourage board members to reflect individually as well as collectively on their common mission, purposes, and obligations at the earliest stage of school development.

Background

1. Name of charter school on whose Board of Directors you intend to serve: Clara Science Academy Charter

2. Full name: Varsty Cromwell Muhammad

Home Address: 13106 Autumn Trace Drive
Business Name and Address:
Telephone No.: 704 953 2446
E-mail address: Varstyc@gmail.com

3. Brief educational and employment history.
   BA in English, M.Ed in Counseling Education, MA in Child and Family, currently working
   See Resume Attached

4. Have you previously served on a board of a school district, another charter school, a non-public school or any not-for-profit corporation?

   No: ☐ Yes ☒ ☐

5. How were you recruited to join this Board of Directors? Why do you wish to serve on the board of the proposed charter school?
   Clara Science Academy evolved from the lives of gallant women and the work their lives inspired, signifying a symbol of change, an advocate for education, and leaving a legacy of excellence. Clara, Latin name "Clarus" signifies clear, bright and famous. As one of the founders, I believe all this is possible through teaching and preparation. The vision of Clara came from the inspiration of mothers, grandmothers and great grandmothers who left a rich legacy in Education – seeking knowledge above the material things in life.

6. What is your understanding of the appropriate role of a public charter school board member?
   My understanding of the role as the school board member is to work collaborative with the other members in ensure that the policies and procedures get implement during the ongoing operation of the school. Ensuring that best practices are implemented and to ensure success for the students at Clara Science Academy. Responsibilities includes but not limited to maintaining appropriate accounting procedures; complying with

local, state, and federal policy; providing meals, security, custodians, psychological services, and bus companies; and of course, educating the students.

7. Describe any previous experience you have that is relevant to serving on the charter school's board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.
   My previous experience involve serving for two terms on the board for a private school in Charlotte. I have worked as a licensed school counselor for three years at a charter school in upstate New York. I also have over 15 years of experience working in the field of education (Early Childhood Education, K-12, and Higher Education) in both management and supervisory roles. I also bring my expertise in community partnerships and academic programming.

8. Describe the specific knowledge and experience that you would bring to the board.
   I bring to the board my expertise in community partnerships, academic programming, and grant writing, crisis management, Pupil Support, OLWEUS Bully Prevention, Response to Intervention (RTI), and Positive Behavior Interventions & Support (PBIS).

School Mission and Program

1. What is your understanding of the school's mission and guiding beliefs?
   I understand that the mission is to provide a Science, Technology and Mathematics focused curriculum that will build self-respect while preparing diverse students to become life-long learners, demonstrate critical-thinking and adapt to our changing technological world.

2. What is your understanding of the school's proposed educational program?
   CSA purpose is to replicate leaders of the twenty-first century by creating a student-centered learning environment that is project-based and technology driven in which students can reach the highest academic excellence preparation for success in their post-secondary studies and professional careers.

3. What do you believe to be the characteristics of a successful school?
   Characteristics such as a clear and well-defined mission and core values as well as the leadership team and broad of directors' key to a successful school. All of which will set the culture of the school

4. How will you know that the school is succeeding (or not) in its mission?
   The school is succeeding based on the state testing and national testing assessments; the retention rate of both the students and the teachers; parental survey and input as well as community involvement and collaboration ratings.

Governance

1. Describe the role that the board will play in the school's operation.
   The role the board will play includes but not limited to maintaining appropriate accounting procedures; complying with local, state, and federal policy; providing meals, security, custodians, psychological services, and bus companies; and of course, educating the students.

2. How will you know if the school is successful at the end of the first year of operation?
   I believe the culture and leadership are two things that determine a successful first year of operation.

3. How will you know at the end of five years of the schools is successful?

3. How will you know at the end of five years of the schools is successful?
   Success comes from the principles as well the teaching staff and the student body through on going monitoring, teacher evaluation and classroom observations. I believe that by establishing solid internal accountability measures can help project the long-term success of the school as well as establishing interim assessments, setting clear goals and objectives, and accountability.

4. What specific steps do you think the charter school board will need to take to ensure that the school is successful?
   By establishing excellent Leadership and a strong academic program.

5. How would you handle a situation in which you believe one or more members of the school's board were acting unethically or not in the best interests of the school?
   My role is in supporting the school's vision while simultaneously holding the leader accountable in regards to student outcomes and complying with local laws and regulations, thus my immediate step would be to report all concerns to the Chair Person of Board

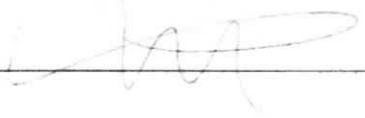
*Please include the following with your Information Form

- a ***one page*** resume
- a national criminal background check

*If you responded within the application that disciplinary action has been taken against any past or present professional licenses, provide a detailed response below outlining the disciplinary action taken and the license validity.

Certification

I, __Varsty Muhammad_____, certify to the best of my knowledge and ability that the information I am providing to the North Carolina State Board of Education as a prospective board member for ___Clara Science Academy Charter School is true and correct in every respect.



8/26/19

Signature Date

Charter School Board Member Information Form

Note: *To be completed individually by each proposed founding charter school board member. All forms must be signed by hand.*

Serving on a public charter school board is a position of public trust and as a board member of a North Carolina public charter school; you are responsible for ensuring the quality of the school's entire program, competent stewardship of public funds, and the school's fulfillment of its public obligations and all terms of its charter.

As part of the application for a new charter school, the State Board of Education requests that each prospective board member respond individually to this questionnaire. Where narrative responses are required, brief responses are sufficient.

The purpose of this questionnaire is twofold: 1) to give application reviewers a clearer introduction to the applicant team behind each school proposal in advance of the applicant interview, in order to be better prepared for the interview; and 2) to encourage board members to reflect individually as well as collectively on their common mission, purposes, and obligations at the earliest stage of school development.

Background

1. Name of charter school on whose Board of Directors you intend to serve: Clara Science Academy

2. Full name: Glenda M. Tate

Home Address: 2013 Deer Island Lane, Wilmington, N.C 28405
Business Name and Address: N/A
Telephone No.: 910-523-1294
E-mail address: gtate,finehomes@gmail.com

3. Brief educational and employment history.
   Retired Senior Executive with the U.S Department of Transportation in Washington D.C. and Masters Degree in Public Administration

4. Have you previously served on a board of a school district, another charter school, a non-public school or any not-for-profit corporation?

   No: Yes:X

5. How were you recruited to join this Board of Directors? Why do you wish to serve on the board of the proposed charter school?
   I was recruited by Omar. I believe this is an opportunity to help establish great learning institutions.

6. What is your understanding of the appropriate role of a public charter school board member?
   To serve on the board and review policy, procedures while maintaining financial stability and staying in the budget.

7. Describe any previous experience you have that is relevant to serving on the charter school's board (e.g., other board service). If you have not had previous experience of this nature, explain why you have the capability to be an effective board member.

8. Describe the specific knowledge and experience that you would bring to the board.
   I've worked for the U.S Government for over 35 years in public service as a Senior Executive

School Mission and Program

1. What is your understanding of the school's mission and guiding beliefs?
   The mission of Clara Science Academy will increase students access to a STEM learning environment and promote high academic achievement through scientific inquiry, reasoning, and investigative learning.

2. What is your understanding of the school's proposed educational program?
   The founders core philosophy evolved through the life of gallant women and the work their lives inspired, signifying a symbol of change, an advocate for education, and leaving a legacy of excellence. Clara, Latin name "Clarus" signifies clear, bright and famous. The underlying purpose of the Clara Science Academy is to replicate the Clara women and men of the twenty first century by providing a strong educational environment for all children without regard to their intellectual ability, measure.

3. What do you believe to be the characteristics of a successful school?
   The characteristics of a successful school are as follows: Encourages free thought, promotes inclusion, provides rigor, fosters community building and nurtures the whole child.

4. How will you know that the school is succeeding (or not) in its mission?
   I will know the school is achieving in its mission by being an active part of the school community and evaluating expected progress.

Governance

1. Describe the role that the board will play in the school's operation.
   The board will perform the following duties: recruit, hire and supervise lead administrator, land acquisition, building purchase, financial support, enter into contracts, staffing, approve salaries and all other duties.

2. How will you know if the school is successful at the end of the first year of operation?
   We will know the school is successful by evaluating whether or not we reached the desired outcomes.

3. How will you know at the end of five years of the schools is successful?
   We will know after 5 years if the school is successful by assessing and evaluating our long term goals and if the desired outcomes were reached.

4. What specific steps do you think the charter school board will need to take to ensure that the school is successful?
   The board will need to observe day-to-day operation and be a part of the decision making process. The board will also need to receive feedback from school leadership and staff.

5. How would you handle a situation in which you believe one or more members of the school's board were acting unethically or not in the best interests of the school?
   When dealing with situations in regards to ethics, all stakeholders need to be involved in the discussion and decisions about their further participation need to be handled expeditiously.

*Please include the following with your Information Form

Certification

I, Glenda Tate, certify to the best of my knowledge and ability that the information I am providing to the North Carolina State Board of Education as a prospective board member for Clara Science Academy Charter School is true and correct in every respect.

Glenda Tate — 8/1/19

Signature — Date

Tariq T. Raheem

25 Eastern Parkway, Newark, NJ 07106
Cell: 973-752-8951 Email: tariqtraheem@gmail.com

Professional Mission:

For over 20 years I have served as an educational leader, helping all who interact, with assigned academic institutions, so that they may realize their full potential through education.

Core Strengths:

Self-starter
Curriculum writing
Professional development
Fundraising and marketing strategies
Active community engagement
Safe school operation/ staff supervision
Informal observations/ via walk throughs
Using software to support data: RealTime, IGPro, Power School, Edmodo, Class Dojo, EdConnect, Excel, Oncourse, Smartboard

Certifications:

Principal's –New Jersey Certificate of Eligibility Certificate
Standard Supervisor Certificate
Teacher Certificate for Social Studies, State of New Jersey

Professional Experience:

November 2018 to Present- Social Studies Teacher Irvington Public Schools

1. Teaching and Aligning lessons with Curriculum Standards for the subjects of Financial Literacy, US History I Honors Level , and Early US History
2. Conducted parent meetings, teacher conferences

July 2018 to Present – Principal Consultant for RAH Development LLC

1. Creating Digital Platforms and consulting for authors, educators, and developers

August 2016 to June 2018- Dean of Culture & Families Marion P. Thomas Charter School

1. Served as 2nd in Command supporting the principal's initiatives to maintain safety
2. Worked with district administration to ensure HIB and discipline compliance

September 2015 to 2016---- Social Studies Teacher in East Orange School District

1. Taught and Aligned lessons with Curriculum Standards at upper levels
2. Co-coached the Chess Club plus co-hosting of the 1st Intra-school Chess Tournament

September 1998 to June 2015-----Social Studies Instructor for Newark Public Schools

1. Teach and Align lessons with Curriculum Standards at upper levels
2. Served as School Newspaper Advisor, and currently the Chess Club Advisor

Education:

Education

2005-2008	Kean University	Master Degree in Educational Administration.
1996-1998	Kean University	Bachelors in Teaching Social Studies.
1994-1996	New Jersey City University	History/ Education Transferred.
1991-1994	Essex County College	Associates degree in Sociology.

Varsty C. Muhammad

13106 Autumn Trace Drive, Huntersville, NC 28078; 704-953-2446; vcmuhammad@gmail.com

Education

Ph.D **Morgan State University, Graduate School of Leadership and Policy** Current Doctoral Candidate
Higher Education Leadership and Policy

M. A. **Syracuse University, Graduate School of Education** 2017
Counseling Secondary Education

Master's Paper: *"Shared spaces within early childhood: Benefits of Intergenerational programs"*

M. Ed **South Carolina State University, Graduate School of Education** 1998
Counseling Secondary Education

B. A. **Paine College** 1992
English,

Relevant Experience

Research Director, 2000 – Present
CiberPoint, Inc. Charlotte, NC

- Directs and implements an organization's research and development policies, objectives, and initiatives.
- Ensures research and development activities will maintain an organization's competitive position and profitability.

Lead Elementary/Middle School Counselor January 2013 – July 2016
Syracuse Academy of Science Charter School Syracuse, NY

- Coordinated with teachers, administrators, resource specialists and community (e.g., service clubs, courts, child protective services, etc.) provided/received requested information and made recommendations.
- Counseled students, parents, and guardians to enhance student success, academically, socially, and emotionally, in school.

UNIVERSITY TEACHING EXPERIENCE

Instructor, *Department of Child and Family Studies*, Syracuse University, Fall 2011
Assumed sole responsibility for course design, instruction and students' assessment for the following undergraduate course: *Family Development* (CFS 201), Fall 2011. Class size 115

EARLY CHILDHOOD EXPERIENCE

Early Childhood Education Manager/Facilitator February 2002 - August 2009
Bethlehem Center Head Start Charlotte, NC

- Provided training and technical assistance to all Head Start (contained) sites, and Head Start-Charlotte Mecklenburg School Partnership sites servicing 858 children and 90 teaching staff within the Mecklenburg County
- Provided direct and immediate supervision, management, and leadership daily for 22 employees (teachers, cooks, janitorial, bus drivers, substitutes, etc.) and 150 students;
- Reviewed and restructured the Early Childhood Education Program Policies and Procedures Manual. Planned and Reviewed the Operational Procedures with the Head Start Director and the Management/Leadership Team within the agency

Glenda M. Tate
2013 Deer Island Lane
Wilmington, N.C. 28405
gtate.finehomes@gmail.com
(910) 523-1294

Education

Master's Degree from American University in Washington, D.C.

Professional Experiences

Retired senior executive with over 30 years of experiences

U.S. Department of Transportation in Washington, D.C

Director of Human Resources **1975 to 2004**

The Federal government

Senior Associate Administrator

The Federal Aviation Administration.

- Managed multi-million-dollar budgets
- Provided leadership and oversight for human resources policies for federal agencies including over 100,000 civilian employees at the Transportation Department.
- Served on agency-related Congressional hearings and programs within the President's Office of Management and Budget.
- Help establish one of the first government "pay for performance" systems which now serves as a model for federal agencies as they transform from tenure based to productivity-based pay systems.

President/Founder

The Kairos Center **2014 to current**

- Focus in economic development for low/middle income (career development, assistance in small business development)
- Assist with acquisition of housing and transportation
- Partnering with clients to purchase homes and automobiles) assist low and middle-income clients in discovering and pursuing their life purpose and destiny

Boards

Board of Directors for both educational, non-profit and medical associations.

JAMES FRANCIS CYRUS IV
725 East Trade Street, Suite 120, Charlotte, NC, 28202
PHONE: (704) 200-9040 • E-MAIL: JCYRUSLAW@GMAIL.COM

EDUCATION

12/08 **North Carolina Central University School of Law** — North Carolina
Juris Doctorate

- Thurgood Marshall Academic Scholarship Recipient
- Thurgood Marshall Essay Competition Winner- "*Power of technology in a global village*"

12/00 **University of North Carolina at Chapel Hill** — North Carolina
Bachelor of Arts
Major: Political Science; Concentration: Latin America

LEGAL EXPERIENCE

08/06 – 12/08 **NCCU-Law School**, Office of Development, Durham, North Carolina
Research Assistant

- Developed strategy for raising funds for the NCCU-Law library endowment.
- Raised $110,000 in 2006

Summer 2006 **Honorable William Webb, U.S. District Court, Eastern District of North Carolina**
Judicial Intern

- Drafted a judicial opinion for a case that involved an appeal for Disability Insurance Benefits. This required reviewing court pleadings and transcripts of the record to determine whether there was substantial evidence for the decision rendered by the Commissioner of Social Security Administration.
- Drafted a Judicial Order in response to a Motion to Amend Answer/Reply brief. The case involved an affirmative defense pursuant to the after-acquired evidence doctrine.
- Verified and cross-checked case law and statutes cited in briefs filed with the court, as well as observed arbitration hearings, pre-trial conferences, and trials.

PROFESSIONAL EXPERIENCE

06/01/2010- **Present** **The Law Office of James F. Cyrus IV, PLLC**
Attorney at Law

- Criminal. Immigration. Civil.

09/02 -07/05 **DC Department of Health** — District of Columbia
Research Investigator

- Oversaw Bioterrorism program and all activities related to surveillance and epidemiology preparedness and response.
- Conducted educational outreach for bioterrorism related activities and other communicable diseases.

05/01-05/02 **Morgan Stanley** — Florida
Financial Advisor

- NASD Licenses: Series 7, Series 66, and Series 3.
- Developed investment strategies for high net worth clients that included wealth planning, asset allocation, managed accounts, and portfolio construction.
- Managed $3 million in assets generated through cold calling and referrals.
- Hosted Private Wealth Management dinners as a member of the Tom Cleary group for investors with investable assets of $5 million or more.

Omar Muhammad
P.O. Box 33204 Charlotte, NC 28233
Home: 704-904-7180 Email: omuhammad_v@yahoo.com

Education

8/2006	Master of Science in Organization Change and Leadership Pfeiffer University, Charlotte North Carolina
7/2004	Certified National Grant Writer and Consultant Research Associates, Inc., Columbia South Carolina
5/2002	Bachelors of Science, Business Management Paine College, Augusta Georgia

Professional Development

5/2011	Fund Development for Nonprofit Boards
9/2010	Business Planning for CHDO's / Nonprofits
6/2008	Building Rural Communities through CHDO's Training
3/2008	Office for Human Research Protections (OHRP) Quality Assurance Training
11/2007	U.S Department of Housing and Urban Development Training
8/2006	IRS Training on Budgeting and file Non-profit Taxes

Technology

Microsoft Windows MS Word / Excel Adobe Photoshop
PowerPoint

Professional Experience

CiberPointe, Inc. (Non-Profit)
Charlotte, NC
Co-Founder - Development Manager **11/ 2007- Present**
Advised on policy, IRS compliance, and government regulations.
Raised over $100K for a neighborhood education plans

United States Department of Agriculture (USDA)
Trenton, NJ
Field Technician **06/2013- 06/2014**
Examine food in schools, centers, and parks
Evaluate, performed field investigations, and sited violations in compliance with Federal laws

UMI & Associates (Non-Profit)
Syracuse, NY
VP of Business Development **11 / 2010 – 02 / 2013**

Work with partners to develop educational and economical developmental programs
Raised over $250K for a neighborhood redevelopment plan

GE Money
Charlotte, NC
Credit Analyst **9/2006 – 10/2007**
Managed accounts
Analyzed financial data and other pertinent information to determine the financial condition and Credit-worthiness of customers

ETrade Financial
Charlotte, North Carolina
Financial Analyst **8/2005 – 9/2006**
Analyzed financial information to produce forecasts of business, industry, and economic conditions for use in making investment decisions.

Dr. Mohammad Adnan Alghorani

5706 Joshua Cain Rd.
Charlotte, NC 28213, USA
+1.704.953.8647
AL3DNAAN@GMAIL.COM
https:/www.linkedin.com/in/dralghorani
AL3DNAAN

Education

AUGUST 2003: **Ph.D. in School Psychology / The University of Texas at Austin, Austin, TX, USA**

DECEMBER 1997: **M.A. in Educational Psychology / The University of Texas at Austin, Austin, TX, USA**

DECEMBER 1992: **M.A. in Counseling Psychology / Damascus University, Damascus, Syria**

AUGUST 1990: **B.Ed. in Psychology / Damascus University, Damascus, Syria**

Experience

2016 – PRESENT: **Principal / Intellicor International Academy**
Planning and managing all aspects of the academy: Strategy, HR, Curriculum, Admissions, Financial, and Daily Operation of this K-12 school.

2016 – PRESENT: **Director / IDEA Consulting, NC, USA**
Educational, Psychological, and Social Consultation Services.

2015 – 2016: **School Psychologist / American Center for Special Abilities, Abu Dhabi, UAE**
Children Psychological Services.

2003 – 2015: **Chair of Department of Psychology & Counseling / UAE University, Al Ain, UAE**
Teaching undergraduate and graduate courses, research, training, and consultation and psychological services. Other held titles and positions: **Associate Professor of Psychology, Adjunct Professor, Department of Psychiatry & Behavioral Sciences, and Assistant Professor of Psychology.**

2011 – 2014: **Consultant Psychologist / Family Development Foundation, Al Ain, UAE**
Providing consultation to families concerning their children academic and psychological wellbeing.

2008 – 2009: **Director of Psychology & Child Psychology Consultant / American Center for Special Abilities, Abu Dhabi, UAE**
Children Psychological Services.

2002 – 2003: **Clinical Psychology Intern / Adler School of Professional Psychology, Chicago, IL, USA**
Correctional Psychology Associate & Forensic Psychology Associate.

1996 – 1997: **Principal / Peace Elementary School (Austin Peace Academy), Austin, TX, USA**
Planning and managing all aspects of the academy: Strategy, HR, Curriculum, Admissions, Financial, and Daily Operation.

1995 – 1997: **Teaching Assistant / The University of Texas at Austin, Austin, TX, USA**
Arabic Language Teaching Assistant.

Leroy L. Wray, Jr., Ed.D

7809 Pope Farm Road • Charlotte, North Carolina 28269
704.996.4447 • llwrayjr@gmail.com

Performance Scorecard

- Highly accomplished leader with 17 years of experience in education, philanthropy and education leadership.
- Experience in analyzing assessment data to drive instruction and operation, resulting in the development and management of initiatives and activities.

Education

GARDNER-WEBB UNIVERSITY, Boiling Springs, North Carolina • 2013 – 2017
Doctorate of Education Leadership and Policy

NORTH CAROLINA STATE UNIVERSITY, Raleigh, North Carolina • 2006 - 2008
Master of Arts, Educational Technology

NORTH CAROLINA CENTRAL UNIVERSITY, Durham, North Carolina • 1998 - 2008
Master of Arts, Educational Leadership
Bachelor of Arts, Elementary Education

School Administration & Teaching Career Summary

WINSTON SALEM STATE UNIVERSITY and UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE, North Carolina • 2018 – present

Department of Education, Adjunct and Clinical Professor

Provided direct and quality instruction to students. Engaged students and provided prompt feedback in an objective, respectful, effective manner.

PRODIGAL SON FOUNDATION, Charlotte, North Carolina • 2008 – present
Executive Director

Founded a 501(c)(3) organization devoted to providing free supplemental afterschool and summer academic support and mentoring services to economically disadvantaged students. Design and implement a rigorous academic and leadership-focused curriculum that has resulted in increased reading and math scores for 90% of program participants.

MALE LEADERSHIP ACADEMY /AUNIVA, Charlotte, North Carolina • 2017 – 2019
Consultant/Grant writer

Provided professional development, training, and coaching to help organizations attain their mission and vision.

CHARLOTTE-MECKLENBURG SCHOOLS, Charlotte, North Carolina • 2008 – 2017
Assistant Principal/Principal

Analyzed assessment data to drive instruction, which resulted in an overall increase in math and literacy growth from 2008-2017 in each school. .

CHARLOTTE-MECKLENBURG SCHOOLS, Charlotte, North Carolina • 2011 – 2013
District Coordinator

Provided consultative and compliance support to 48 Title I elementary schools and respective Title I SES and Parental Involvement Specialists. Interpreted and monitored compliance with federal and state laws, rules and regulations for Title I and provided written guidance.

JAWWAAD A. RASHEED
P.O. Box 4896
Rome, New York 13442-4896
(315) 416-5550

CAREER SUMMARY

Thirty seven years of progressively responsible legal experience in private and public service. Provided judicial decisions, criminal and civil litigation, legal critiques, analyze business risk, formulate and recommend negotiation strategies, and general practice law. Have been a trier of fact and judicial decision maker for New York State Family Court for the last 26 years.

EDUCATION

L.L.M.	Georgetown University Law Center Washington, D.C. International Business	1983
J.D.	Georgetown University Law Center Washington, D.C.	1981
B.A.	Amherst College Amherst, Mass., Political Science, Middle Eastern Studies and African American History (Magna Cum Laude)	1978

EXPERIENCE

1993-Present NEW YORK STATE OFFICE OF COURT ADMINISTRATION
Oneida County Family Court Support Magistrate Utica/Rome, New York

Responsible for the adjudication of child support/spousal support petitions filed in Oneida County including initial support request modifications, enforcement and violations. Also responsible for modifications and enforcement of child and spousal support provisions of divorce and separation decrees found in Supreme Court actions.

Accomplishments Include:

* Adjudicated over 4,000 cases per year for first four years in office.
* Currently adjudicates an average of 2,500 or more cases per year.
* Initiated and facilitated periodic meetings between various agencies and departments which comprises the total child support system in Oneida County Family Court.
* Initiated periodic meetings with Family Court Judges and Chief Clerk of Family Court and Support Magistrates to help facilitate services to public.
* Participated on a regular basis with the interviewing and selection of carious personnel under the auspices of the Office of Court Administration.
* Selected to represent New York State Family Court Support Magistrate Program on various panels, conferences and speaking engagements on a local, national and international basis.

2004-Present **STATE UNIVERSITY OF NEW YORK; MOHAWK VALLEY COMMUNITY COLLEGE**
Adjunct Professor - Utica/Rome, New York

Teach first and second year college courses within the Criminal Justice major. Courses include but are not limited to Law & Ethics, a study of American style democracy and morality; Juvenile Delinquency and the courts, a study of how our legal system interact with American youth.

Accomplishments Include:

* Highly rated student reviews
* Instituted Internship program for students with New York State Courts

1990-1993 **MONROE COUNTY LAW DEPARTMENT**
Deputy County Attorney, Rochester, New York

Responsible for Family Court representation/litigation on behalf of various county agencies and private clients who contract with the county.

Accomplishments Include:

* Successfully litigated over 1500 paternity /support petitions a year.
* Provide Appellate Court appeals and argument on ambiguous areas of paternity/support law.
* Assumed supervisory responsibility for Child Support Unit of the Law Department.
* Participated in legislative amendments to child support law via the New York State House of Representatives.

1989-1990 **ROY W. KING, P.C.**
Associate Attorney, Rochester, New York

Responsible for over 125 open files for the general law practice firm. Including but not limited to cases dealing with criminal law, corporations, family law, and real estate.

Accomplishments Include:

* The incorporation of over ten corporations including some S. Chapter corporations and Non-for-Profit corporations.
* Providing criminal defense representation various felony and misdemeanor charges including AI felony trials.
* Represented the buyer of improved commercial property with a value over one million dollars and represented a contract for equipment, fixtures and inventory successfully.
* Provided in-house legal counseling to various small corporations on a daily basis, including civil litigation.
* Successfully litigated personal injury law suits and provided legal arguments up through appeals to New York Appellate Court.

1987-1989 **MONROE COUNTY DISTRICT ATTORNEY OFFICE**
Assistant District Attorney, Rochester, New York

Responsible for the prosecution of criminal offenses throughout various parts of Monroe County including Rochester, Henrietta, Brighton, etc.

Accomplishments Include:

* Successful felony prosecutions.
* Prosecution of over 1,000 criminal cases resulting in guilty pleas or trial convictions.
* Utilized on various occasions dispute resolution mechanisms and organizations.

1983-1987 **FIRST NATIONAL WESTMINSTER GROUP OF COMPANIES**
Legal Counsel, Los Angeles, California

Perform and direct all general legal services of the corporation. Review and revise all international investment guidelines and procedures. Negotiate all client contractual relationships for domestic and internal investment opportunities. Represent the corporation's clients on various matters involving investment portfolios.

Accomplishments Include:

* Represented client during negotiation and consummation of various purchases and development projects in the United States, Europe, and the Middle East.
* Negotiated and monitored various types of aviation contracts involving aircraft and airline purchases.
* Obtained and monitored various export licenses for technology products.
* Established various subsidiaries under parent company.

1981-1983 **THE BENDIX CORPORATION, Aerospace-Electronic Group**
Staff Attorney, Office of the General Counsel
Arlington, Virginia

Reviewed and revised International and Federal government contracts. Drafted international and domestic distributor agreements. Interpreted United States Department of Commerce anti-boycott compliance regulations. Negotiated personnel EEO conciliation matters and real estate contracts. Performed negotiations tasks and general corporation legal responsibilities.

Accomplishments Include:

* Reviewed and modified proposal between the Bendix Communications Divisions and the Dept. of Transportation. Federal Aviation Administration.
* Analyzed letter of credit for the Rafidian Bank, Baghdad, Iraq and recommended modifications to comply with Department of Commerce anti-boycott regulations.
* Assessed company's tax liability for doing business in the republic of Senegal, coordinated negotiations with the economic Minster of Senegal and U.S. Ambassador of Senegal located in Dakar.
* Devised procedure guide used by the Aerospace Division handling garnishments for the States of Maryland, Virginia, and West Virginia.
* Represented the company in Equal Employment Opportunity Commission hearing (Washington, D.C.).
* Negotiated a ten year lease for the Company's facility in Las Vegas, Nevada.

1980-1981 **AGENCY FOR INTERNATIONAL DEVELOPMENT**
STATE DEPARTMENT, UNITED STATES OF AMERICA
Legislative Specialist/Legal Clerk
Office of the General Counsel, Washington, D.C.

Researched Foreign Assistance Act (FAA) and all related U.S. International statutory law. Drafted and amended proposed FAA legislation for the U.S. Congress. Researched and prepared legal memoranda create dot solve domestic and international procedure problems. Interfaced and support proposed Bills.

Accomplishments Include:

* Analyzed international policy issues and recommended solutions.
* Created system for maintaining legislative status on FAA legislation.

1979-1980 **SMALL BUSINESS ADMINISTRATION**
Legal Clerk, Office of the General Counsel
Washington, D.C.

Researched and prepared memoranda on legislative administrative law. Prepared briefs supporting the position of national small business clients in contention with government policies and practices. Lobbied on behalf of clients at Capital Hill and state government levels.

Accomplishments Include:

* Researched and developed major government report entitled: "Government Competition with Small Businesses."

1979 **UNITED STATES ARMY**
Army Judge, General Advocate Corps (Summer Intern)
Ft. Belvior, Virginia

Researched and prepared memoranda in criminal and administrative law. Performed various family law related tasks. Developed Army procedural and subcontract projects.

1978-1979 **LEGAL SERVICES CORPORATION**
Legal Assistant, Washington, D.C.

Improved the basic skills of new and/or less experienced paralegals. Taught basic writing, interviewing, investigation, and information presentation skills.

MEMBERSHIP ACTIVITIES

Professional

Board of Director for National Child Support Enforcement Association 2000-2002.
Speaker and presenter for National Child Support Enforcement Association, 1997-2015.
Board of Director, and or speaker, lecturer for Eastern Regional Inter-state Child Support Association, 1997-2015.
Founder and Board of Director for NY State Support Magistrate Association 2003- 2010
Member and past board of directors for American Judges Association, 1996-2010.
Committee member to plan, organize, present annual training for NY State Support Magistrates, 1996-Present.
Lecturer and speaker for Oneida County Bar Association on Family Law, 1996-Present.
Lecturer and speaker for New York State Bar Association, on Family Law 1999-Present.
Member, Oneida County Bar Association, 1993-Present.
Member, Rome County Bar Association, 1993-Present.
New York State Bar Association, 1982-Present.
National Bar Association, 1982-Present.
American Bar Association, 1982-Present.

Other

Trustee, SANY (Science Academy of New York) charter school, 2014-present
Trustee, Herkimer/Oneida County Community Foundation 2015 - present
Past Board of Directors United Way of Greater Utica, New York .
Recipient of New York State Office of Court Administration Merit Award for Community Services, 1999.
Board of Directors Cosmopolitan Center, Utica, New York 2000-2006.
National Board of Directors Frontiers International, 2000- 2014.
National Director of the Junior Frontiers o/b/o Frontiers International 2008–2013
Founder and Board of Directors 100 Black Men of Syracuse, New York 2006-Present.
Co-Director of Junior Frontiers of Mohawk Valley 2003-Present.
Trustee for Science Academy of New York Charter School –2014 –Present
Recipient of J.C.Penney Golden Ace Award for Outstanding Humanitarian Award, 1998.
Board of Directors for Utica YMCA, 1997-2002.
Member and Sponsor of Youth Annual Theatrical Production of "The Wiz", 1996-2004.
Co-founder of Rome YMCA Youth Program: Saturday Night Midnight Madness, 1996-2005.
Founder and Director of Adirondack Spirit Basketball Club, 1994-2005.
Board of Directors, Land of Oneida Boy Scouts of America, 1994-2000.
Board of Directors, A Better Chance Program (Clinton, NY), 1993-2000.
Director of Mentor Program, Rochester Urban League, 1989-1993.
Board of Directors, Boys and Girls Club Center (Rochester, NY), 1988-1993.
Board Member, Urban-Suburban Project (Monroe County), 1986.
Martin Luther King, Jr. Award for Outstanding Citizen, 1983.
Outstanding Young Men in American, 1980-1981.
Who's Who in America Colleges, 1979.

Charter School Required Signature Certification

Note: *Outlined below is a list of areas that must be certified by the proposed Board of Directors. Any forms Not Applicable to the proposed charter school indicate below with N/A and provide a brief explanation for providing such response.*

Serving on a public charter school board is a position of public trust and board members of a North Carolina public charter school; you are responsible for ensuring the quality of the school's entire program, competent stewardship of public funds, the school's fulfillment of its public obligations, all terms of its charter, and understanding/overseeing all third party contracts with individuals or companies.

- The selected Board Attorney that he/she has reviewed with the full Board of Directors, listed within the application, all the governance documents and liabilities associated with being on the Board of a Non Profit Corporation.
  - Name of the Selected Board Attorney: _____N/A_____
  - Date of Review: _____
  - Signature of Board Members Present (Add Signature Lines as Needed):
    - _____
    - _____
    - _____
    - _____
    - _____
    - _____
    - _____
    - _____
- The selected Board Auditor that he/she has reviewed with the full Board of Directors, listed within the application, all the items required for the annual audit and 990 preparations.
  - Name of the Selected Board Auditor: _____N/A_____
  - Date of Review: _____
  - Signature of Board Members Present (Add Signature Lines as Needed):
    - _____
    - _____
    - _____
    - _____
    - _____
    - _____
    - _____

- If contracting with a CMO/EMO, that the selected management company has reviewed with the full Board of Directors, listed within the application, all the items required and the associated management contract and operations.
  - Name of the Contact for Selected EMO/CMO:
    _____N/A_____
  - Date of Review:
    _____
  - Signature of Board Members Present (Add Signature Lines as Needed):
    - _____
    - _____
    - _____
    - _____
    - _____
    - _____
    - _____
- If contracting with a financial management service provider that the selected financial service provider has reviewed with the full Board of Directors, listed within the application, all the financial processes and services provided.
  - Name of the Contact:
    _____N/A_____
  - Name of the Selected Financial Service Provider:
    _____
  - Date of Review:
    _____
  - Signature of Board Members Present (Add Signature Lines as Needed):
    - _____
    - _____
    - _____
    - _____
    - _____
    - _____
    - _____
- If the proposed Board of Directors, listed within the application, is contracting with a service provider to operate PowerSchool that the service provider has reviewed all of the financial processes and services provided.
  - Name of the Contact:
    _____N/A_____
  - Name of the Selected PowerSchool Service Provider:
    _____
  - Date of Review:
    _____
  - Signature of Board Members Present (Add Signature Lines as Needed):
    - _____
    - _____

- _____
- _____
- _____
- _____
- _____

Certification

I, _Omar Muhammad_____, as Board Chair, certify that each Board Member has reviewed and participated in the selection of the individuals and vendors attached to this document as evidenced by the full Board of Director signatures outlined above. The information I am providing to the North Carolina State Board of Education as _Clara Science Academy_____ Charter School is true and correct in every respect.

Signature 8/1/19 Date

Appendix __I__: [Board Member Certification/Board Member Background Checks]

[Clara Science Academy]

Charter School Board Member Background Check Form

Certification Statement:

Note: *To be completed individually by each proposed founding charter school board member. Form must be signed by hand.*

If a board member has been convicted of a misdemeanor or felony other than a minor traffic violation, attach a separate sheet listing the year of the charge, the charge, the verdict, and the final disposition.

I, __Jawwaad A Rasheed_____, certify that I ***have not*** been convicted of any misdemeanor or felony other than a minor traffic violation.

Signature Jawwaad Rasheed Date _8/24/19_____

I, _____, certify that I ***have*** been convicted of a misdemeanor or felony other than a minor traffic violation.

Signature _____ Date _____

Board Member Background Check

Each member of the founding board must submit a completed background check that meets the following parameters:

1) **Background check must include a Social Security Trace** (which scans his/her SSN and lists every county/state of residence where that SSN has been used).
2) **Background check must include any additional aliases that have been used by the individual.**
3) **Background check must include a completed county level check for any county returned in the Social Security Trace.**
4) **Background check must include a completed nationwide check.**

Charter School Board Member Background Check Form

Certification Statement:

Note: *To be completed individually by each proposed founding charter school board member. Form must be signed by hand.*

If a board member has been convicted of a misdemeanor or felony other than a minor traffic violation, attach a separate sheet listing the year of the charge, the charge, the verdict, and the final disposition.

I, ___Glenda Tate_____, certify that I ***have not*** been convicted of any misdemeanor or felony other than a minor traffic violation.

Signature Glenda Tate Date _8/23/19_____

I, _____, certify that I ***have*** been convicted of a misdemeanor or felony other than a minor traffic violation.

Signature _____ Date _____

Board Member Background Check

Each member of the founding board must submit a completed background check that meets the following parameters:

1) **Background check must include a Social Security Trace** (which scans his/her SSN and lists every county/state of residence where that SSN has been used).
2) **Background check must include any additional aliases that have been used by the individual.**
3) **Background check must include a completed county level check for any county returned in the Social Security Trace.**
4) **Background check must include a completed nationwide check.**

Charter School Board Member Background Check Form

Certification Statement:

Note: *To be completed individually by each proposed founding charter school board member. Form must be signed by hand.*

If a board member has been convicted of a misdemeanor or felony other than a minor traffic violation, attach a separate sheet listing the year of the charge, the charge, the verdict, and the final disposition.

I, _Omar Muhamad_____, certify that I ***have not*** been convicted of any misdemeanor or felony other than a minor traffic violation.

Signature  Date 8/20/19_____

I, _____, certify that I ***have*** been convicted of a misdemeanor or felony other than a minor traffic violation.

Signature _____ Date _____

Board Member Background Check

Each member of the founding board must submit a completed background check that meets the following parameters:

1) **Background check must include a Social Security Trace** (which scans his/her SSN and lists every county/state of residence where that SSN has been used).
2) **Background check must include any additional aliases that have been used by the individual.**
3) **Background check must include a completed county level check for any county returned in the Social Security Trace.**
4) **Background check must include a completed nationwide check.**

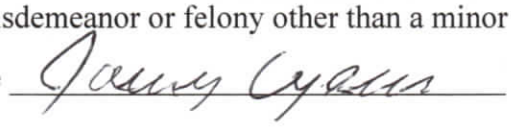
Charter School Board Member Background Check Form

Certification Statement:

Note: *To be completed individually by each proposed founding charter school board member. Form must be signed by hand.*

If a board member has been convicted of a misdemeanor or felony other than a minor traffic violation, attach a separate sheet listing the year of the charge, the charge, the verdict, and the final disposition.

I, _James Francis Cyrus_____, certify that I ***have not*** been convicted of any misdemeanor or felony other than a minor traffic violation.

Signature  Date __8/02/19_____

I, _____, certify that I ***have*** been convicted of a misdemeanor or felony other than a minor traffic violation.

Signature _____ Date _____

Board Member Background Check

Each member of the founding board must submit a completed background check that meets the following parameters:

1) **Background check must include a Social Security Trace** (which scans his/her SSN and lists every county/state of residence where that SSN has been used).
2) **Background check must include any additional aliases that have been used by the individual.**
3) **Background check must include a completed county level check for any county returned in the Social Security Trace.**
4) **Background check must include a completed nationwide check.**

Charter School Board Member Background Check Form

Certification Statement:

Note: *To be completed individually by each proposed founding charter school board member. Form must be signed by hand.*

If a board member has been convicted of a misdemeanor or felony other than a minor traffic violation, attach a separate sheet listing the year of the charge, the charge, the verdict, and the final disposition.

I, _Varsty Muhammad_____, certify that I ***have not*** been convicted of any misdemeanor or felony other than a ~~minor~~ traffic violation.

Signature _____ Date __8/10/19_____

I, _____, certify that I ***have*** been convicted of a misdemeanor or felony other than a minor traffic violation.

Signature _____ Date _____

Board Member Background Check

Each member of the founding board must submit a completed background check that meets the following parameters:

1) **Background check must include a Social Security Trace** (which scans his/her SSN and lists every county/state of residence where that SSN has been used).
2) **Background check must include any additional aliases that have been used by the individual.**
3) **Background check must include a completed county level check for any county returned in the Social Security Trace.**
4) **Background check must include a completed nationwide check.**

Charter School Board Member Background Check Form

Certification Statement:

Note: *To be completed individually by each proposed founding charter school board member. Form must be signed by hand.*

If a board member has been convicted of a misdemeanor or felony other than a minor traffic violation, attach a separate sheet listing the year of the charge, the charge, the verdict, and the final disposition.

I, __Mohammad Adnan Algorani_____, certify that I ***have not*** been convicted of any misdemeanor or felony other than a minor traffic violation.

Signature _____ Date __8/26/19_____

I, _____, certify that I ***have*** been convicted of a misdemeanor or felony other than a minor traffic violation.

Signature _____ Date _____

Board Member Background Check

Each member of the founding board must submit a completed background check that meets the following parameters:

1) **Background check must include a Social Security Trace** (which scans his/her SSN and lists every county/state of residence where that SSN has been used).
2) **Background check must include any additional aliases that have been used by the individual.**
3) **Background check must include a completed county level check for any county returned in the Social Security Trace.**
4) **Background check must include a completed nationwide check.**

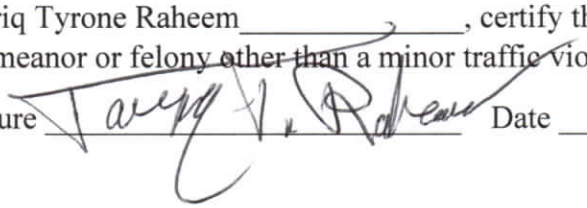
Charter School Board Member Background Check Form

Certification Statement:

Note: *To be completed individually by each proposed founding charter school board member. Form must be signed by hand.*

If a board member has been convicted of a misdemeanor or felony other than a minor traffic violation, attach a separate sheet listing the year of the charge, the charge, the verdict, and the final disposition.

I, _Tariq Tyrone Raheem_____, certify that I ***have not*** been convicted of any misdemeanor or felony other than a minor traffic violation.

Signature  Date ___8/01/19_____

I, _____, certify that I ***have*** been convicted of a misdemeanor or felony other than a minor traffic violation.

Signature _____ Date _____

Board Member Background Check

Each member of the founding board must submit a completed background check that meets the following parameters:

1) **Background check must include a Social Security Trace** (which scans his/her SSN and lists every county/state of residence where that SSN has been used).
2) **Background check must include any additional aliases that have been used by the individual.**
3) **Background check must include a completed county level check for any county returned in the Social Security Trace.**
4) **Background check must include a completed nationwide check.**

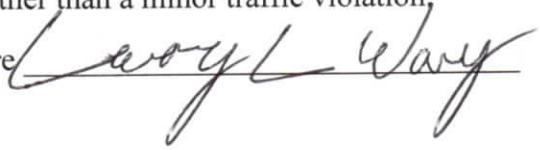
Charter School Board Member Background Check Form

Certification Statement:

Note: *To be completed individually by each proposed founding charter school board member. Form must be signed by hand.*

If a board member has been convicted of a misdemeanor or felony other than a minor traffic violation, attach a separate sheet listing the year of the charge, the charge, the verdict, and the final disposition.

I, __Leroy L. Wray_____, certify that I ***have not*** been convicted of any misdemeanor or felony other than a minor traffic violation.

Signature  Date _8/15/19_____

I, _____, certify that I ***have*** been convicted of a misdemeanor or felony other than a minor traffic violation.

Signature _____ Date _____

Board Member Background Check

Each member of the founding board must submit a completed background check that meets the following parameters:

1) **Background check must include a Social Security Trace** (which scans his/her SSN and lists every county/state of residence where that SSN has been used).
2) **Background check must include any additional aliases that have been used by the individual.**
3) **Background check must include a completed county level check for any county returned in the Social Security Trace.**
4) **Background check must include a completed nationwide check.**

Appendix _J__: [Proposed By-Laws of the School's Board of Directors]

[Clara Science Academy]

Clara Science Academy Board
Draft Bylaws

THE SCHOOL

Section 1. Name. The name of this school is "Clara Science Academy Charter School" of Charlotte, Mecklenburg County, North Carolina. This school shall be referred to throughout these Bylaws as the "School".

Section 2. Purpose. As provided in the North Carolina General Statue 115C-1, and the Charter issued by the Board of Education of North Carolina, the purpose of this school shall be to stimulate the development of innovative programs in public education; to provide opportunities for innovative learning and assessments; to provide parents and students with greater options in choosing schools within and outside the school districts; to provide teachers with a vehicle for establishing schools with alternative, innovative methods of educational instruction and school structure and management; to encourage performance based educational programs; to hold teachers and school administrators accountable for students' educational outcomes; and to provide models for replication in other public and private schools.
The School is organized exclusively under the provisions of North Carolina General Statue 115C-1, and shall be a public school of choice offering North Carolina students a rigorous education that puts them on the path to college and cultivates their ability to contribute to the larger community through their work.

Board of Directors

Section 1. *Responsibilities and Powers*. The affairs and responsibilities of the School shall be directed and controlled by a Board of Directors which shall be a public entity under the laws of North Carolina, to be constituted in a manner provided in Section 2 of these bylaws, which may exercise all the lawful powers of the School.
Without limiting the Board of Directors shall be responsible for each of the following:

a) Establishment of short and long-range objectives and goals of the School.

b) Review and adoption of policies and programs to achieve the objectives of the School and offer educational methods which provide a curriculum and an education of the highest quality for children.
c) Establish administrative and fiscal controls to ensure successful implementation of approving policies and programs.
d) Prove adequate equipment for the immediate and future needs of the School, as well as implementation of sound plans for the physical development of the School.
e) Establish sound fiscal policy for the School, including but not limited to (i) review and adoption of annual operating and capital budgets; (ii) management of endowments, and (iii) implementation of development and fund raising programs.
f) Engagement of a qualified Director, who shall be the lead administrator of the School, responsible for implementing approved policies and programs, and hiring, evaluating, managing and terminating faculty and administrative faculty and personnel as required for the effective operation of the School and cooperating with area educational institutions to insure maximum exchange of ideas and concepts that will have a long lasting effect on the education of children.
g) Ensuring that the School and the Board shall comply with all applicable laws and regulations.
h) Ensuring that the School is an academic success, organizationally viable, faithful to its charter and earns charter renewal as required.
i) Ensuring that board members shall not discriminate against potential members of the Board of Directors on the basis of age, sex, sexual orientation, race, national origin, ancestry, religion, marital status, or non-disqualifying

handicap or mental condition. In addition, through North Carolina law, the Board of Directors, acting in the name and on behalf of the School, shall have the following powers:
j) To purchase real and personal property; to invest and reinvest the property of the School; to sell at public sale, exchange, transfer, or grant options to purchase the whole or any part of the property of the School, real or personal, at any time held by it, upon such terms and conditions as they may deem best, and consistent with current statutory laws and regulations from time to time promulgated, and to execute, acknowledge and deliver such deeds, contracts or other instruments as they may deem necessary or advisable in connection with any such purchase, sale, exchange, option or transfer.
k) To determine in accordance with generally accepted accounting principles whether any money or other property, received by the School shall be treated as Principal or as income, and to determine in accordance with such principles the extent to which expenses the School shall be borne as between Principal and income; and this power shall include, without limitation, the power to determine in case any investment shall at any time be made in any bond or security for money at a premium or in a wasting investment so-called or in non-income producing property, the extent to which such investment shall be dealt with as Principal or as income.
l) With respect to any security which is part of the property of the School, a vote or grant proxies to vote for such security, to take any action deemed appropriate in connection with any merger, consolidation or reorganization and to exercise any conversion, subscription, or other right pertaining to such security can be consider by the board.
m) To lease, with or without option to purchase, any real estate at any time held by the School, for such term or terms, and upon such provisions and conditions, as they shall determine, and to alter, repair, demolish, rebuild and improve any building which is at any time part of the property of the School.
n) To borrow money on such terms as they deem proper and to mortgage or pledge property, real or personal, of the School to secure the same.
o) To invest in and retain for so long a period as they see fit the shares, preferred or common, of investment companies or investment trusts, whether of the open-end or closed-end type, and without notice to anyone to participate in any common trust or pooled fund.
p) To invest such portion of the funds of the School as the board members may from time to time determine in such securities as the board members in their uncontrolled discretion shall consider likely to result in future appreciation of Principal, even though the securities so purchased may pay currently only small dividend in proportion to their cost, or no dividend at all, and there is no reasonable prospect of a higher dividend rate, or of any dividend, for an indeterminate or extended time in the future.
q) To invest such portion of the funds of the School as the board members may from time to time determine in securities for income from which is exempt from federal or state income tax.
r) To adjust, settle, arbitrate or compromise any claim or claims of any nature payable to or made against the School, including any claims for taxes upon any terms satisfactory to them.
s) To hold, retain, purchase, dispose of or otherwise deal with insurance or annuities on the life of any officer or employee of the School for the benefit of the School, and to pay all premiums and costs thereof from the funds of the School.

Section 2. Number and Election of Board Members. The Board of Directors shall consist of not less than five (5) to nine (9) board members. Fourteen (14) days at least prior to the annual meeting of the Board, as established by Section 6 of these bylaws, candidates shall be nominated to succeed any one or more retiring board members, and the board members shall elect new board members by a majority vote at the annual meeting. In addition, the board members may at any time elect new board members by a majority vote at any regular or special meeting of board members. The Director shall be a non-voting ex officio member of the Board of Directors. Each board member elected shall serve a term of three (3) years.
Once elected, the name of each board members shall be published in the School Newsletter or other appropriate publication of general circulation to the School community. The term for board members serving on the initial Board of Directors may be for greater than three years in order that the Board may achieve a coordinated expiration of the board members term of office, as provided for in Section 3 hereof. At the expiration of each three-year term, any board member may thereafter be elected to serve an additional three-year term by a vote of a majority of board members. Board members may serve no more than five (5) consecutive terms in that position.

Section 3. Continuity. The term of office for each board member and the number of members elected by the Board from time to time should be focused on achieving a Board consisting of not less than five (5) members with prior service.

Section 4. Resignation. Any member may resign by delivering to the Secretary a written resignation which shall take effect upon the acceptance by the Board at any meeting.

Section 5. Removal. Any board member may be removed from office with or without cause by the vote of a majority of all the board members then in office. A member may be removed for cause only after being afforded reasonable notice and an opportunity to be heard before the Board of Directors.

Section 6. Open meetings and public records. The Annual Meeting of the Board shall be held on the August of each year or other date and time as may be established by the Board. Fourteen (14) days written notice of the Annual Meeting shall be given to all board members then in office. Other meetings of the Board at least as frequently as quarterly may be held as the Board may determine. Notice of the place, date, hour and purpose of any such meeting of the board members shall be given or caused to be given by the Chairperson to each member at least fourteen (14) days prior to the meeting and shall be open to the public according to GS **115C-218.25** . Special meeting may be held at any time without such notice, if all the board members are present or if those not present execute a written waiver of notice before or after the meeting and the Board has fully complied with the provisions.

Section 7. Quorum. A majority of the board members then in office shall constitute a quorum for the transaction of business. Less than a quorum may adjourn a meeting. Except as is otherwise required by law, or these By-laws, the action of a majority of the board members present at a meeting in which a quorum is present shall be the action of the Board of Directors. Board members must vote in person and not by email, proxy or otherwise.

Section 8. Minutes. The board members shall maintain accurate records of its meetings, setting forth the date, time, place, members present or absent and action taken at each meeting, including executive sessions. The records of each meeting shall become a public record and be available to the public; provided, however, that the records of any executive session may remain secret as long as publication may defeat the lawful purposes of the executive session, but no longer. All votes taken in executive sessions shall be recorded roll call votes and shall become a part of the record of said executive sessions. No votes taken in open session shall be by secret ballot.

COMMITTEES

The standing committees of the Board of Directors shall be the Academic Excellence Committee, the Development Committee, the Finance Committee, the Governance Committee, and the Strategic Planning and Assessment Committee. The Board of Directors may establish such other committees having such duties, responsibilities and powers and consisting of such number of persons as the Board of Directors shall determine. The members and chairs of committees shall be appointed by the Board of Directors Chairperson. Committee chairs must be a board member, and committee members may be board members, parents, teachers and members of the community. All committees will have a description of their responsibilities and an annual charge approved by the Board of Directors.

OFFICERS

Section 1. Principal Officers: Election Thereof: Eligibility. The officers of the School shall be a Chairperson, a Vice Chairperson, a Treasurer, a Secretary, and such other officers as the Board of Directors may elect or appoint. Each officer, as a condition for election and continued service, must be a board member. Such officers shall be elected by the Board of Directors at the Annual Meeting of the Board or with respect to the initial Board of Directors at the initial meeting thereof. Subject to the provisions of Sections 2, 3 and 4 of these bylaws, the Chairperson, the Vice Chairperson, the Treasurer and the Secretary shall each hold office until the next Annual Meeting of the Board of Directors and until their respective successors are elected.

Section 2. Chairperson. The Chairperson shall work closely with the Director and other members of the Board of Directors to advance the mission of the School. The Chairperson and School Leader shall work closely together to support and facilitate the work of the Board of Directors. The Chairperson shall preside at all meetings of the Board of Directors. The Chairperson shall, upon the advice and counsel of other members of the Board and the Director, set the agenda for all meetings and shall conduct the meetings in an orderly, thorough, fair, and proper fashion so as to encourage full discussion and proper action by the Board on all issues to be decided. The Chairperson shall, with the advice and counsel of other members of the Board and the Director, appoint committee chairs and members, and have such other powers as the Board of Directors may determine or designate from time to time.

Section 3. Vice Chairperson. The Vice Chairperson shall have such powers and perform such duties as may be assigned by the Board of Directors. In the absence or disability of the Chairperson, or in case of an unfilled vacancy in that office, the Vice Chairperson shall perform the duties and exercise the powers of the Chairperson.

Section 4. Treasurer. The Treasurer shall be responsible for the care and custody of the money, funds, valuable papers and documents of the School and shall have and exercise all the powers and duties commonly to such office. The Treasurer may endorse a deposit or collection all checks, notes, drafts and instruments for the payment of money, payable to the School or to its order, and shall keep accurate books of account of all moneys received and disbursed. If required by the Board of Directors, the School shall provide a bond covering the Treasurer in such sum and such surety or sureties as shall be satisfactory to the Board for the faithful performance of the duties of this office.

Section 5. Secretary. The Secretary shall be responsible for maintaining accurate minutes of all meetings of the Board of Directors, shall perform all the duties commonly to this office, and shall perform such other duties and have such other powers as the Board of Directors shall from time to time designate or as may be otherwise provided for in these By-laws. In the absence of the Secretary, a temp Secretary may be appointed by the Board of Directors to perform such duties.

Section 6. Additional Officers. The Board of Directors in its discretion may appoint an Assistant Treasurer and an Assistant Secretary and may prescribe their duties and their terms of office.

INDEMNIFICATION OF MEMBERS AND OFFICERS

The School shall, to the extent legally permissible, indemnify each person who may serve or who has served at any time as an officer or may serve as a board member, against all expenses and liabilities (including counsel fees, judgments, fines, excise taxes, penalties and amounts payable in settlements) reasonably incurred by or imposed upon such person in connection with any threatened, pending or completed action, suit or other proceeding, whether civil, criminal, administrative or investigative, in which he or she may become involved by reason of his or her serving or having served in such capacity (other than a proceeding voluntarily initiated by such person unless he or she is successful on the merits, the proceeding was authorized by the School or the proceeding seeks a declaratory judgment regarding his or her own conduct); provided that no indemnification shall be provided for any such person with respect to any matter as to which he or she shall have been finally adjudicated in any proceeding not to have acted in good faith in the reasonable belief that his or her action was in the best interest of the School; and provided, further, that as to any matter disposed of by a compromise payment by such person, pursuant to a consent decree or otherwise, the payment and indemnification thereof have been approved by the School, which approval shall not be unreasonably withheld, or by a court of competent jurisdiction. Such indemnification shall include payment by the School of expenses incurred in defending a civil or criminal action or proceeding in advance of the final disposition of such action or proceeding, upon receipt of an undertaking by the person indemnified to repay such payment if he or she shall be adjudicated to be not entitled to indemnification under these bylaws, which undertaking may be accepted without regard to the financial ability of such person to make repayment. A person entitled to indemnification hereunder whose duties include service or responsibilities as a fiduciary with respect to a subsidiary or other organization shall be deemed to have acted in good faith in the reasonable belief that his or her action was in the best interests of the school, if he or she acted in good faith in the reasonable belief that his or her action was in the best interests of such subsidiary or organization or of the participants or beneficiaries of, or other persons with interests in, such subsidiary or organization to whom he or she had a fiduciary duty. Where indemnification hereunder requires authorization or approval by the School, such authorization or approval shall be conclusively deemed to have been obtained, and in any case where a director of the School approves payment of indemnification, such director shall be wholly protected by, if: **i** the payment has been approved or ratified (1) by a majority vote or a quorum of the directors consisting of persons who are not at that time parties to the proceeding; (2) by a majority vote of a committee of two or more directors who are not at that time parties to the proceedings and are selected for this purpose by the full board (in which selection directors who are parties may participate), or (3) by the members of the corporation of disinterested; or **ii** the action is taken in reliance upon the opinion of independent legal counsel (who may be counsel to the corporation) appointed for the purpose by a vote of the directors or in the manner specified in clauses (1), (2) or (3) of subparagraph (i); or **iii** the payment is approved by a court of competent jurisdiction; or iv the directors may have otherwise acted in accordance with the standard of conduct set forth in applicable provisions of the North Carolina General Statue. Any indemnification or advance of expenses under these bylaws be paid promptly, and in any event within 30 days, after the receipt by the School of a written request therefore from the person to be indemnified, unless with respect to a claim for indemnification the School shall have determined that the person is not entitled to indemnification. If the School denies the request or if payment is not made within such 30-day period, the persons seeking to be indemnified may at any time thereafter seek to enforce his or her rights hereunder in a court of competent jurisdiction and, if successful in whole or in part, he or she shall be entitled also to indemnification for the expenses of prosecuting such action. Unless otherwise provided by law, the burden of proving that the person is not entitled to indemnification shall be on the School.

The right of indemnification under these bylaws shall be a contract right inuring to the benefit of the directors, officer and other persons entitled to be indemnified hereunder, and no amendment or repeal of these bylaws shall adversely affect any right of such director, officer or other person existing at the time of such amendment or repeal. The indemnification provided hereunder shall inure to the benefit of the heirs, executors and administrators of a director, officer or other person entitled to indemnification hereunder. The indemnification provided hereunder may be to the extent authorized by the School, apply to the directors, officers, and other persons associated with the Schools, who would have been entitled to indemnification hereunder had they served in such capacity with or at the request of the School. The right of indemnification under these bylaws shall be in addition to and not exclusive of all other rights to which such director or officer or other persons may be entitled. Nothing contained in this document

shall affect any rights to indemnification to which School employees or agents other than directors and officers and other persons entitled to indemnification hereunder may be entitled by contract or otherwise under law. The School shall maintain or cause to be maintained liability insurance with insurance companies authorized to do business in North Carolina insuring the board members and officers against liabilities and expenses incurred in their capacities as board members and officers.

ROBERT'S RULES

All meetings of the Board shall be governed by Robert's Rules of Order, except as otherwise provided by these By-Laws.

AMENDMENTS

These bylaws may be amended at any meeting of the board members by a majority vote of all the members then in office. Notice of the meeting must indicate the amendment(s) to be voted on.

FISCAL YEAR

The fiscal year of the School shall end on the _____(date) day of _____(month) of each year.

SEAL

The Seal of the School shall consist of a flat-faced circular die with the name of the School, the year of charter issuance, and the word "North Carolina" cut or engraved thereon.

PROVISIONS FOR DISSOLUTION

In the event of liquidation or dissolution of the Corporation, all the assets of the Corporation, after paying or making sufficient provision for the payment of all of the liabilities of the Corporation, shall be distributed exclusively as provided for in the North Carolina Non-profit General Statues included below:

Distributions Upon Dissolution

Upon the dissolution of the corporation, the Board of Directors shall, after paying or making provision for the payment of all of the liabilities of the corporation, dispose of all of the assets of the corporation exclusively for the purposes of the corporation in such manner, or to such organization or organizations organized and operated exclusively for religious, charitable, educational, scientific or literary purposes as shall at the time qualify as an exempt organization or organizations under Section 501(c)(3) of the Code as the Board of Directors shall determine, or to federal, state, or local governments to be used exclusively for public purposes. Any such assets not so disposed of shall be disposed of by the Superior Court of the county in which the charter school is then located, exclusively for such purposes or to such organizations, such as the court shall determine, which are organized and operated exclusively for such purposes, or to such governments for such purposes.

Appendix _K_: [Articles of Incorporation or Municipal Charter]

[Clara Science Academy]

NORTH CAROLINA
Department of the Secretary of State

To all whom these presents shall come, Greetings:

I, Elaine F. Marshall, Secretary of State of the State of North Carolina, do hereby certify the following and hereto attached to be a true copy of

ARTICLES OF INCORPORATION

OF

CLARA SCIENCE ACADEMY CHARTER SCHOOL

the original of which was filed in this office on the 23rd day of September, 2015.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Raleigh, this 23rd day of September, 2015.

Secretary of State

Scan to verify online.

Elaine F. Marshall

Appendix _L_: [Insurance Quotes]

[Clara Science Academy]

INSURANCE PEOPLE

Below are the **estimated annual premiums**: **Clara Science Academy**

Property Premium Estimate			**$450**
	Contents	$250,000	
	Deductible	$1,000	
	Form	Special	
	Equipment Breakdown	Included	
General Liability Premium Estimate			**$1,461**
Rating Basis:	Students	250	
	Faculty	29	
Limits:			
Per Occurrence Limit		$1,000,000	
Annual Aggregate		$3,000,000	
Sexual Abuse & Molestation		$1,000,000 per occurrence	
		$3,000,000 aggregate	
Employee Benefits		$1,000,000 per occurrence	
		$3,000,000 aggregate	
School District & Educators Legal Liability (D&O/ E&O) Premium Estimate			**$4,277**
		$1,000,000 per occurrence	
		$2,000,000 aggregate	
Additional Defense		$100,000/$50,000/$100,000	

Named insured includes the insured Organization (School Entity), it's school board, School Committee, Board of Trustees, Board of Governors or similar governing body, elected or appointed members of the Board of Education, Board of Trustees, School Directors, School Committee, Board of Governors or similar governing board, Employees, Student Teachers, School Volunteers, and students while serving in a supervised internship program sponsored by the "educational institution".

Wrongful Act to include any actual or alleged act, error, omission, misstatement, misleading statement, neglect, or breach of duty by or on behalf of the Insured Organization, including educational malpractice or failure to educate, negligent instruction, failure to supervise, inadequate or negligent academic guidance of counseling, improper or inappropriate academic placement or discipline.

INSURANCE PEOPLE

Fidelity Bond Estimate		**$332**
Limit	$250,000	
Auto Premium Estimate		**$181**
Hired & Non Owned Autos Only		
Limit of Liability	$1,000,000	
Head of Class Endorsement		**$82**
Workers Compensation Premium Estimate		**$6,710**
Statutory State - NC		
Employers Liability	$500/ $500/ $500	
Payroll Estimate	$1,123,000	
Umbrella Premium Estimate		**$2,387**
Limit of Liability	$1,000,000	
TOTAL ESTIMATED PREMIUM		**$15,880**
Student Accident Coverage		$7.00/ student

These premiums are subject to change based on Underwriter review and approval of completed applications.

Disclaimer: The abbreviated outlines of coverages used throughout this proposal are not intended to express legal opinion as to the nature of coverage. They are only visuals to a basic understanding of coverages. The policy terms, conditions, and exclusions will prevail. Please read the policy forms for specific details of coverage

07/29/2019

Appendix _N_: [Proposed School Budget for Year 1 through Year 5]

[Clara Science Academy]

Enrollment Projections Year 1 through Year 5

In the following tables, please list for each year and grade level, the numbers of students that the school reasonably expe please indicate any plans to increase the grade levels offered by the school over time and be sure these figures match th

The numbers in the following tables are projections, or estimates, and do not bind the State to fund the school at any part

LEA #1:	**600-Char.-Mecklenburg**	What percentage of students from t
LEA #2:		What percentage of students from t
LEA #3:		What percentage of students from t

Grade	Year 1			Year 2			
	LEA #1	LEA #2	LEA #3	LEA #1	LEA #2	LEA #3	LEA #1
	600			600			600
Kindergarten	84			84			84
Grade 1	83			83			83
Grade 2	83			83			83
Grade 3				100			100
Grade 4							100
Grade 5							
Grade 6							
Grade 7							
Grade 8							
Grade 9							
Grade 10							
Grade 11							
Grade 12							
LEA Totals:	**250**	**0**	**0**	**350**	**0**	**0**	**450**

For the first two years the State will fund the school up to the maximum projected enrollment for each of those years as s subsequent years, the school may increase its enrollment only as permitted by NCGS 115C-218.7(b).

[redacted]

ɔcts to enroll. In addition,
ose on the initial cover page.

ɨicular level.

he LEA selected above will qualify for EC funding?	12%

he LEA selected above will qualify for EC funding?	

he LEA selected above will qualify for EC funding?	

Year 3			Year 4			Year 5	
LEA #2	LEA #3	LEA #1	LEA #2	LEA #3	LEA #1	LEA #2	LEA #3
		600			600		
		84			84		
		83			83		
		83			83		
		100			100		
		100			100		
		100			100		
					100		
0	0	550	0	0	650	0	0

ɐt forth and approved in the projected enrollment tables. However, in

Budget: Revenue Projections from each LEA Year 1

State Funds: *Charter schools receive an equivalent amount per student as the local education agency (LEA) receives per student receives from the State. Funding is based on the 1st month average daily membership.*

In year 1: *Base state allotments are determined by the LEA in which the student resides.*

In year 2 and Beyond: *Base State allotments are determined by the LEA in which the school is located.*

Local Funds: *Charter schools receive a per pupil share of the local current expense of the LEA in which the student resides.*

State EC Funds: *Charter schools receive a per pupil share of state funds per student with disabilities (school-aged 5 through 21). Funds are limited to 12.75% of the local education agency's average daily membership (ADM).*

Federal EC Funds: *Charter schools must qualify and apply for the individual federal grants based on their population of students.*

REFER TO RESOURCE GUIDE FOR ADDITIONAL INFORMATION AND SOURCE DOCUMENTS

LEA #1:	600-Char.-Mecklenburg		
Revenue	**Approximate Per Pupil Funding**	**Projected LEA ADM**	**Approximate funding for Year 1**
State Funds	$5,291.06	250	$1,322,765.00
Local Funds	$2,756.00	250	$689,000.00
State EC Funds	$4,464.16	30	$133,924.80
Federal EC Funds	$1,514.35	30	$45,430.50
		Total:	$2,191,120.30

LEA #2:			
Revenue	**Approximate Per Pupil Funding**	**Projected LEA ADM**	**Approximate funding for Year 1**
State Funds		0	
Local Funds		0	

State EC Funds		0	
Federal EC Funds		0	
		Total:	$0.00

LEA #3:			
Revenue	**Approximate Per Pupil Funding**	**Projected LEA ADM**	**Approximate funding for Year 1**
State Funds			
Local Funds			
State EC Funds			
Federal EC Funds			
		Total:	$0.00

Total Budget: Revenue Projections Year 1 through Year 5

All per pupil amounts are from the most current information and would be approximations for Year 1.

Federal funding is based upon the number of students enrolled who qualify. The applicant should use caution when relying on federal funding in year one to meet budgetary goals.

These revenue projection figures do NOT guarantee the charter school would receive this amount of funding in Year 1.

For local funding amounts, applicants will need to contact their local offices or LEA.

Income: Revenue Projections	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
State ADM Funds	$ 1,322,765	$ 1,851,871	$ 2,380,977	$ 2,910,083	$ 3,439,189
Local Per Pupil Funds	$ 689,000	$ 964,600	$ 1,240,200	$ 1,515,800	$ 1,791,400
State EC Funds	$ 133,925	$ 187,495	$ 241,065	$ 294,635	$ 348,204
Federal EC Funds	-	$ 45,431	$ 81,775	$ 99,947	$ 118,119
Other Funds*	$ 30,000	$ 38,000.00	$ 50,000.00	$ 60,000.00	$ 70,000.00
Working Capital*	$ 285,000	$ -	$ -	$ -	$ -
TOTAL REVENUE:	**$ 2,460,690**	**$ 3,087,396**	**$ 3,994,017**	**$ 4,880,465**	**$ 5,766,913**

**All budgets should balance indicating strong budgetary skills. Any negative fund balances will, more than likely, generate additional questions by those evaluating the application. If the applicant is depending on other funding sources or working capital to balance the operating budget, please provide documentation such as signed statements from donors, foundations, bank documents, etc., on the commitment of these funds. If these figures are loans, the repayment needs to be explained in the narrative and found within the budget projections.*

Assurances are needed to confirm the commitment of these additional sources of revenue. Please include these as Appendix M.

Personnel Budget: Expenditure Projections

Budget Expenditure Projections	Year 1			Year 2			Year 3			Year 4			Year 5		
	Number of Staff	Average Salary	Total Salary	Number of Staff	Average Salary	Total Salary	Number of Staff	Average Salary	Total Salary	Number of Staff	Average Salary	Total Salary	Number of Staff	Average Salary	Total Salary
Administrative & Support Personnel															
Lead Administrator	1	$ 75,000	$ 75,000	1	$ 76,500	$ 76,500	1	$ 78,030	$ 78,030	1	$ 79,590	$ 79,590	1	$ 81,181	$ 81,181
Assistant Administrator			$ -	1	$ 50,000	$ 50,000	1	$ 51,000	$ 51,000	1	$ 52,020	$ 52,020	2	$ 53,060	$ 106,120
Finance Officer			$ -			$ -	1	$ 50,000	$ 50,000	1	$ 51,000	$ 51,000	1	$ 52,020	$ 52,020
Clerical	1	$ 26,000	$ 26,000	1	$ 26,520	$ 26,520	2	$ 27,050	$ 54,100	2	$ 27,591	$ 55,182	2	$ 28,142	$ 56,284
Food Service Staff	1.5	$ 25,000	$ 37,500	1.5	$ 25,500	$ 38,250	2.5	$ 26,010	$ 65,025	2.5	$ 26,530	$ 66,325	3	$ 27,060	$ 81,180
Custodians			$ -	1.5	$ 25,000	$ 37,500	2	$ 25,500	$ 51,000	2	$ 26,530	$ 53,060	3	$ 27,060	$ 81,180
Transportation Staff	2	$ 15,000	$ 30,000	2	$ 15,000	$ 30,000	3	$ 15,300	$ 45,900	5	$ 15,606	$ 78,030	6	$ 15,918	$ 95,508
Nurse	0.5	$ 32,000	$ 16,000	1	$ 32,000	$ 32,000	1	$ 32,640	$ 32,640	1	$ 33,293	$ 33,293	1	$ 33,959	$ 33,959
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Total Admin and Support:	**6**		**$ 184,500**	**9**		$ 290,770	**13.5**		**$ 427,695**	**15.5**		$ 468,500	**19**		**$ 587,432**
Instructional Personnel															
Core Content Teacher(s)	10	$ 45,000	$ 450,000	17	$ 45,900	$ 780,300	22	$ 46,818	$ 1,029,996	27	$ 47,754	$ 1,289,358	32	$ 48,709	$ 1,558,688
Electives/Specialty Teacher(s)	2	$ 45,000	$ 90,000	3	$ 45,900	$ 137,700	3	$ 46,818	$ 140,454	4	$ 47,754	$ 191,016	7	$ 48,709	$ 340,963
Exceptional Children Teacher(s)	2	$ 48,000	$ 96,000	2	$ 48,960	$ 97,920	3	$ 49,939	$ 149,817	3	$ 50,937	$ 152,811	4	$ 51,955	$ 207,820
Instructional Support	2	$ 36,000	$ 72,000	4	$ 26,720	$ 106,880	5	$ 38,494	$ 192,470	5	$ 39,263	$ 196,315	6	$ 40,048	$ 240,288
Teacher Assistants	6	$ 20,000	$ 120,000	6	$ 20,400	$ 122,400	7	$ 20,808	$ 145,656	7	$ 21,224	$ 148,568	7	$ 21,648	$ 151,536
Substitutes	2	$ 5,000	$ 10,000	2.5	$ 5,000	$ 12,500	3	$ 5,000	$ 15,000	3	$ 5,000	$ 15,000	4	$ 5,000	$ 20,000
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Total Instructional Personnel:	**24**		**$ 838,000**	**34.5**		$ 1,257,700	**43**		**$ 1,673,393**	**49**		$ 1,993,068	**60**		**$ 2,519,295**
Total Admin, Support and Instructional Personnel:	**30**		**$ 1,022,500**	**43.5**		$ 1,548,470	**56.5**		**$ 2,101,088**	**64.5**		$ 2,461,568.00	**79**		**$ 3,106,727**

Benefits	Year 1			Year 2			Year 3			Year 4			Year 5		
	Number of Staff	Cost Per	Total	Number of Staff	Cost Per	Total	Number of Staff	Cost Per	Total	Number of Staff	Cost Per	Total	Number of Staff	Cost Per	Total
Administrative & Support Benefits															
Health Insurance	3	$ 6,000	$ 18,000	7	$ 6,500	$ 45,500	10	$ 7,250	$ 72,500	10	$ 7,500	$ 75,000	13	$ 7,500	$ 97,500
Retirement Plan--NC State	0	$ -	$ -	0	$ -	$ -	0	$ -	$ -	0	$ -	$ -	0	$ -	$ -
Retirement Plan--Other	3	$ 1,260	$ 3,780	7	$ 1,260	$ 8,820	10	$ 1,260	$ 12,600	10	$ 1,260	$ 12,600	13	$ 1,260	$ 16,380
Life Insurance	3	$ 75	$ 225	7	$ 80	$ 560	10	$ 85	$ 850	10	$ 90	$ 900	13	$ 95	$ 1,235
Disability	3	$ 75	$ 225	7	$ 80	$ 560	10	$ 85	$ 850	10	$ 90	$ 900	13	$ 95	$ 1,235
Medicare	6	$ 446	$ 2,675	7	$ 602	$ 4,216	10	$ 620	$ 6,202	10	$ 679	$ 6,793	13	$ 655	$ 8,518
Social Security	6	$ 1,907	$ 11,439	7	$ 2,575	$ 18,028	10	$ 2,652	$ 26,517	10	$ 2,905	$ 29,047	13	$ 2,802	$ 36,421
State Unemployment	6	$ 243	$ 1,458	7	$ 253	$ 1,771	10	$ 263	$ 2,630	10	$ 273	$ 2,730	10	$ 283	$ 2,830
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Total Admin and Support Benefits:			$ 37,802			$ 79,455			$ 122,149			$ 127,970			$ 164,119
Instructional Personnel Benefits															
Health Insurance	24	$ 6,000	$ 144,000	29	$ 6,500	$ 188,500	37	$ 7,250	$ 268,250	42	$ 7,500	$ 315,000	51	$ 7,500	$ 382,500
Retirement Plan--NC State	0	$ -	$ -	0	$ -	$ -	0	$ -	$ -	0	$ -	$ -	0	$ -	$ -
Retirement Plan--Other	24	$ 1,150	$ 27,600	29	$ 1,285	$ 37,265	37	$ 1,345	$ 49,752	42	$ 1,413	$ 59,342	51	$ 1,470	$ 74,979
Social Security	24	$ 2,397	$ 57,536	29	$ 2,689	$ 77,977	37	$ 2,804	$ 103,750	42	$ 2,942	$ 123,570	51	$ 3,063	$ 156,196
Disability	24	$ 75	$ 1,800	29	$ 80	$ 2,320	37	$ 85	$ 3,145	42	$ 90	$ 3,780	51	$ 95	$ 4,845
Medicare	24	$ 561	$ 13,456	29	$ 629	$ 18,237	37	$ 656	$ 24,264	42	$ 688	$ 28,899	51	$ 716	$ 36,530
Life Insurance	24	$ 75	$ 1,800	29	$ 80	$ 2,320	37	$ 85	$ 3,145	42	$ 90	$ 3,780	51	$ 95	$ 4,845
State Unemployment	24	$ 243	$ 5,832	29	$ 253	$ 7,337	37	$ 263	$ 9,731	42	$ 273	$ 11,466	51	$ 283	$ 14,433
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Total Instructional Personnel Benefits:			$ 252,024			$ 333,956			$ 462,037			$ 545,838			$ 674,328
Total Personnel Benefits:			$ 289,826			$ 413,411			$ 584,186			$ 673,808			$ 838,446
Total Admin & Support Personnel (Salary & Benefits):	6		$ 222,302	9		$ 370,225	13.5		$ 549,844	15.5		$ 596,470.25	19		$ 751,551
Total Instructional Personnel (Salary & Benefits):	24		$ 1,090,024	34.5		$ 1,591,656	43		$ 2,135,430	49		$ 2,538,906	60		$ 3,193,623
TOTAL PERSONNEL:	30		$ 1,312,326	43.5		$ 1,961,881	56.5		$ 2,685,274	64.5		$ 3,135,376	79		$ 3,945,173

*The personnel list below may be amended to meet the staffing of individual charter schools: This list should align with the projected staff located in the Operations Plan.

Operations Budget: Expenditure Projections

The following list of expenditure items is presented as an example. Applicants should modify to meet their needs.

OPERATIONS BUDGET: Administrative and Support	Year 1	Year 2	Year 3	Year 4	Year 5
Office					
Office Supplies	$ 3,000.00	$ 5,000.00	$ 7,000.00	$ 9,000.00	$ 11,000.00
Paper	$ 1,400.00	$ 1,800.00	$ 2,200.00	$ 2,600.00	$ 3,000.00
Computers & Software	$ 5,000.00	$ 6,000.00	$ 6,000.00	$ 6,500.00	$ 7,000.00
Communications & Telephone	$ 9,000.00	$ 10,000.00	$ 11,000.00	$ 11,000.00	$ 11,000.00
Copier leases	$ 7,500.00	$ 7,500.00	$ 7,500.00	$ 8,000.00	$ 8,000.00
Other	$ -	$ -	$ -	$ -	$ -
*** Insert rows and edit text as needed. ***					
Management Company					
Contract Fees	$ -	$ -	$ -	$ -	$ -
Other	$ -	$ -	$ -	$ -	$ -
*** Insert rows and edit text as needed. ***					
Professional Contract					
Legal Counsel	$ 5,000.00	$ 7,000.00	$ 9,000.00	$ 18,000.00	$ 14,000.00
Student Accounting	$ 7,500.00	$ 10,500.00	$ 13,500.00	$ 16,500.00	$ 19,500.00
Financial	$ 20,000.00	$ 23,000.00	$ 26,000.00	$ 29,000.00	$ 32,000.00
Technology	$ 25,000.00	$ 25,000.00	$ 25,000.00	$ 30,000.00	$ 30,000.00
Other	$ -	$ 12,000.00	$ 15,000.00	$ 17,000.00	$ 20,000.00
Facilities					
Facility Lease/Mortgage	$ 463,284.00	$ 200,000.00	$ 220,000.00	$ 500,000.00	$ 500,000.00
Maintenance	$ -	$ -	$ -	$ -	$ -
Custodial Supplies	$ 5,500.00	$ 6,500.00	$ 7,500.00	$ 8,000.00	$ 8,500.00

Custodial Contract	$ 25,000.00	$ -	$ -	$ -	$ -
Insurance (pg19)	$ 20,880.00	$ 23,880.00	$ 26,880.00	$ 29,880.00	$ 33,880.00
Other	$ -	$ -	$ -	$ -	$ -
*** Insert rows and edit text as needed. ***					
Utilities					
Electric	$ 18,000.00	$ 25,000.00	$ 35,000.00	$ 40,000.00	$ 43,000.00
Gas	$ 5,000.00	$ 6,000.00	$ 6,500.00	$ 8,500.00	$ 9,000.00
Water/Sewer	$ 9,000.00	$ 10,000.00	$ 11,000.00	$ 14,000.00	$ 15,000.00
Trash	$ 2,000.00	$ 2,500.00	$ 3,000.00	$ 3,500.00	$ 4,000.00
Other	$ -	$ -	$ -	$ -	$ -
*** Insert rows and edit text as needed. ***					
Transportation					
Buses	$ 30,000.00	$ -	$ 15,000.00	$ -	$ 30,000.00
Gas	$ 28,000.00	$ 30,000.00	$ 38,000.00	$ 40,000.00	$ 56,000.00
Oil/Tires & Maintenance	$ 22,000.00	$ 25,000.00	$ 30,000.00	$ 33,000.00	$ 43,000.00
Other	$ -	$ -	$ -	$ -	$ -
*** Insert rows and edit text as needed. ***					
Other					
Marketing	$ 7,000.00	$ 12,000.00	$ 16,000.00	$ 17,500.00	$ 20,500.00
Child nutrition	$ 30,000.00	$ 38,000.00	$ 50,000.00	$ 60,000.00	$ 70,000.00
Travel	$ 1,500.00	$ 3,000.00	$ 4,500.00	$ 5,500.00	$ 6,500.00
Other	$ -	$ -	$ -	$ -	$ -
*** Insert rows and edit text as needed. ***					
Total Administrative & Support Operations:	**$ 750,564.00**	**$ 489,680.00**	**$ 585,580.00**	**$ 907,480.00**	**$ 994,880.00**

OPERATIONS BUDGET: Instructional	Year 1	Year 2	Year 3	Year 4	Year 5
Classroom Technology					
Computers and Software	$ 75,000.00	$ 100,000.00	$ 110,000.00	$ 116,000.00	$ 131,000.00
Other	$ -	$ -	$ -	$ -	$ -
*** Insert rows and edit text as needed. ***					
Instructional Contract					
Staff Development/EC Services	$ 45,000.00	$ 48,000.00	$ 49,000.00	$ 51,000.00	$ 53,000.00
Other	$ -	$ -	$ -	$ -	$ -
*** Insert rows and edit text as needed. ***					
Books and Supplies					
Instructional Materials	$ 25,000.00	$ 30,000.00	$ 35,000.00	$ 35,000.00	$ 40,000.00
Curriculum/Texts	$ 37,500.00	$ 42,000.00	$ 50,000.00	$ 55,000.00	$ 60,000.00
Copy Paper	$ 7,000.00	$ 9,000.00	$ 11,000.00	$ 13,000.00	$ 15,000.00
Testing Supplies	$ 150.00	$ 750.00	$ 1,000.00	$ 1,300.00	$ 1,600.00
Furniture/Equipment	$ 70,000.00	$ 40,000.00	$ 50,000.00	$ 50,000.00	$ 55,000.00
Other					
Total Instructional Operations:	**$ 259,650.00**	**$ 269,750.00**	**$ 306,000.00**	**$ 321,300.00**	**$ 355,600.00**

TOTAL OPERATIONS:	**$ 1,010,214.00**	**$ 759,430.00**	**$ 891,580.00**	**$ 1,228,780.00**	**$ 1,350,480.00**

**Applicants may amend this table and the position titles to fit their Education and Operations Plans.*

Overall Budget

SUMMARY	Logic	Year 1	Year 2	Year 3	Year 4	Year 5
Total Personnel	J	$ 1,312,326.25	$ 1,961,880.96	$ 2,685,274.02	$ 3,135,375.99	$ 3,945,173.47
Total Operations	M	$ 1,010,214.00	$ 759,430.00	$ 891,580.00	$ 1,228,780.00	$ 1,350,480.00
Total Expenditures	N = J + M	$ 2,322,540.25	$ 2,721,310.96	$ 3,576,854.02	$ 4,364,155.99	$ 5,295,653.47
Total Revenue	Z	$ 2,460,689.80	$ 3,087,396.22	$ 3,994,016.54	$ 4,880,464.66	$ 5,766,912.78
Surplus / (Deficit)	= Z - N	$ 138,149.55	$ 366,085.27	$ 417,162.52	$ 516,308.67	$ 471,259.31

Appendix _O_: [Additional Appendices Provided by Applicant]

[Clara Science Academy]

Appendix _P_: [Required Signed and Notarized Documents]

[Clara Science Academy]

Signature Page

The foregoing application is submitted on behalf of [Omar Muhammad for Clara Science Academy]. The undersigned has read the application and hereby declares that the information contained in it is true and accurate to the best of his/her information and belief. The undersigned further represents that the applicant has read the Charter School Law and agrees to be governed by it, other applicable laws, and SBE regulations. Additionally, we understand the final approval of the charter is contingent upon successful completion of a mandatory planning year. Per SBE policy "Planning Year for New and Preliminary Charter Schools – CHTR 013, all new nonprofit boards receiving a charter must participate in a year-long planning program prior to the charter school's opening for students. The planning year provides an applicant time to prepare for the implementation of the school's curricular, financial, marketing, and facility plans. During this planning year, regular meetings are held with the Board of Directors and consultants from the Office of Charter Schools to provide information on the following topics: school opening plans, staff development, finance, governance, board training, marketing, policies and procedures, securing a school site, and hiring a school administrator. Final approval of the charter will be contingent upon successfully completing all of the planning program requirements.

Print/Type Name: Omar Muhammad

Board Position: Chairman

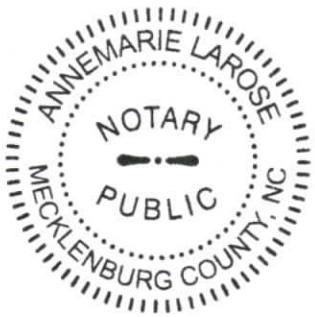
Signature:

Date: 8/24/2019

Sworn to and subscribed before me this 26th day of August, 2019.

Notary Public:

Official Seal:



My commission expires: 12-17-, 2023.

If you have questions regarding the application process, please contact the Office of Charter Schools via email at danielle.allen@dpi.nc.gov.

Appendix _M_: [Revenue Assurances and/or Working Capital Report]

[Clara Science Academy]

CHARTER SCHOOL CAPITAL

222 SW Columbia, Ste 1750
Portland, OR 07201
(877) 272-1001
www.charterschoolcapital.org

August 01, 2019

VIA EMAIL

Omar Muhammad, Board Member
Clara Science Academy Charter School
13106 Autumn Trace Dr.
Huntersville, NC 28078

Re: Qualification for Funding – Clara Science Academy Charter School

Ladies and Gentlemen:

Please be advised that Clara Science Academy Charter School has prequalified for funding with Charter School Capital, Inc. (CSC) based on the information contained in its application and other documents submitted to CSC. Based on the initial information provided by the school, CSC has indicated that it can offer a contract to cover funding in the amount of $285,000.

Funding for Clara Science Academy Charter School is generally contingent on the following factors and is subject to satisfaction of CSC's underwriting requirements:

1. Having a valid charter with defined beginning and ending dates of the charter term;
2. Being recognized as a valid charter school in good standing with the State of North Carolina, the North Carolina State Board of Education, and the North Carolina Department of Public Instruction;
3. CSC receiving a copy of the approved charter;
4. Having a nonprofit corporation in good standing with the North Carolina Secretary of State;
5. A "Good Standing Certification" being executed by the North Carolina State Board of Education upon approval of the charter that is either unconditional or with conditions that are acceptable to CSC;
6. Being in compliance with its charter and North Carolina laws governing charter schools.

Please feel free to call if any other information is needed.

Sincerely,

Dylan Smith

Dylan Smith
Inside Sales Rep

SchoolDev | EAST LLC

ATLANTA OFFICE

12306 Cicero Drive
Alpharetta, Georgia 30022
229.560.1967
chipharp@schooldev.us
www.schooldev.us

CHARTER SCHOOL FACILITY
DEVELOPMENT & FINANCE

SALT LAKE CITY | PHOENIX | ATLANTA

SINCE 2004

Omar Muhammad

Clara Science Academy

RE: FACILITY DEVELOPMENT PLAN OUTLINE
Date: 8/ 01 / 2019

Introduction

SchoolDev East, LLC is pleased to confirm our engagement as the facility development services provider for the Clara Science Academy in Charlotte, North Carolina. Anticipating approval of the school's charter application by the North Carolina Board of Education Office of Charter Schools and our due diligence process, SchoolDev East will commence with a facility development program for the school.

SchoolDev East is a national leader in facility development for charter schools. Our firm has developed over 60 charter school facilities and over 2.5 million square feet of charter school buildings housing over 18,000 students, including schools in North Carolina.

Permanent Facility Plan

The facility plan will provide services to identify, vet, purchase, and develop land to house the school's permanent facility.

Working with the school's board and leadership, potential sites will be identified for use as its permanent home, of which two finalists will be considered and will be subjected to further due diligence. Finalist sites will meet the school's requirements regarding location to best serve the community's students, the school's facility budget requirements, and the school's growth plan.

In developing the permanent facility, consideration will be given to the school's academic mission, teaching method, extracurricular requirements, and in providing a safe and healthy learning environment.

Conclusion

A new school facility would be ready to open for the 2021-22 school year. Our firm can also confirm the funding and resources are available to provide these services and lease the facility to the school until enrollment and financial stability allows for the school to purchase the facility using permanent funding sources.

If there are any questions or for more information regarding this proposal, please feel free to contact SchoolDev at the number provided.

Respectfully,

S.E. (Chip) Harp, Jr.
Vice President

CLARA'S FOUNDATION

"To Dream and make it a reality"

8 / 10 / 19

Dear Clara Science Academy:

It is with great pleasure to announce that Clara Science Academy has been awarded **$20,000**. These funds were awarded to Clara Science Academy transportation department. Clara Science Academy has provided a clear mission and vision that is align with the Clara's Foundation goals.

Clara's Foundation has been created to serve its community in the areas of education, research and economic development. While our commitment to research is unwavering, we recognize that the most pressing challenges confronting young people change over time.

The foundation believes that education practices have evolved and is still impacting communities around the world. With the right research and education, Clara's foundation is convinced that society can improve economic development for low income communities and all others.

As the foundation grows, we will continual to express to all communities that everyone should dream big and the Clara's Foundation will help to make it a reality.

Once again, congratulations to Clara Science Academy. The foundation looks forward to working with you in the future.

Thank you,

Clara's Foundation

Appendix _____: [Insert Title of Appendix]

[Clara Science Academy]