

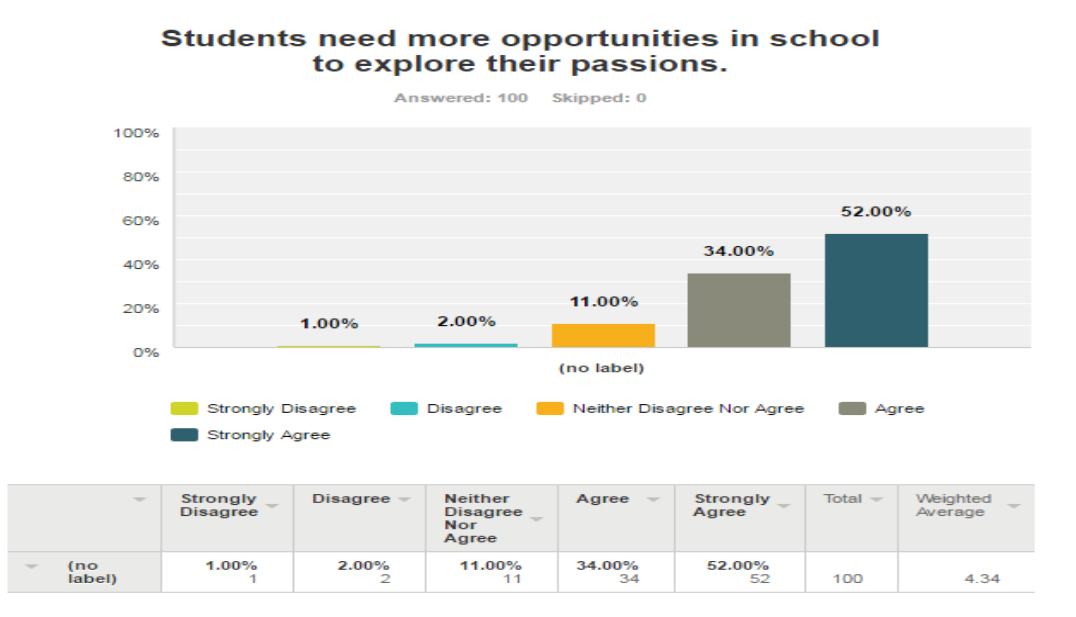
## Appendix A1

### Establishing an Educational Need for the Experiential School of Greensboro

To determine the need for an experiential school in downtown Greensboro, we conducted two surveys, one of GCS educators and one of GCS parents. Both surveys aimed to determine whether there was a gap between the kinds of schooling experiences offered in GCS and the kinds of experiences that families and teachers wanted to be a part of. We have also made contacts with and secured letters of support from two downtown businessmen who recognize the need for a community-engaged experiential school in this area of Greensboro and intend to support the endeavor: Andy Zimmerman, a major downtown developer, and George Scheer, the founder and executive director of the nationally and internationally-acclaimed Elsewhere Museum.

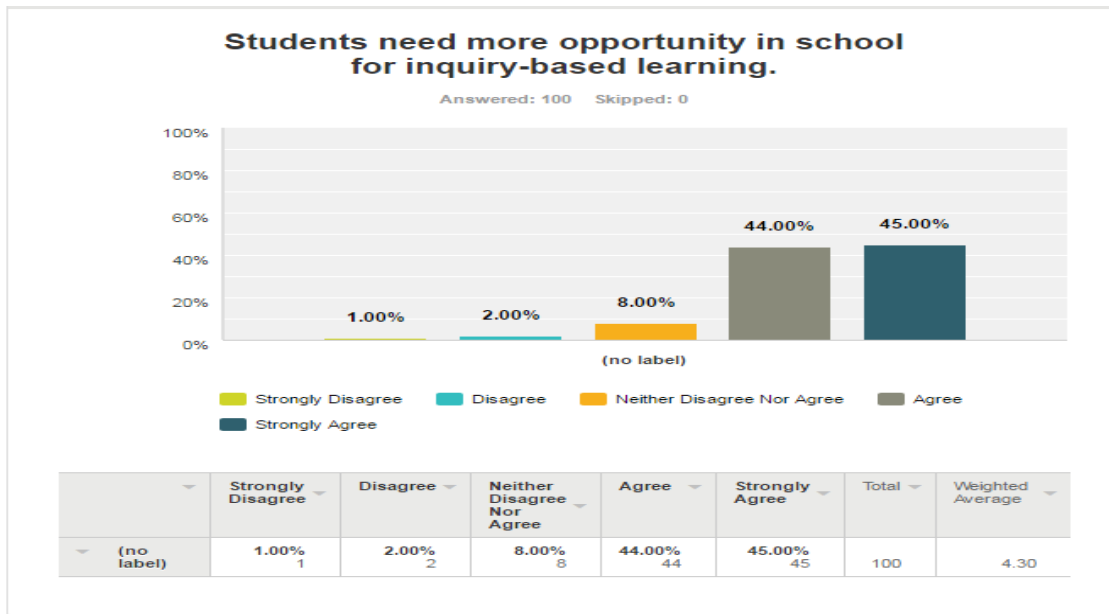
#### The GCS Educator Perspective

To collect educator data, we distributed a surveymonkey.com survey via email and social media links to current and former GCS teachers, administrators, and licensed support staff. We received responses from 100 educators.

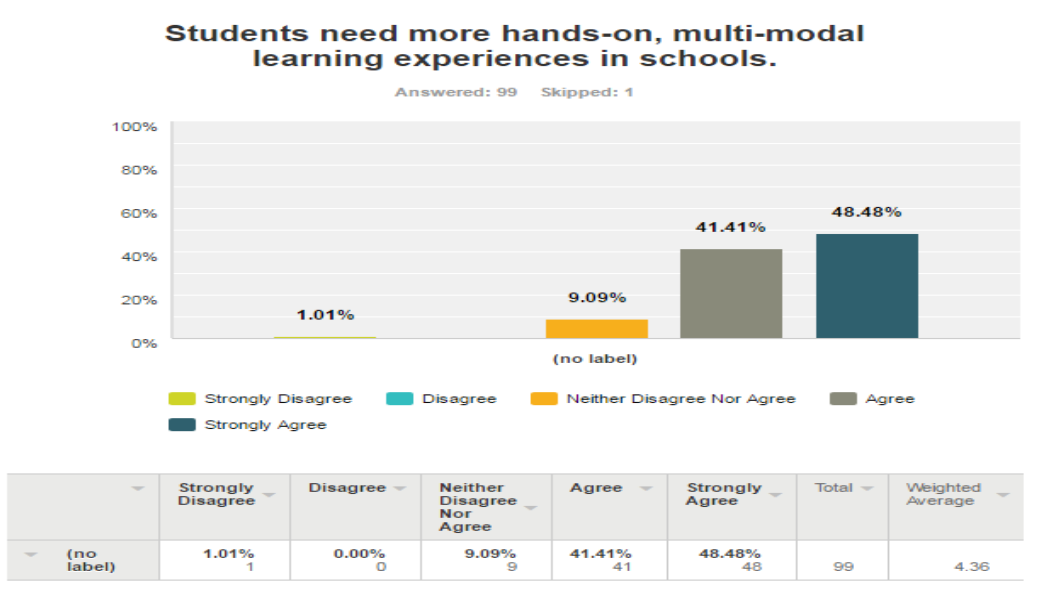


GCS educators surveyed agreed that students need more opportunities in school to explore their passions, with 86% agreeing or strongly agreeing with the statement. Their replies indicate that while

they value learning experiences that allow students to follow their curiosity and pursue topics they are interested in, current schooling options are not offering such opportunities.



Eighty-nine percent of GCS educators surveyed agreed, 45% strongly, that students need more inquiry-based learning opportunities in school, indicating again that while inquiry-based methods, like PBL and student-led research, are valued by local educators, opportunities for such learning are not widely available.



Ninety percent of CGS educators surveyed agreed, 48.48% strongly, that more hands-on, multi-model learning should be offered in school. As with inquiry-based and passion-led learning, this finding indicates a gap between the kinds of instruction GCS educators value and what opportunities currently exist.

### **The GCS Family Perspective**






The parents and guardians survey was more extensive than the educator survey, as it sought to explicitly establish what kinds of experience families currently receive in GCS and the extent of their interest in a school offering an instructional program like TESG's. Sixty families responded to the Qualtrics survey which was sent via email and social media to local networks of GCS parents and guardians.

The first part of the survey, presented below, asked families about the kinds of learning experiences their children were currently receiving in GCS. A majority of families surveyed did not find that their child(ren) were regularly offered experiential learning activities (54.9%), project-based learning (53.33%), arts-integrated instruction (55%), or multiage/grade learning (68.3%). Families' opinions about GCS schools regularly offering opportunities for creativity and to learn in spaces outside of the classroom were more evenly split, with 41.67% agreeing to some extent and 45% disagreeing to some extent that their schools offered alternative learning spaces and 50% agreeing to some extent and 38.33% disagreeing to some extent that their school supported creativity.






In the second part of the survey, we asked families the extent to which they would like for their child's school to offer these kinds of experiences. The data in this section, when compared to the data from the first section demonstrates a clear mismatch between what families observe in their current schooling options and what they would like to have access to. While 54.9% of families surveyed did not find that their child(ren) were regularly offered experiential learning activities, 98.18% of families agreed or strongly agreed that they want these offerings. Similarly, while 53.33% of families did not see project-based learning in their current schools, 100% of respondents said they would like to see such methods. Also, 96.43% would like for their child's school to regularly use arts-integrated instruction, though only 36.37% report seeing such methods regularly. Strikingly, while only 18.3% of responding families reported seeing multiage/grade learning regularly, 89.28% would like such opportunities to be available. Schools regularly offering opportunities for creativity was very important to families, with 98.2% of families agreeing, 89.29% strongly, that they would like to have such opportunities available.

Similarly, 100% of respondents want opportunities to learn in spaces outside of the classroom, but 45% disagreed to some extent that their current schools offered such spaces.






**My child's current school regularly offers experiential learning activities (role-playing, simulations, experimentation, student-directed research, service projects, internships, etc.).**

#	Answer	Bar	Response	%
1	Strongly agree		8	13.33%
2	Somewhat agree		12	20.00%
3	Neither agree nor disagree		7	11.67%
4	Somewhat disagree		17	28.33%
5	Strongly disagree		16	26.67%
	Total		60	100.00%






**My child's current school regularly offers project-based learning opportunities (skills and ideas learned through tasks and projects) in which students pose problems and experiment to find solutions.**

#	Answer	Bar	Response	%
1	Strongly agree		7	11.67%
2	Somewhat agree		12	20.00%
3	Neither agree nor disagree		9	15.00%
4	Somewhat disagree		21	35.00%
5	Strongly disagree		11	18.33%
	Total		60	100.00%

**My child's current school regularly uses the arts (drawing, sculpting, music, drama, dance) to teach core subjects (math, science, social studies, English language arts).**






#	Answer	Bar	Response	%
1	Strongly agree		9	15.00%
2	Somewhat agree		13	21.67%
3	Neither agree nor disagree		5	8.33%
4	Somewhat disagree		17	28.33%
5	Strongly disagree		16	26.67%
	Total		60	100.00%

**My child's current school regularly teaches my child in ways that require him/her to be creative.**






#	Answer	Bar	Response	%
1	Strongly agree		7	11.67%
2	Somewhat agree		23	38.33%
3	Neither agree nor disagree		7	11.67%
4	Somewhat disagree		14	23.33%
5	Strongly disagree		9	15.00%
	Total		60	100.00%






**My child's current school regularly provides opportunities for students of different grade levels to work together.**

#	Answer	Bar	Response	%
1	Strongly agree		6	10.00%
2	Somewhat agree		5	8.33%
3	Neither agree nor disagree		8	13.33%
4	Somewhat disagree		18	30.00%
5	Strongly disagree		23	38.33%
	Total		60	100.00%



**My child's current school regularly provides opportunities for my child to learn in spaces outside of the classroom (field trips, internships, community service learning, outdoor "classrooms", etc.).**

#	Answer	Bar	Response	%
1	Strongly agree		9	15.00%
2	Somewhat agree		16	26.67%
3	Neither agree nor disagree		8	13.33%
4	Somewhat disagree		19	31.67%
5	Strongly disagree		8	13.33%
	Total		60	100.00%




**I would like for my child's school to regularly offer experiential learning activities (role-playing, simulations, experimentation, student-directed research, service projects, internships, etc.).**

#	Answer	Bar	Response	%
1	Strongly agree		45	81.82%
2	Somewhat agree		9	16.36%
3	Neither agree nor disagree		1	1.82%
4	Somewhat disagree		0	0.00%
5	Strongly disagree		0	0.00%
	Total		55	100.00%




**I would like for my child's school to regularly offer project-based learning opportunities (skills and ideas learned through tasks and projects) in which students pose problems and experiment to find solutions.**

#	Answer	Bar	Response	%
1	Strongly agree		47	85.45%
2	Somewhat agree		8	14.55%
3	Neither agree nor disagree		0	0.00%
4	Somewhat disagree		0	0.00%
5	Strongly disagree		0	0.00%
	Total		55	100.00%





I would like for my child's school to regularly use the arts (drawing, sculpting, music, drama, dance) to teach core subjects (math, science, social studies, English language arts).

#	Answer	Bar	Response	%
1	Strongly agree		47	83.93%
2	Somewhat agree		7	12.50%
3	Neither agree nor disagree		2	3.57%
4	Somewhat disagree		0	0.00%
5	Strongly disagree		0	0.00%
	Total		56	100.00%



**I would like for my child's school to regularly teach my child in ways that require him/her to be creative.**

#	Answer	Bar	Response	%
1	Strongly agree		50	89.29%
2	Somewhat agree		5	8.93%
3	Neither agree nor disagree		1	1.79%
4	Somewhat disagree		0	0.00%
5	Strongly disagree		0	0.00%
	Total		56	100.00%

**I would like for my child's school to regularly provide opportunities for students of different grade levels to work together.**

#	Answer	Bar	Response	%
1	Strongly agree		41	73.21%
2	Somewhat agree		9	16.07%
3	Neither agree nor disagree		5	8.93%
4	Somewhat disagree		1	1.79%
5	Strongly disagree		0	0.00%
	Total		56	100.00%

**I would like for my child's school to regularly provide opportunities for my child to learn in spaces outside of the classroom (field trips, internships, community service learning, outdoor "classrooms", etc.).**

#	Answer	Bar	Response	%
1	Strongly agree		47	83.93%
2	Somewhat agree		9	16.07%
3	Neither agree nor disagree		0	0.00%
4	Somewhat disagree		0	0.00%
5	Strongly disagree		0	0.00%
	Total		56	100.00%



TESG will address the gap between the current GCS offerings and the kinds of experiences that families desire and that educators agree are important. Moreover, it will offer educators the opportunity to teach in such a place, learning and implementing the practices they support but do not generally get to utilize. In addition, as mentioned in the targeted population section of the application, the immediate area around our proposed site is in dire need of a truly alternative schooling option that uses research-based practices designed to reach children of diverse backgrounds (in terms of race, SES, cultural, ability, and gender *and* in terms of learning modalities and differences). The existing schools, while they may have an alternative magnet focus, still offer traditional instructional programs, and these programs are not succeeding with a majority of the students they serve as measured by state EOG scores. Of the six elementary schools in the immediate area, all are performing at 10%-40% below district averages across EOG grades, subject areas, and demographic subgroups, meaning that in many instances only 20%-40% of students in defined subgroups are performing on or above grade level. Of the three closest elementary schools, two have less than 50% of their student body as a whole performing at or above grade level. Thus in all regards, based on immediate local need for alternatives and educator and family interest, TESG will meet an established educational need and attend to the legislated purposes of a charter school.

## Appendix B

### 3<sup>rd</sup>/4<sup>th</sup> Grade Math and 7<sup>th</sup> Grade Math Sample Scope and Sequence

#### Scope—3<sup>rd</sup>/4<sup>th</sup> Grade Math

While in a multi-aged classroom, students in 3<sup>rd</sup> and 4<sup>th</sup> grade will still be held to the standards assigned to their grade level on internal and external assessments. But to meet these standards, students will rarely be divided strictly by grade level for classroom activities. Rather than held rigidly within a grade level’s set of expectations, students are met where they are (based on teacher observation and “Student Can” checklists and student self-assessments), and classroom tasks are designed to advance their individual knowledge and skills—the ultimate goal being that by the end of the school year, each student is achieving across content areas at or above grade level standards. As such, during classroom instruction and activity, students will be grouped by interests, ability, talents, learning styles, modalities, and multiple intelligence. These groups will change often based on the needs of the task at hand and the learning needs of the students. Grouping in this way meets the needs of all students, not only those performing at typical grade level expectations. It allows for students needing more experience with certain topics to have that need supported while students ready for more advanced work are able to move ahead.

The standards (Common Core and NC Essential Standards) for each of the two grades in a class group are collectively used to guide student tasks, with the higher set of standards considered the default and the lower set of standards considered the scaffolding needed to get to the higher set of standards. Because all of NC’s standards are spiraled, they are readily adaptable to such a use.

The following chart places the Common Core Standards<sup>1</sup> for mathematics for 3<sup>rd</sup> and 4<sup>th</sup> grade side-by-side to demonstrate how the lower set of standards can be understood to scaffold the higher set.

Grade Three	Grade Four
<p><b>Represent and solve problems involving multiplication and division.</b>                      CCSS.MATH.CONTENT.3.OA.A.1                      Interpret products of whole numbers, e.g., interpret <math>5 \times 7</math> as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as <math>5 \times 7</math>.</i>                      CCSS.MATH.CONTENT.3.OA.A.2                      Interpret whole-number quotients of whole numbers, e.g., interpret <math>56 \div 8</math> as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. <i>For example, describe a context in which a number of shares or a number of groups can be expressed as <math>56 \div 8</math>.</i></p>	<p><b>Use the four operations with whole numbers to solve problems.</b>                      CCSS.MATH.CONTENT.4.OA.A.1                      Interpret a multiplication equation as a comparison, e.g., interpret <math>35 = 5 \times 7</math> as a statement that 35 is 5 times as many as 7 and 7 times as many as 5.                      Represent verbal statements of multiplicative comparisons as multiplication equations.                      CCSS.MATH.CONTENT.4.OA.A.2                      Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.<sup>1</sup></p>

CCSS.MATH.CONTENT.3.OA.A.3

Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.<sup>1</sup>

CCSS.MATH.CONTENT.3.OA.A.4

Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations  $8 \times ? = 48$ ,  $5 = \_ \div 3$ ,  $6 \times 6 = ?$*

**Understand properties of multiplication and the relationship between multiplication and division.**

CCSS.MATH.CONTENT.3.OA.B.5

Apply properties of operations as strategies to multiply and divide.<sup>2</sup> *Examples: If  $6 \times 4 = 24$  is known, then  $4 \times 6 = 24$  is also known. (Commutative property of multiplication.)  $3 \times 5 \times 2$  can be found by  $3 \times 5 = 15$ , then  $15 \times 2 = 30$ , or by  $5 \times 2 = 10$ , then  $3 \times 10 = 30$ . (Associative property of multiplication.) Knowing that  $8 \times 5 = 40$  and  $8 \times 2 = 16$ , one can find  $8 \times 7$  as  $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$ . (Distributive property.)*

CCSS.MATH.CONTENT.3.OA.B.6

Understand division as an unknown-factor problem. *For example, find  $32 \div 8$  by finding the number that makes 32 when multiplied by 8.*

**Multiply and divide within 100.**

CCSS.MATH.CONTENT.3.OA.C.7

Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that  $8 \times 5 = 40$ , one knows  $40 \div 5 = 8$ ) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

**Solve problems involving the four operations, and identify and explain patterns in arithmetic.**

CCSS.MATH.CONTENT.3.OA.D.8

Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.<sup>3</sup>

CCSS.MATH.CONTENT.4.OA.A.3

Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

**Gain familiarity with factors and multiples.**

CCSS.MATH.CONTENT.4.OA.B.4

Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.

**Generate and analyze patterns.**

<p>CCSS.MATH.CONTENT.3.OA.D.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i></p>	<p>CCSS.MATH.CONTENT.4.OA.C.5 Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. <i>For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers. Explain informally why the numbers will continue to alternate in this way.</i></p>
<p><b>Use place value understanding and properties of operations to perform multi-digit arithmetic.<sup>1</sup></b> CCSS.MATH.CONTENT.3.NBT.A.1 Use place value understanding to round whole numbers to the nearest 10 or 100.</p> <p>CCSS.MATH.CONTENT.3.NBT.A.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.</p> <p>CCSS.MATH.CONTENT.3.NBT.A.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., <math>9 \times 80</math>, <math>5 \times 60</math>) using strategies based on place value and properties of operations.</p>	<p><b>Generalize place value understanding for multi-digit whole numbers.</b> CCSS.MATH.CONTENT.4.NBT.A.1 Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. <i>For example, recognize that <math>700 \div 70 = 10</math> by applying concepts of place value and division.</i></p> <p>CCSS.MATH.CONTENT.4.NBT.A.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using <math>&gt;</math>, <math>=</math>, and <math>&lt;</math> symbols to record the results of comparisons.</p> <p>CCSS.MATH.CONTENT.4.NBT.A.3 Use place value understanding to round multi-digit whole numbers to any place.</p> <p><b>Use place value understanding and properties of operations to perform multi-digit arithmetic.</b> CCSS.MATH.CONTENT.4.NBT.B.4 Fluently add and subtract multi-digit whole numbers using the standard algorithm.</p> <p>CCSS.MATH.CONTENT.4.NBT.B.5 Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p> <p>CCSS.MATH.CONTENT.4.NBT.B.6 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division.</p>

	<p>Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.</p>
<p><b>Develop understanding of fractions as numbers.</b></p> <p>CCSS.MATH.CONTENT.3.NF.A.1 Understand a fraction <math>1/b</math> as the quantity formed by 1 part when a whole is partitioned into <math>b</math> equal parts; understand a fraction <math>a/b</math> as the quantity formed by <math>a</math> parts of size <math>1/b</math>.</p> <p>CCSS.MATH.CONTENT.3.NF.A.2 Understand a fraction as a number on the number line; represent fractions on a number line diagram.</p> <p>CCSS.MATH.CONTENT.3.NF.A.2.A Represent a fraction <math>1/b</math> on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into <math>b</math> equal parts. Recognize that each part has size <math>1/b</math> and that the endpoint of the part based at 0 locates the number <math>1/b</math> on the number line.</p> <p>CCSS.MATH.CONTENT.3.NF.A.2.B Represent a fraction <math>a/b</math> on a number line diagram by marking off a lengths <math>1/b</math> from 0. Recognize that the resulting interval has size <math>a/b</math> and that its endpoint locates the number <math>a/b</math> on the number line.</p> <p>CCSS.MATH.CONTENT.3.NF.A.3 Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.</p> <p>CCSS.MATH.CONTENT.3.NF.A.3.A Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.</p> <p>CCSS.MATH.CONTENT.3.NF.A.3.B Recognize and generate simple equivalent fractions, e.g., <math>1/2 = 2/4</math>, <math>4/6 = 2/3</math>. Explain why the fractions are equivalent, e.g., by using a visual fraction model.</p> <p>CCSS.MATH.CONTENT.3.NF.A.3.C Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. <i>Examples: Express 3 in the form <math>3 = 3/1</math>; recognize that <math>6/1 = 6</math>; locate <math>4/4</math> and 1 at the same point of a number line diagram.</i></p> <p>CCSS.MATH.CONTENT.3.NF.A.3.D Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only</p>	<p><b>Extend understanding of fraction equivalence and ordering.</b></p> <p>CCSS.MATH.CONTENT.4.NF.A.1 Explain why a fraction <math>a/b</math> is equivalent to a fraction <math>(n \times a)/(n \times b)</math> by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.</p>

when the two fractions refer to the same whole. Record the results of comparisons with the symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

CCSS.MATH.CONTENT.4.NF.A.2

Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as  $\frac{1}{2}$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols  $>$ ,  $=$ , or  $<$ , and justify the conclusions, e.g., by using a visual fraction model.

**Build fractions from unit fractions.**

CCSS.MATH.CONTENT.4.NF.B.3

Understand a fraction  $\frac{a}{b}$  with  $a > 1$  as a sum of fractions  $\frac{1}{b}$ .

CCSS.MATH.CONTENT.4.NF.B.3.A

Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

CCSS.MATH.CONTENT.4.NF.B.3.B

Decompose a fraction into a sum of fractions with the same denominator in more than one way, recording each decomposition by an equation. Justify decompositions, e.g., by using a visual fraction model. *Examples:*  $\frac{3}{8} = \frac{1}{8} + \frac{1}{8} + \frac{1}{8}$ ;  $\frac{3}{8} = \frac{1}{8} + \frac{2}{8}$ ;  $2\frac{1}{8} = 1 + 1 + \frac{1}{8} = \frac{8}{8} + \frac{8}{8} + \frac{1}{8}$ .

CCSS.MATH.CONTENT.4.NF.B.3.C

Add and subtract mixed numbers with like denominators, e.g., by replacing each mixed number with an equivalent fraction, and/or by using properties of operations and the relationship between addition and subtraction.

CCSS.MATH.CONTENT.4.NF.B.3.D

Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators, e.g., by using visual fraction models and equations to represent the problem.

CCSS.MATH.CONTENT.4.NF.B.4

Apply and extend previous understandings of multiplication to multiply a fraction by a whole number.

CCSS.MATH.CONTENT.4.NF.B.4.A

Understand a fraction  $\frac{a}{b}$  as a multiple of  $\frac{1}{b}$ . *For example, use a visual fraction model to represent  $\frac{5}{4}$  as the product  $5 \times (\frac{1}{4})$ , recording the conclusion by the equation  $\frac{5}{4} = 5 \times (\frac{1}{4})$ .*

CCSS.MATH.CONTENT.4.NF.B.4.B

Understand a multiple of  $\frac{a}{b}$  as a multiple of  $\frac{1}{b}$ , and use this understanding to multiply a fraction by a whole number. *For example, use a visual fraction*

	<p><i>model to express <math>3 \times (2/5)</math> as <math>6 \times (1/5)</math>, recognizing this product as <math>6/5</math>. (In general, <math>n \times (a/b) = (n \times a)/b</math>.)</i></p> <p>CCSS.MATH.CONTENT.4.NF.B.4.C Solve word problems involving multiplication of a fraction by a whole number, e.g., by using visual fraction models and equations to represent the problem. <i>For example, if each person at a party will eat <math>3/8</math> of a pound of roast beef, and there will be 5 people at the party, how many pounds of roast beef will be needed? Between what two whole numbers does your answer lie?</i></p> <p><b>Understand decimal notation for fractions, and compare decimal fractions.</b></p> <p>CCSS.MATH.CONTENT.4.NF.C.5 Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.<sup>2</sup><i>For example, express <math>3/10</math> as <math>30/100</math>, and add <math>3/10 + 4/100 = 34/100</math>.</i></p> <p>CCSS.MATH.CONTENT.4.NF.C.6 Use decimal notation for fractions with denominators 10 or 100. <i>For example, rewrite <math>0.62</math> as <math>62/100</math>; describe a length as <math>0.62</math> meters; locate <math>0.62</math> on a number line diagram.</i></p> <p>CCSS.MATH.CONTENT.4.NF.C.7 Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>, and justify the conclusions, e.g., by using a visual model.</p>
<p><b>Solve problems involving measurement and estimation.</b></p> <p>CCSS.MATH.CONTENT.3.MD.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.</p> <p>CCSS.MATH.CONTENT.3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).<sup>1</sup> Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.<sup>2</sup></p>	<p><b>Solve problems involving measurement and conversion of measurements.</b></p> <p>CCSS.MATH.CONTENT.4.MD.A.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table. <i>For example, know that 1 ft is 12 times as long as 1 in. Express the length of a 4 ft snake as 48 in. Generate a conversion table for feet and inches listing the number pairs (1, 12), (2, 24), (3, 36), ...</i></p> <p>CCSS.MATH.CONTENT.4.MD.A.2 Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money, including problems involving simple fractions or decimals, and problems that require expressing</p>

**Represent and interpret data.**

CCSS.MATH.CONTENT.3.MD.B.3

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*

CCSS.MATH.CONTENT.3.MD.B.4

Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

**Geometric measurement: understand concepts of area and relate area to multiplication and to addition.**

CCSS.MATH.CONTENT.3.MD.C.5

Recognize area as an attribute of plane figures and understand concepts of area measurement.

CCSS.MATH.CONTENT.3.MD.C.5.A

A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.

CCSS.MATH.CONTENT.3.MD.C.5.B

A plane figure which can be covered without gaps or overlaps by  $n$  unit squares is said to have an area of  $n$  square units.

CCSS.MATH.CONTENT.3.MD.C.6

Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

measurements given in a larger unit in terms of a smaller unit. Represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.

CCSS.MATH.CONTENT.4.MD.A.3\*\*

Apply the area and perimeter formulas for rectangles in real world and mathematical problems. *For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.*

**Represent and interpret data.**

CCSS.MATH.CONTENT.4.MD.B.4

Make a line plot to display a data set of measurements in fractions of a unit ( $1/2$ ,  $1/4$ ,  $1/8$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots. *For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.*

**Geometric measurement: understand concepts of angle and measure angles.**

CCSS.MATH.CONTENT.4.MD.C.5

Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint, and understand concepts of angle measurement:

CCSS.MATH.CONTENT.4.MD.C.5.A

An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through  $1/360$  of a circle is called a "one-degree angle," and can be used to measure angles.

CCSS.MATH.CONTENT.4.MD.C.5.B

An angle that turns through  $n$  one-degree angles is said to have an angle measure of  $n$  degrees.



<p>CCSS.MATH.CONTENT.3.MD.C.7 Relate area to the operations of multiplication and addition.</p> <p>CCSS.MATH.CONTENT.3.MD.C.7.A Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.</p> <p>CCSS.MATH.CONTENT.3.MD.C.7.B Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.</p> <p>CCSS.MATH.CONTENT.3.MD.C.7.C Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths <math>a</math> and <math>b + c</math> is the sum of <math>a \times b</math> and <math>a \times c</math>. Use area models to represent the distributive property in mathematical reasoning.</p> <p>CCSS.MATH.CONTENT.3.MD.C.7.D Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.</p> <p><b>Geometric measurement: recognize perimeter.</b></p> <p>CCSS.MATH.CONTENT.3.MD.D.8** Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.</p>	<p>CCSS.MATH.CONTENT.4.MD.C.6 Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.</p> <p>CCSS.MATH.CONTENT.4.MD.C.7 Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.</p>
<p><b>Reason with shapes and their attributes.</b></p> <p>CCSS.MATH.CONTENT.3.G.A.1 Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.</p>	<p><b>Draw and identify lines and angles, and classify shapes by properties of their lines and angles.</b></p> <p>CCSS.MATH.CONTENT.4.G.A.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.</p> <p>CCSS.MATH.CONTENT.4.G.A.2 Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.</p>

<p>CCSS.MATH.CONTENT.3.G.A.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. <i>For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.</i></p>	<p>CCSS.MATH.CONTENT.4.G.A.3 Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.</p>
---	---

**Sequence—3<sup>rd</sup>/4<sup>th</sup> Grade Math**

The following chart offers a sample course sequence for 3<sup>rd</sup>/4<sup>th</sup> grade math. These “I Can/Student Can” statements will be used by teachers to assess student progress and by students to self-assess throughout the year. They guide evidence selection for the students’ portfolios. They are presented here in the order that they will likely be administered to all students in the house. Students in 3<sup>rd</sup> grade should master all concepts that relate to 3<sup>rd</sup> grade standards, though they may proceed through the checklists as their developed skills allow. Fourth grade students should master all concepts on all of these checklists.

I Can Checklists	Standards
<ul style="list-style-type: none"> <li>✓ I can multiply to find the product.</li> <li>✓ I can show products using equal groups, arrays, and repeated addition.</li> <li>✓ I can find the quotient of whole numbers using equal groups.</li> <li>✓ I can tell what the numbers in a division problem mean.</li> <li>✓ I can explain what division means.</li> <li>✓ I can show division as equal sharing.</li> <li>✓ I can multiply to solve word problems.</li> <li>✓ I can divide to solve word problems.</li> <li>✓ I can decide when to multiply or divide to solve word problems.</li> <li>✓ I can find the missing number in a multiplication problem.</li> <li>✓ I can find the missing number in a division problem.</li> </ul>	<p>3.OA.A.1 3.OA.A.2 3.OA.A.3 3.OA.A.4</p>
<ul style="list-style-type: none"> <li>✓ I can use the properties of multiplication and division to solve problems.</li> <li>✓ I can explain the commutative property of multiplication.</li> <li>✓ I can explain the associative property of multiplication.</li> <li>✓ I can explain the distributive property of multiplication.</li> <li>✓ I can identify the multiplication problem related to the division problem.</li> <li>✓ I can use multiplication to solve division problems.</li> <li>✓ I can recognize and explain the relationship between multiplication and division.</li> <li>✓ I can memorize all products within 100.</li> <li>✓ I can use strategies to solve a multiplication problem.</li> <li>✓ I can use strategies to solve a division problem.</li> </ul>	<p>3.OA.5 3.OA.6 3.OA.7</p>
<ul style="list-style-type: none"> <li>✓ I can recognize multiplication strategies.</li> <li>✓ I can write a multiplication equation based on given data</li> </ul>	<p>4.OA.A.1 4.OA.A.2</p>

<ul style="list-style-type: none"> <li>✓ I can use multiplication in 2 or more ways to solve the same problem.</li> <li>✓ I can use division in 2 or more ways to solve the same problem.</li> <li>✓ I can model a multiplication problem as repeated addition.</li> <li>✓ I can divide whole numbers including division with remainders</li> <li>✓ I can solve a word problem that includes letters representing numbers.</li> <li>✓ I can choose the correct operation to solve a word problem.</li> <li>✓ I can use mental math and estimation to determine whether my answer is reasonable</li> </ul>	4.OA.A.3
<ul style="list-style-type: none"> <li>✓ I can identify the order of operations of a problem.</li> <li>✓ I can identify different strategies for estimating.</li> <li>✓ I can construct and equation with a letter standing for the unknown quantity.</li> <li>✓ I can solve two-step word problems using the four operations.</li> <li>✓ I can justify my answer using estimation strategies and mental computation.</li> </ul>	3.OA.8
<ul style="list-style-type: none"> <li>✓ I can recognize prime and composite numbers up to 100.</li> <li>✓ I can write the factors of each number up to 100.</li> <li>✓ I can show that a whole number is a multiple of each of its factors.</li> <li>✓ I can check to see if a given whole number is a multiple of numbers on through nine.</li> </ul>	4.OA.B.4
<ul style="list-style-type: none"> <li>✓ I can identify patterns.</li> <li>✓ I can explain rules for a pattern using properties of operations.</li> <li>✓ I can explain relationships between the numbers in a pattern.</li> <li>✓ I can continue a given number or shape pattern.</li> <li>✓ I can make a number or shape pattern that follows a given rule.</li> <li>✓ I can explain how different patterns are built.</li> <li>✓ I can analyze a pattern to determine parts not stated in the rule.</li> </ul>	3.OA.9 4.OA.C.5
<ul style="list-style-type: none"> <li>✓ I can define “round or rounding” in relation to place value.</li> <li>✓ I can round a whole number to the nearest 10.</li> <li>✓ I can round a whole number to the nearest 100.</li> <li>✓ I can explain that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.</li> <li>✓ I can read and write numbers in standard form up to one million.</li> <li>✓ I can read and write numbers in word form up to one million.</li> <li>✓ I can read and write numbers in expanded form up to one million.</li> <li>✓ I can compare two numbers with digits up to one million and identify whether they are less than, greater than, or equal to another number.</li> </ul>	3.NBT.1 4.NBT.A.1 4.NBT.A.2

<ul style="list-style-type: none"> <li>✓ I can identify strategies for adding within 1000.</li> <li>✓ I can identify strategies for subtracting within 1000.</li> <li>✓ I can fluently add within 1000.</li> <li>✓ I can fluently subtract within 1000</li> <li>✓ I can add numbers up to a million.</li> <li>✓ I can subtract numbers up to a million.</li> </ul>	<p>3.NBT.2 4.NBT.B.4</p>
<ul style="list-style-type: none"> <li>✓ I can identify strategies to multiply one-digit numbers by multiples of 10.</li> <li>✓ I can use place value to multiply one-digit whole numbers by multiples of 10.</li> <li>✓ I can multiply 4 digit by one digit numbers without a calculator.</li> <li>✓ I can multiply 2 digit by 2 digit numbers without a calculator.</li> <li>✓ I can use 2 or more different strategies to multiply numbers.</li> <li>✓ I can use words, drawings, and equations to explain multiplication with arrays.</li> <li>✓ I can use words, drawing, and equations to explain multiplication with area models. I can divide a 4 digit number by a one digit number.</li> <li>✓ I can show the relationship between multiplication and division.</li> <li>✓ I can use an array to show a multiplication problem.</li> <li>✓ I can use an array to explain a division problem.</li> <li>✓ I can find the area of a space using multiplication</li> </ul>	<p>3.NBT.3 4.NBT.B.5 4.NBT.B.6</p>
<ul style="list-style-type: none"> <li>✓ I can define a unit fraction.</li> <li>✓ I can recognize a unit fraction as part of a whole.</li> <li>✓ I can identify and explain the parts of a written fraction.</li> <li>✓ I can compare fractions using equal to, less than, and greater than one.</li> </ul>	<p>3.NF.1</p>
<ul style="list-style-type: none"> <li>✓ I can define the interval from 0 to 1 on a number line as the whole.</li> <li>✓ I can divide a whole on a number line into equal parts.</li> <li>✓ I can recognize that the equal parts between 0 and 1 stand for a fraction.</li> <li>✓ I can represent each equal part on a number line with a fraction.</li> <li>✓ I can define the interval from 0 to 1 on a number line as the whole.</li> <li>✓ I can divide a whole on a number line into equal parts.</li> <li>✓ I can represent each equal part on a number line with a fraction.</li> <li>✓ I can explain that the endpoint of each equal part represents the total number of equal parts.</li> </ul>	<p>3.NF.2 3.NF.2b</p>

<ul style="list-style-type: none"> <li>✓ I can describe equivalent fractions.</li> <li>✓ I can recognize simple equivalent fractions.</li> <li>✓ I can compare fractions by their size to determine equivalence.</li> <li>✓ I can use number lines, size, visual fraction models, etc. to find equivalent fractions.</li> <li>✓ I can recognize whole numbers written in fractional parts on a number line.</li> <li>✓ I can recognize the difference in a whole number and a fraction.</li> <li>✓ I can express whole numbers as fractions.</li> <li>✓ I can explain how a fraction is equivalent to a whole number.</li> <li>✓ I can explain why fractions are equivalent.</li> <li>✓ I can recognize and identify equivalent fractions with unlike denominators.</li> <li>✓ I can explain equivalent fractions such as <math>\frac{1}{2} = \frac{2}{4}</math> and <math>\frac{3}{6} = \frac{4}{8}</math>.</li> <li>✓ I can use visual fraction models to show why fractions are equivalent (ex. <math>\frac{3}{4} = \frac{6}{8}</math>)</li> <li>✓ I can determine equivalent fractions using fraction models and explain why they can be called “equivalent”.</li> </ul>	<p>3.NF.3 3.NF.3a 3.NF.3b 3.NF.3c 4.NF.A.1</p>
<ul style="list-style-type: none"> <li>✓ I can compare two fractions with the same numerator by reasoning about their size.</li> <li>✓ I can compare two fractions with the same denominator by reasoning about their size.</li> <li>✓ I can record the results of comparisons using symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>.</li> <li>✓ I can explain what a numerator means.</li> <li>✓ I can explain what denominator means.</li> <li>✓ I can recognize whether fractions refer to the same whole.</li> <li>✓ I can decide if comparison of fractions can be made (if they refer to the same whole).</li> <li>✓ I can use benchmark fractions such as <math>\frac{1}{2}</math> for comparison purposes.</li> <li>✓ I can make comparisons based on parts of the same whole.</li> <li>✓ I can compare two fractions with different numerators.</li> <li>✓ I can compare two fractions with different denominators.</li> <li>✓ I can prove the results of a comparison of two fractions.</li> </ul>	<p>3.NF.3d 4.NF.A.2</p>
<ul style="list-style-type: none"> <li>✓ I can add unit fractions (<math>\frac{1}{b}</math>) to get a fraction greater than one.</li> <li>✓ I can use fraction models to add fractions to make a whole.</li> <li>✓ I can use fraction models to subtract fractions away from the whole.</li> <li>✓ I can add and subtract fractions with like denominators.</li> <li>✓ I can recognize different ways to represent one whole using fractions with the same denominator.</li> <li>✓ I can use fraction models to take apart a fraction.</li> <li>✓ I can add fractions with same denominators in more than one way.</li> <li>✓ I can record decompositions of fractions as an equation and explain the equation using fraction models.</li> <li>✓ I can write an equation that shows how to add fraction (with like denominators) in more than one way using a fraction model.</li> <li>✓ I can add and subtract mixed numbers with like denominators.</li> </ul>	<p>4.NF.B.3 4.NF.B.3.A 4.NF.B.3.B</p>

<ul style="list-style-type: none"> <li>✓ I can replace mixed numbers with equivalent fractions, using fraction models.</li> <li>✓ I can replace improper fractions with a mixed number, using fraction models.</li> <li>✓ I can add and subtract mixed numbers by replacing each mixed number with an equivalent fraction.</li> <li>✓ I can add and subtract fractions with like denominators.</li> <li>✓ I can solve word problems involving addition of fractions referring to the same whole and having like denominators, by using fraction models and equations to represent the problems.</li> <li>✓ I can solve word problems involving subtraction of fractions referring to the same whole and having like denominators, by using fraction models and equations to represent the problems.</li> </ul>	<p>4.NF.B.3.C 4.NF.B.3.D</p>
<ul style="list-style-type: none"> <li>✓ I can use fraction models to show multiplication of fraction is repeated addition. <math>\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{5}{4}</math></li> <li>✓ I can multiply fractions by a whole number using models.</li> <li>✓ I can name multiples of a fraction with a model.</li> <li>✓ I can multiply a fraction by a whole number.</li> <li>✓ I can multiply a fraction by a whole number.</li> <li>✓ I can use fraction models and equations to represent a problem.</li> <li>✓ I can solve word problems involving multiplication of a fraction by a whole number.</li> </ul>	<p>4.NF.B.4 4.NF.B.4.A 4.NF.B.4.B 4.NF.B.4.C</p>
<ul style="list-style-type: none"> <li>✓ I can rename and recognize a fraction with a denominator of 10 as a fraction with a denominator of 100.</li> <li>✓ I can add two fractions with denominators 10 and 100 by renaming tenths to one hundredths.</li> <li>✓ I can name the values of digits in the decimal places to the hundredths.</li> <li>✓ I can recognize that two fractions with unlike denominators can be equivalent.</li> </ul>	<p>4.NF.C.5 4.NF.C.6</p>
<ul style="list-style-type: none"> <li>✓ I can read and write decimals through the hundredths.</li> <li>✓ I can rename fractions with 10 and 100 in the denominator as decimals.</li> <li>✓ I can recognize multiples of fractions with denominators of 10 or 100.</li> <li>✓ I can represent fractions with denominators 10 or 100.</li> <li>✓ I can represent fractions as decimals to the hundredths place.</li> <li>✓ I can explain how decimals and fractions relate.</li> <li>✓ I can compare tow decimals to the same whole.</li> <li>✓ I can record the results of comparisons with the symbols <math>&gt;</math>, <math>=</math>, <math>&lt;</math></li> <li>✓ I can compare two decimals to hundredths by looking at their size.</li> <li>✓ I can prove my conclusions with models.</li> </ul>	<p>4.NF.C.6 4.NF.C.7</p>
<ul style="list-style-type: none"> <li>✓ I can recognize minute marks on analog clock face and minute position on digital clock face.</li> <li>✓ I can tell and write time to the nearest minute.</li> <li>✓ I can compare an analog clock face with a number line.</li> <li>✓ I can use a number line to add and subtract time.</li> <li>✓ I can solve word problems related to adding and subtracting minutes.</li> </ul>	<p>3.MD.1</p>
<ul style="list-style-type: none"> <li>✓ I can explain how to measure liquid volume in liters.</li> <li>✓ I can explain how to measure mass in grams and kilograms.</li> <li>✓ I can measure liquid volumes using liters.</li> </ul>	<p>3.MD.2 4.MD.1</p>

<ul style="list-style-type: none"> <li>✓ I can measure mass of objects using grams (g), and kilograms (kg).</li> <li>✓ I can explain the size of different units of measurement (km,m; kg, g; lb, oz; L, mL; hrs, min, sec).</li> <li>✓ I can compare the different units within the same system of measurement (e.g. 1 ft = 12 in; 1 lb = 16 oz).</li> <li>✓ I can explain measurements given in a larger unit in terms of a smaller unit.</li> </ul>	
<ul style="list-style-type: none"> <li>✓ I can add, subtract, multiply and divide units of liters, grams, and kilograms.</li> <li>✓ I can use strategies to represent a word problem involving liquid volume or mass.</li> <li>✓ I can solve one step word problems involving masses given in the same units.</li> <li>✓ I can solve one step word problems involving liquid volume given in the same units (e.g. by using cups, pints, quarts, and gallons).</li> <li>✓ I can solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money.</li> <li>✓ I can solve word problems involving measurement that include simple fractions or decimals.</li> <li>✓ I can solve word problems that require expressing measurements given in a larger unit in terms of a smaller unit.</li> </ul>	<p>3.MD.2 4.MD.2</p>
<ul style="list-style-type: none"> <li>✓ I can convert larger units of measurement within the same system to smaller units and record conversions in a 2-column table.</li> <li>✓ I can analyze and interpret a line plot to solve problems involving addition and subtraction of fractions.</li> <li>✓ I can create a line plot to display a data set of measurements given in fractions of a unit.</li> <li>✓ I can add, subtract, multiply, and divide fractions and decimals.</li> <li>✓ I can represent measurement quantities using diagrams such as number line diagrams that feature a measurement scale.</li> </ul>	<p>4.MD.4</p>
<ul style="list-style-type: none"> <li>✓ I can identify and explain the scale of a graph.</li> <li>✓ I can interpret a bar/picture graph to determine “how many more” and “how many less”.</li> <li>✓ I can analyze a graph with a scale greater than one.</li> <li>✓ I can choose a proper scale for a bar graph or picture graph.</li> <li>✓ I can create a scaled picture graph to show data.</li> <li>✓ I can create a scaled bar graph to show data.</li> </ul>	<p>3.MD.3</p>
<ul style="list-style-type: none"> <li>✓ I can define horizontal axis.</li> <li>✓ I can identify each plot on the line as data or a number of objects.</li> <li>✓ I can determine appropriate unit of measurement.</li> <li>✓ I can determine appropriate scale for line plot.</li> <li>✓ I can measure and record lengths using rulers marked with halves and fourths of an inch.</li> <li>✓ I can create a line plot where the horizontal scale is marked off in appropriate units whole numbers, halves, or quarters.</li> </ul>	<p>3.MD.4</p>

<ul style="list-style-type: none"> <li>✓ I can define “unit square”.</li> <li>✓ I can define area.</li> <li>✓ I can find the area of a plane figure using unit squares.</li> <li>✓ I can cover the area of a plane figure with unit squares without gaps or overlaps.</li> <li>✓ I can measure areas by counting unit squares.</li> <li>✓ I can use unit squares of cm, m, in, ft, and other sizes of unit squares to measure area.</li> <li>✓ I can find the area of a rectangle by tiling it in unit squares.</li> <li>✓ I can find the side lengths of a rectangle in units.</li> <li>✓ I can compare the area found by tiling a rectangle to the area found by multiplying the side lengths.</li> <li>✓ I can multiply side lengths to find areas of rectangles.</li> <li>✓ I can solve real world problems using area.</li> </ul>	<p>3.MD.5a 3.MD.5b 3.MD.6 3.MD.7a 3.MD.7b</p>
<ul style="list-style-type: none"> <li>✓ I can use arrays to represent multiplication problems.</li> <li>✓ I can use an array to multiply.</li> <li>✓ I can find the area of a rectangle by modeling the distributive property using multiplication and addition.</li> <li>✓ I can use tiling to find the area of rectangles using the distributive property.</li> <li>✓ I can find areas of rectangles.</li> <li>✓ I can add area of rectangles.</li> <li>✓ I can recognize that areas of each rectangle in a rectilinear (straight line) figure can be added together to find the area of the figure.</li> <li>✓ I can separate a polygon into rectangles to find the area of each rectangle to solve real world problems.</li> <li>✓ I can separate polygons into non-overlapping rectangles.</li> </ul>	<p>3.MD.7c 3.MD.7d</p>
<ul style="list-style-type: none"> <li>✓ I can define perimeter.</li> <li>✓ I can find the perimeter when given the length of sides.</li> <li>✓ I can find the perimeter when there is an unknown side length.</li> <li>✓ I can create rectangles with the same perimeter and different areas.</li> <li>✓ I can create rectangles with the same area and different perimeters.</li> <li>✓ I can identify that the formula for the perimeter of a rectangle is <math>2L + 2W</math> or <math>L + L + W + W</math>.</li> <li>✓ I can identify that the formula for the area of a rectangle is <math>L \times W</math>.</li> <li>✓ I can apply the formula for perimeter of a rectangle to solve real world and mathematical problems.</li> <li>✓ I can apply the formula for area of a rectangle to solve real world and mathematical problems.</li> <li>✓ I can solve area and perimeter problems in which there is an unknown factor (<math>n</math>).</li> </ul>	<p>3.MD.8 4.MD.A.3</p>
<ul style="list-style-type: none"> <li>✓ I can define a polygon.</li> <li>✓ I can identify and define two-dimensional shapes based on their attributes.</li> <li>✓ I can identify rhombuses, rectangles, and squares as quadrilaterals.</li> <li>✓ I can define attributes.</li> <li>✓ I can describe, analyze, and compare properties of two-dimensional shapes.</li> <li>✓ I can compare and classify shapes by attributes, sides and angles.</li> <li>✓ I can group shapes with shared attributes.</li> </ul>	<p>3.MD.8 3.G.1 3.G.2</p>



<ul style="list-style-type: none"> <li>✓ I can draw examples that are and are not quadrilaterals.</li> <li>✓ I can divide shapes into equal parts.</li> <li>✓ I can describe the area of each part as a fractional part of the whole.</li> <li>✓ I can divide a shape into parts with equal areas and describe the area of each part as a unit fraction of the whole.</li> </ul>	
<ul style="list-style-type: none"> <li>✓ I can recognize that a circle has 360 degrees.</li> <li>✓ I can recognize and identify that an angle is formed from 2 rays with a common endpoint.</li> <li>✓ I can recognize that an angle is a fraction of a 360 degree circle.</li> <li>✓ I can explain the angle measurement in terms of degrees.</li> <li>✓ I can determine that an arc is a part of a circle.</li> <li>✓ I can compare angles within a circle.</li> <li>✓ I can determine what fraction of the circular arc an angle forms</li> </ul>	4.MD.C.5 4.MD.C.5.A 4.MD.C.5.B 4.MD.C.6 4.MD.C.7
<ul style="list-style-type: none"> <li>✓ I can draw points, line, line segments, and rays.</li> <li>✓ I can draw right, acute, and obtuse angles.</li> <li>✓ I can draw perpendicular and parallel lines.</li> <li>✓ I can analyze 2 dimensional figures to identify points, line, line segments and rays.</li> <li>✓ I can analyze 2 dimensional figures to identify right, acute and obtuse angles.</li> <li>✓ I can analyze 2 dimensional figures to identify perpendicular and parallel lines.</li> <li>✓ I can recognize lines of symmetry for a two-dimensional figure.</li> <li>✓ I can recognize a line of symmetry as a line across a figure that when folded along creates matching parts.</li> <li>✓ I can draw lines of symmetry for two-dimensional figures.</li> <li>✓ I can classify two-dimensional figures based on parallel or perpendicular lines and size of angles.</li> <li>✓ I can classify triangles as right triangles or not right.</li> </ul>	4.G.A.1 4.G.A.2 4.G.A.3

### Scope and Sequence—7<sup>th</sup> Grade Math

In the 7<sup>th</sup> and 8<sup>th</sup> grade house, students will attend the math course that best fits their assessed skill set. Four math classes will be offered during the school day and the foci of these courses will be determined by student need. There will likely be at least one class focused on the standard 7<sup>th</sup> grade curriculum, at least one focused on the standard 8<sup>th</sup> grade curriculum, and possibly one high school level math course for students ready for an advanced course of study. The following chart presents the Common Core State Standards for 7<sup>th</sup> Grade Mathematics that will provide the scope for that course’s curriculum. The “I Can/Student Can” Statements, which will be used for teacher and student self-assessments and guide portfolio development, represent the sequence in which these skills are taught.

I Can Statements	Common Core State Standard
<ul style="list-style-type: none"> <li>✓ I can compute unit rates with ratios of fractions</li> <li>✓ I can compute unit rates with ratios of lengths, areas, and other quantities</li> <li>✓ I can compute unit rates with ratios measured in like units</li> </ul>	<b>Analyze proportional relationships and use them to solve real-world and mathematical problems.</b> CCSS.MATH.CONTENT.7.RP.A.1 Compute unit rates associated with ratios of fractions, including ratios of

<ul style="list-style-type: none"> <li>✓ I can compute unit rates with ratios measured in different units</li> <li>✓ I can determine if two quantities are proportional using a variety of methods</li> <li>✓ I can identify the constant of proportionality in a table</li> <li>✓ I can identify the constant of proportionality in a diagram</li> <li>✓ I can identify the constant of proportionality in a graph</li> <li>✓ I can identify the constant of proportionality in an equation</li> <li>✓ I can identify the constant of proportionality in a verbal description</li> <li>✓ I can represent proportional relationship in an equation</li> </ul>	<p>lengths, areas and other quantities measured in like or different units. <i>For example, if a person walks 1/2 mile in each 1/4 hour, compute the unit rate as the complex fraction <math>\frac{1/2}{1/4}</math> miles per hour, equivalently 2 miles per hour.</i></p> <p>CCSS.MATH.CONTENT.7.RP.A.2</p> <p>Recognize and represent proportional relationships between quantities.</p>
<ul style="list-style-type: none"> <li>✓ I can explain what a point <math>(x, y)</math> on the graph of a proportional relationship means</li> <li>✓ I can identify the unit rate by using the point <math>(1, r)</math></li> <li>✓ I can explain what the point <math>(0, 0)</math> on the graph of a proportional relationship means</li> <li>✓ I can use proportional relationships to solve multi-step ratios</li> <li>✓ I can use proportional relationships to solve multi-step percent problems</li> </ul>	<p>CCSS.MATH.CONTENT.7.RP.A.2.A</p> <p>Decide whether two quantities are in a proportional relationship, e.g., by testing for equivalent ratios in a table or graphing on a coordinate plane and observing whether the graph is a straight line through the origin.</p> <p>CCSS.MATH.CONTENT.7.RP.A.2.B</p> <p>Identify the constant of proportionality (unit rate) in tables, graphs, equations, diagrams, and verbal descriptions of proportional relationships.</p> <p>CCSS.MATH.CONTENT.7.RP.A.2.C</p> <p>Represent proportional relationships by equations. <i>For example, if total cost <math>t</math> is proportional to the number <math>n</math> of items purchased at a constant price <math>p</math>, the relationship between the total cost and the number of items can be expressed as <math>t = pn</math>.</i></p> <p>CCSS.MATH.CONTENT.7.RP.A.2.D</p> <p>Explain what a point <math>(x, y)</math> on the graph of a proportional relationship means in terms of the situation, with special attention to the points <math>(0, 0)</math> and <math>(1, r)</math> where <math>r</math> is the unit rate.</p> <p>CCSS.MATH.CONTENT.7.RP.A.3</p> <p>Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.</p> <p>Apply and extend previous understandings of operations with fractions.</p>
<ul style="list-style-type: none"> <li>✓ I can describe situations in which opposite quantities combine to make 0</li> <li>✓ I can represent addition of rational numbers on a vertical or horizontal number line using the sign of the value being added to determine direction</li> <li>✓ I can show that a number and its opposite are additive inverses</li> <li>✓ I can describe sums of rational numbers in real world contexts</li> </ul>	<p>CCSS.MATH.CONTENT.7.NS.A.1</p> <p>Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.</p> <p>CCSS.MATH.CONTENT.7.NS.A.1.A</p> <p>Describe situations in which opposite quantities combine to make 0. <i>For</i></p>

<ul style="list-style-type: none"> <li>✓ I can use the additive inverse to write a subtraction problem as an addition problem</li> <li>✓ I can show the distance between two rational numbers on the number line is the absolute value of their difference</li> <li>✓ I can subtract rational numbers in real world contexts</li> <li>✓ I can add rational numbers using the properties of operations</li> <li>✓ I can subtract rational numbers using the properties of operations</li> </ul>	<p><i>example, a hydrogen atom has 0 charge because its two constituents are oppositely charged.</i></p> <p>CCSS.MATH.CONTENT.7.NS.A.1.B Understand <math>p + q</math> as the number located a distance <math> q </math> from <math>p</math>, in the positive or negative direction depending on whether <math>q</math> is positive or negative. Show that a number and its opposite have a sum of 0 (are additive inverses). Interpret sums of rational numbers by describing real-world contexts.</p> <p>CCSS.MATH.CONTENT.7.NS.A.1.C Understand subtraction of rational numbers as adding the additive inverse, <math>p - q = p + (-q)</math>. Show that the distance between two rational numbers on the number line is the absolute value of their difference, and apply this principle in real-world contexts.</p> <p>CCSS.MATH.CONTENT.7.NS.A.1.D Apply properties of operations as strategies to add and subtract rational numbers.</p>
<ul style="list-style-type: none"> <li>✓ I can relate the properties of multiplication of fractions to the multiplication of rational numbers</li> <li>✓ I can use the rules for multiplying signed numbers to determine the sign of the product</li> <li>✓ I can interpret products of rational numbers by describing real world situations</li> <li>✓ I can use multiplication of rational numbers to develop the procedure of dividing integers.</li> <li>✓ I can explain why dividing by zero is undefined</li> <li>✓ I can use the rules for dividing signed numbers to determine the sign of the quotient</li> <li>✓ I can interpret quotients of rational numbers by describing real world situations</li> <li>✓ I can multiply rational numbers using the properties of operations</li> <li>✓ I can divide rational numbers using the properties of operations</li> <li>✓ I can convert rational numbers into decimals using long division</li> <li>✓ I can convert rational numbers into decimals using long division</li> </ul>	<p>CCSS.MATH.CONTENT.7.NS.A.2 Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.</p> <p>CCSS.MATH.CONTENT.7.NS.A.2.A Understand that multiplication is extended from fractions to rational numbers by requiring that operations continue to satisfy the properties of operations, particularly the distributive property, leading to products such as <math>(-1)(-1) = 1</math> and the rules for multiplying signed numbers. Interpret products of rational numbers by describing real-world contexts.</p> <p>CCSS.MATH.CONTENT.7.NS.A.2.B Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If <math>p</math> and <math>q</math> are integers, then <math>-(p/q) = (-p)/q = p/(-q)</math>. Interpret quotients of rational numbers by describing real-world contexts.</p> <p>CCSS.MATH.CONTENT.7.NS.A.2.C Apply properties of operations as strategies to multiply and divide rational numbers.</p> <p>CCSS.MATH.CONTENT.7.NS.A.2.D Convert a rational number to a decimal using long division; know that the decimal form of a rational number terminates in 0s or eventually repeats.</p> <p>CCSS.MATH.CONTENT.7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers.</p>

<ul style="list-style-type: none"> <li>✓ I can use Order of Operations to solve mathematical problems with rational numbers</li> <li>✓ I can use Order of Operations to solve real world problems with rational numbers</li> </ul>	<p>CCSS.MATH.CONTENT.7.NS.A.3 Solve real-world and mathematical problems involving the four operations with rational numbers.</p>
<ul style="list-style-type: none"> <li>✓ I can apply the properties of operations as strategies to add linear expressions with rational coefficients</li> <li>✓ I can apply the properties of operations as strategies to subtract linear expressions with rational coefficients</li> <li>✓ I can apply the properties of operations as strategies to factor linear expressions with rational coefficients</li> <li>✓ I can apply the properties of operations as strategies to expand linear expressions with rational coefficients</li> <li>✓ I can manipulate expressions to make equivalent expressions while problem solving</li> <li>✓ I can solve multi-step mathematical problems with positive and negative rational numbers</li> <li>✓ I can solve multi-step real world problems with positive and negative rational numbers</li> <li>✓ I can apply properties of operations to calculate with numbers in any form</li> <li>✓ I can assess the reasonableness of answers using mental computation and estimation</li> </ul>	<p><b>Use properties of operations to generate equivalent expressions.</b> CCSS.MATH.CONTENT.7.EE.A.1 Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients. CCSS.MATH.CONTENT.7.EE.A.2 Understand that rewriting an expression in different forms in a problem context can shed light on the problem and how the quantities in it are related. <i>For example, <math>a + 0.05a = 1.05a</math> means that "increase by 5%" is the same as "multiply by 1.05."</i> Solve real-life and mathematical problems using numerical and algebraic expressions and equations. CCSS.MATH.CONTENT.7.EE.B.3 Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. <i>For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional 1/10 of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar 9 3/4 inches long in the center of a door that is 27 1/2 inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.</i></p>
<ul style="list-style-type: none"> <li>✓ I can use a variable to represent an unknown quantity</li> <li>✓ I can write a simple algebraic equation of the form <math>px + q = r</math> where <math>p</math>, <math>q</math>, and <math>r</math> are specific numbers to represent a real -world problem</li> <li>✓ I can use inverse operations and the properties of equality to solve word problems leading to equations of the form <math>px + q = r</math> where <math>p</math>, <math>q</math>, and <math>r</math> are specific numbers</li> <li>✓ I can use inverse operations and the properties of equality to solve word problems leading to equations of the form <math>p(x + q) = r</math> where <math>p</math>, <math>q</math>, and <math>r</math> are specific numbers</li> <li>✓ I can compare the algebraic solution to an arithmetic solution</li> </ul>	<p>CCSS.MATH.CONTENT.7.EE.B.4 Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities. CCSS.MATH.CONTENT.7.EE.B.4.A Solve word problems leading to equations of the form <math>px + q = r</math> and <math>p(x + q) = r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. <i>For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?</i></p>

<ul style="list-style-type: none"> <li>✓ I can write a simple algebraic inequality in the form <math>px+q=r</math> where <math>p</math>, <math>q</math>, and <math>r</math> are specific numbers to represent a real-world problem</li> <li>✓ I can use inverse operations and the properties of inequality to solve word problems leading to inequalities of the form <math>px + q &gt; r</math> where <math>p</math>, <math>q</math>, and <math>r</math> are specific numbers</li> <li>✓ I can use inverse operations and the properties of inequalities of the form <math>px + q &lt; r</math> where <math>p</math>, <math>q</math>, and <math>r</math> are specific numbers</li> <li>✓ I can use inverse operations and the properties of</li> <li>✓ I can interpret the solution set in relation to the problem</li> </ul>	<p>CCSS.MATH.CONTENT.7.EE.B.4.B</p> <p>Solve word problems leading to inequalities of the form <math>px + q &gt; r</math> or <math>px + q &lt; r</math>, where <math>p</math>, <math>q</math>, and <math>r</math> are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. <i>For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.</i></p>
<ul style="list-style-type: none"> <li>✓ I can solve problems involving scale drawings of geometric figures</li> <li>✓ I can compute the actual length of a geometric figure from a scale drawing</li> <li>✓ I can compute the actual area of a geometric figure from a scale drawing</li> <li>✓ I can reproduce a scale drawing at a different scale</li> <li>✓ I can draw geometric shapes from given conditions using multiple methods</li> <li>✓ I can construct triangles from three measures of angles</li> <li>✓ I can construct triangles from three measures of sides</li> <li>✓ I can determine if the given measures of angles or sides produce a unique triangle, more than one triangle, or no triangle</li> <li>✓ I can describe the two dimensional figure that results from slicing a three dimensional figure</li> <li>✓ I can describe the two dimensional figure that results from slicing a three dimensional figure</li> </ul>	<p><b>Draw construct, and describe geometrical figures and describe the relationships between them.</b></p> <p>CCSS.MATH.CONTENT.7.G.A.1</p> <p>Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.</p> <p>CCSS.MATH.CONTENT.7.G.A.2</p> <p>Draw (freehand, with ruler and protractor, and with technology) geometric shapes with given conditions. Focus on constructing triangles from three measures of angles or sides, noticing when the conditions determine a unique triangle, more than one triangle, or no triangle.</p> <p>CCSS.MATH.CONTENT.7.G.A.3</p> <p>Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.</p> <p>Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.</p>
<ul style="list-style-type: none"> <li>✓ I can derive the formula for the circumference of a circle</li> <li>✓ I can derive the formula for the area of a circle</li> <li>✓ I can describe the relationship between the circumference and area of a circle I can use the formula for the circumference of a circle to solve problems</li> <li>✓ I can use the formula for the area of a circle to solve problems</li> <li>✓ I can determine the radius or diameter of a circle when the area or circumference is known</li> <li>✓ I can state relationships between supplementary, complementary, vertical, and adjacent angles</li> <li>✓ I can use facts about angles in a multi-step problem to write simple equations for an unknown angle in a figure</li> </ul>	<p>CCSS.MATH.CONTENT.7.G.B.4</p> <p>Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.</p> <p>CCSS.MATH.CONTENT.7.G.B.5</p> <p>Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.</p> <p>CCSS.MATH.CONTENT.7.G.B.6</p> <p>Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.</p>

<ul style="list-style-type: none"> <li>✓ I can solve simple equations for an unknown angle in a figure</li> <li>✓ I can solve mathematical and real-world problems involving area</li> <li>✓ I can solve mathematical and real-world problems involving volume</li> <li>✓ I can solve mathematical and real-world problems involving surface area</li> </ul>	
<ul style="list-style-type: none"> <li>✓ I can examine a sample of a population to gain information about the population</li> <li>✓ I can recognize generalizations about a population from a sample are valid only if the sample is representative of that population</li> <li>✓ I can produce representative samples by using random sampling to support valid inferences of the population</li> <li>✓ I can use data from a random sample to draw inferences about a population with a unknown characteristic of interest</li> <li>✓ I can generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions</li> <li>✓ I can compare the centers (mean and median) or mode of two different data sets</li> <li>✓ I can assess the similarities and differences between two data sets</li> <li>✓ I can compare differences reality to the mean absolute deviation or interquartile range of two data sets</li> <li>✓ I can compare two populations by using the centers (means and/or medians) of data collected from random samples</li> <li>✓ I can compare two populations by using the measures of variability (mean absolute deviation and/or interquartile range) of data collected from random samples</li> </ul>	<p><b>Use random sampling to draw inferences about a population.</b>  CCSS.MATH.CONTENT.7.SP.A.1  Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.</p> <p>CCSS.MATH.CONTENT.7.SP.A.2  Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. <i>For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.</i></p> <p>Draw informal comparative inferences about two populations.  CCSS.MATH.CONTENT.7.SP.B.3  Informally assess the degree of visual overlap of two numerical data distributions with similar variabilities, measuring the difference between the centers by expressing it as a multiple of a measure of variability. <i>For example, the mean height of players on the basketball team is 10 cm greater than the mean height of players on the soccer team, about twice the variability (mean absolute deviation) on either team; on a dot plot, the separation between the two distributions of heights is noticeable.</i></p> <p>CCSS.MATH.CONTENT.7.SP.B.4  Use measures of center and measures of variability for numerical data from random samples to draw informal comparative inferences about two populations. <i>For example, decide whether the words in a chapter of a seventh-grade science book are generally longer than the words in a chapter of a fourth-grade science book.</i></p> <p>Investigate chance processes and develop, use, and evaluate probability models.</p>

<ul style="list-style-type: none"> <li>✓ I can recognize that probability of a chance event is a number between 0 and 1</li> <li>✓ I can express probability as the likelihood of the event occurring</li> <li>✓ I can recognize that larger number indicate greater likelihood</li> <li>✓ I can recognize that a probability near 0 indicates an unlikely event</li> <li>✓ I can recognize that a probability around <math>\frac{1}{2}</math> indicates an event is equally likely or unlikely</li> <li>✓ I can recognize that a probability near 1 indicates a likely event</li> <li>✓ I can recognize that probability may be expressed as a decimal, percent, or ratio event occurring</li> <li>✓ I can recognize that larger number indicate greater likelihood</li> <li>✓ I can recognize that a probability near 0 indicates an unlikely event</li> <li>✓ I can recognize that a probability around <math>\frac{1}{2}</math> indicates an event is equally likely or unlikely</li> <li>✓ I can recognize that a probability near 1 indicates a likely event</li> <li>✓ I can recognize that probability may be expressed as a decimal, percent, or ratio</li> </ul>	<p>CCSS.MATH.CONTENT.7.SP.C.5 Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring. Larger numbers indicate greater likelihood. A probability near 0 indicates an unlikely event, a probability around <math>\frac{1}{2}</math> indicates an event that is neither unlikely nor likely, and a probability near 1 indicates a likely event.</p> <p>CCSS.MATH.CONTENT.7.SP.C.6 Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability. <i>For example, when rolling a number cube 600 times, predict that a 3 or 6 would be rolled roughly 200 times, but probably not exactly 200 times.</i></p>
<ul style="list-style-type: none"> <li>✓ I can develop a uniform theoretical probability model to represent a situation</li> <li>✓ I can determine the probability of the event from that model</li> <li>✓ I can conduct a probability experiment and develop a theoretical probability model to represent the situation</li> <li>✓ I can determine probability of the event from that model</li> <li>✓ I can extend the principles of probability of simple events to compound events</li> <li>✓ I can represent sample spaces for compound events using multiple methods such as organized lists, tables and tree diagrams</li> <li>✓ I can find the probability of compound events based on the sample space</li> <li>✓ I can design a simulation to generate frequencies for compound events</li> <li>✓ I can use a simulation to generate frequencies for compound events</li> <li>✓ I can find the probability of compound events based on the simulation</li> </ul>	<p>CCSS.MATH.CONTENT.7.SP.C.7 Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.</p> <p>CCSS.MATH.CONTENT.7.SP.C.7.A Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. <i>For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.</i></p> <p>CCSS.MATH.CONTENT.7.SP.C.7.B Develop a probability model (which may not be uniform) by observing frequencies in data generated from a chance process. <i>For example, find the approximate probability that a spinning penny will land heads up or that a tossed paper cup will land open-end down. Do the outcomes for the spinning penny appear to be equally likely based on the observed frequencies?</i></p> <p>CCSS.MATH.CONTENT.7.SP.C.8 Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.</p> <p>CCSS.MATH.CONTENT.7.SP.C.8.A Understand that, just as with simple events, the probability of a compound</p>

	<p>event is the fraction of outcomes in the sample space for which the compound event occurs.</p> <p>CCSS.MATH.CONTENT.7.SP.C.8.B</p> <p>Represent sample spaces for compound events using methods such as organized lists, tables and tree diagrams. For an event described in everyday language (e.g., "rolling double sixes"), identify the outcomes in the sample space which compose the event.</p> <p>CCSS.MATH.CONTENT.7.SP.C.8.C</p> <p>Design and use a simulation to generate frequencies for compound events. <i>For example, use random digits as a simulation tool to approximate the answer to the question: If 40% of donors have type A blood, what is the probability that it will take at least 4 donors to find one with type A blood?</i></p>
--	---

<sup>1</sup>The Common Core Standards are pulled directly from the website of the Common Core State Standards Initiative <http://www.corestandards.org/>



## Appendix C

### The Experiential School of Greensboro: Academic Calendar 2018-2019

August 13-16: Professional Development Days for staff—Mandated Workdays

August 17: Teacher Workday\*

August 20: Teacher Workday\*

August 21: First Day of School for Students

September 3: Labor Day—No School

October 29: Teacher Workday\*(1)

November 21: Vacation—No School

November 22-23: Holiday—No School

December 21: Professional Development Day for staff—Mandated Workday

December 24-26: Holidays—No School

December 27-31: Vacation—No School

January 1: Holiday—No School

January 2: Teacher Workday\*(2)

January 21: Teacher Workday\*(3)

February 18: Professional Development Day for staff—Mandated Workday

March 18: Professional Development Day for staff—Mandated Workday

April 15-18: Vacation—No School (7-9)

April 19: Holiday—No School

May 27: Holiday—No School

June 7: Last Day of Classes for Students

June 10-13: Teacher Workdays\*(4-6)

\*Teachers may take annual leave on these workdays

Numbers in parenthesis indicate the order in which inclement weather make-up days will be taken

The Experiential School of Greensboro

Academic Calendar 2018-2019

AUGUST				
M	T	W	T	F
		1	2	3
6	7	8	9	10
13 <sub>PD</sub>	14 <sub>PD</sub>	15 <sub>PD</sub>	16 <sub>PD</sub>	17 <sub>W</sub>
20 <sub>W</sub>	21	22	23	24
27	28	29	30	31

9

SEPTEMBER				
M	T	W	T	F
3 <sub>H</sub>	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	27	28

19

OCTOBER				
M	T	W	T	F
1	2	3	4	5
8 <sub>W</sub>	9	10	11	12
15	16	17	18	19
22	23	24	25	26
29 <sub>W<sup>1</sup></sub>	30	31		

21

NOVEMBER				
M	T	W	T	F
			1	2
5	6	7	8	9
12	13	14	15	16
19	20	21 <sub>V</sub>	22 <sub>H</sub>	23 <sub>H</sub>
26	27	28	29	30

19

DECEMBER				
M	T	W	T	F
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21 <sub>PD</sub>
24 <sub>H</sub>	25 <sub>H</sub>	26 <sub>H</sub>	27 <sub>V</sub>	28 <sub>V</sub>
31 <sub>V</sub>				

14

JANUARY				
M	T	W	T	F
	1 <sub>H</sub>	2 <sub>W<sup>2</sup></sub>	3	4
7	8	9	10	11
14	15	16	17	18
21 <sub>W<sup>3</sup></sub>	22	23	24	25
28	29	30	31	

20

FEBRUARY				
M	T	W	T	F
				1
4	5	6	7	8
11	12	13	14	15
18 <sub>PD</sub>	19	20	21	22
25	26	27	28	

19

MARCH				
M	T	W	T	F
				1
4	5	6	7	8
11	12	13	14	15
18 <sub>PD</sub>	19	20	21	22
25	26	27	28	29

20

APRIL				
M	T	W	T	F
1	2	3	4	5
8	9	10	11	12
15 <sub>V<sup>7</sup></sub>	16 <sub>V<sup>8</sup></sub>	17 <sub>V<sup>9</sup></sub>	18 <sub>V</sub>	19 <sub>H</sub>
22	23	24	25	26
29	30			

17

MAY				
M	T	W	T	F
		1	2	3
6	7	8	9	10
13	14	15	16	17
20	21	22	23	24
27 <sub>H</sub>	28	29	30	31

22

JUNE				
M	T	W	T	F
3	4	5	6	7
10 <sub>W<sup>4</sup></sub>	11 <sub>W<sup>5</sup></sub>	12 <sub>W<sup>6</sup></sub>	13 <sub>W</sub>	14
17	18	19	20	21
24	25	26	27	28

5



= First/Last student day

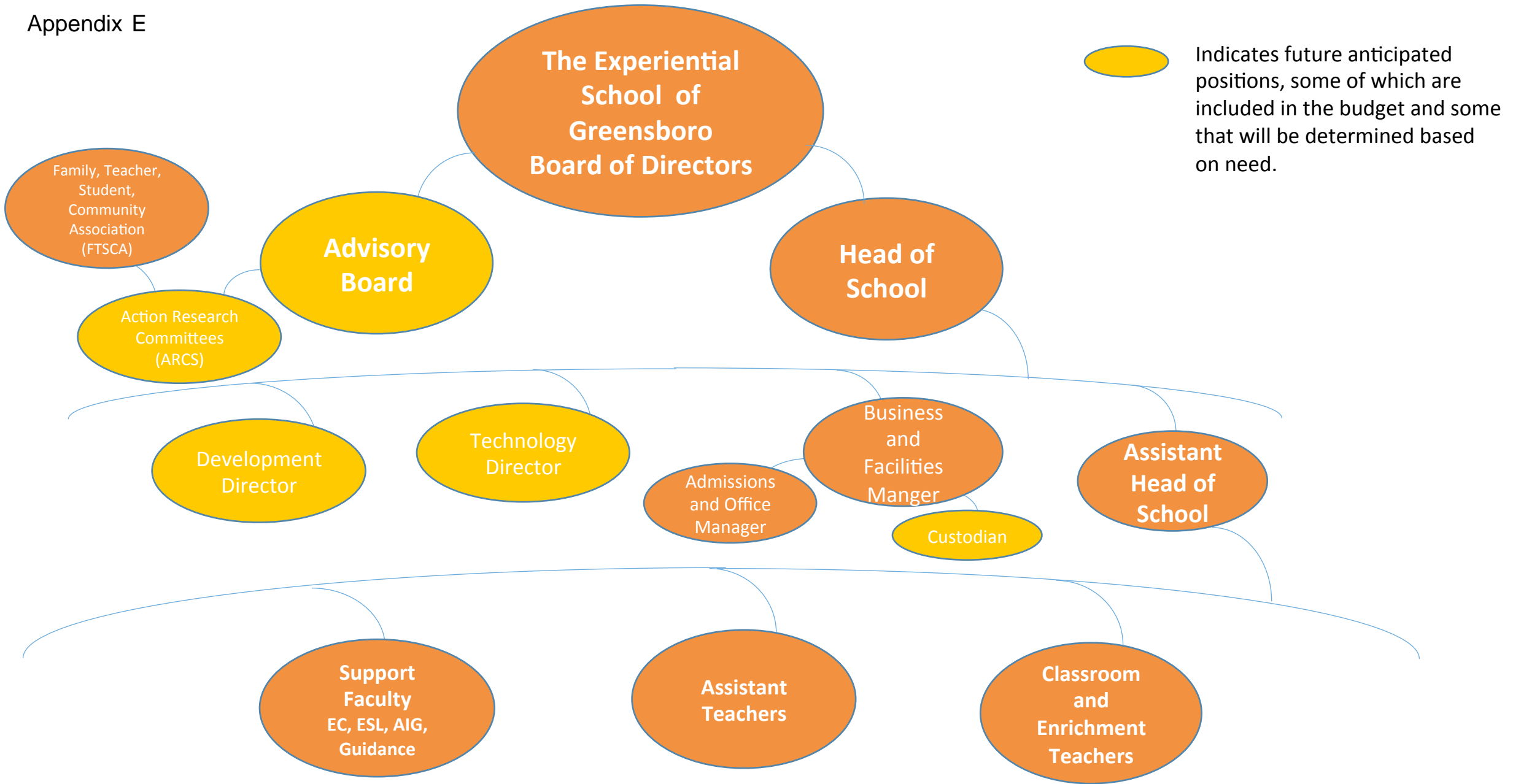
W = Teacher Work Day (annual leave may be taken on these days)

PD = Professional Development Day, no classes, mandatory teacher workdays

H = Holiday

V = Vacation Day

<sup>1-9</sup> = Inclement Weather Make-Up Days



# STATED BYLAWS OF THE EXPERIENTIAL SCHOOL OF GREENSBORO

The Board of Directors, pursuant to Article XIV of the Bylaws of The Experiential School of Greensboro, has adopted the following Stated Bylaws of The Experiential School of Greensboro to be effective September 8, 2016 until otherwise amended, altered, revised or repealed:

## ARTICLE I. NAME

The name of the Corporation shall be The Experiential School of Greensboro, Inc.

## ARTICLE II. PURPOSES

### Section 1. Not for Profit.

The Corporation is organized under and shall operate as a North Carolina Not For Profit Corporation, and shall have such powers as are now or as may hereafter be granted by the North Carolina Nonprofit Corporation Act. (1993, c. 398, s. 1.) § 55A-1-02. .

### Section 2. Purposes.

The purposes of the Corporation are educational and charitable within the meaning of section 501(c)(3) of the Internal Revenue Code of 1986, as amended, including but not limited to the establishment of a Charter School under the auspices of the State of North Carolina.

### Section 3. Rules.

The following rules shall conclusively bind the Corporation and all persons acting for or on behalf of it:

a. No part of the net earnings of the Corporation shall inure to the benefit of, or be distributable to its members, directors, officers, or other private persons, except that the Corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes set forth herein. No substantial part of the activities of the Corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the Corporation shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of any candidate for public office. Notwithstanding any other provision of these bylaws, the Corporation shall not carry on any other activities not permitted to be carried on (a) by a corporation exempt from Federal income tax under section 501(c)(3) of the Internal Revenue Code of 1986 (or the corresponding provision of any future United States Internal Revenue Law) or (b) by a corporation, contributions to which are deductible under section 170(c)(2) of the Internal Revenue Code of 1986 (or the corresponding provision of any future United States Internal Revenue Law).

b. Upon the dissolution of the Corporation, the Board of Directors shall, after paying or making provision for the payment of all the liabilities of the Corporation, dispose of all 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 charitable, educational, religious, or scientific purposes as shall at the time qualify as an exempt organization or organizations under section 501(c)(3)

of the Internal Revenue Code of 1986 (or the corresponding provision of any future United States Internal Revenue Law), as the Board of Directors shall determine. Any assets not so disposed of shall be disposed of by the Court of Common Pleas of the county in which the principal office of the Corporation is then located, exclusively for such purposes or to such organization or organizations, as said Court shall determine, which are organized and operated exclusively for such purposes.

c. The Corporation shall not adopt any practice, policy or procedure which would result in discrimination on the basis of race, religion, creed or sexual orientation or ability.

### **ARTICLE III. REGISTERED OFFICE AND AGENT**

The Corporation shall have and continuously maintain in the State of North Carolina within the boundaries of Guilford County, a registered office and a registered agent whose office shall be identical with such registered office.

### **ARTICLE IV. MEMBERS**

The Corporation shall have no members.

### **ARTICLE V. BOARD OF DIRECTORS**

#### Section 1. General Powers.

The affairs of the Corporation shall be managed by or under the direction of its Board of Directors which may delegate authority to specified officers and other designated personnel.

#### Section 2. Number, Tenure and Qualifications.

The number of directors shall be nine. Each individual who becomes a director after the adoption of these Bylaws shall serve a term of three years. Each director shall hold office until the end of his or her respective term, resignation, removal, or until his or her successor shall have been elected and qualified. No director may serve for more than two consecutive, full three-year terms, excluding any ex-officio tenure. At the next regular meeting following the adoption of these Bylaws, the terms of the current directors will be designated as staggered, with two directors to be elected not less than fourteen days preceding the annual organizational meeting in October.

#### Section 3. Regular Meetings.

Regular meetings of the Board of Directors shall be held monthly on dates to be determined by the Board, for no less than ten (10) regular meetings each year. The meeting will be set on a regular calendar according to Article 336 of the North Carolina Public Meetings Law. The annual meeting of the Board of Directors shall be held on the date corresponding to the date that the regular meeting scheduled for October would otherwise be held.

#### Section 4. Special Meetings.

Special meetings of the Board of Directors may be called by or at the request of the President or by 2 of the other directors. The person or persons authorized to call special meetings of the Board of Directors may fix any place within Guilford County, North Carolina, as the place for holding any special meeting of the Board of Directors called by them.

#### Section 5. Notice.

Notice of any special meeting of the Board of Directors shall be given at least 48 hours in advance according to the North Carolina Open Public Meetings Act specifying the purpose of the meeting to each director at his or her address or by email as shown by the records of the Corporation and held within Guilford County, North Carolina. If mailed, such notice shall be deemed to be delivered when deposited in the United States mail in a sealed envelope so addressed, with postage thereon prepaid. The meeting agenda will be posted at least 48 hours in advance according to the North Carolina Public Open Meetings Act. No special meeting may remove a director unless written notice of the proposed removal is delivered to all directors at least twenty days prior to such meeting.

#### Section 6. Minimum Requirement for Board member participation.

Board members must attend eight of the ten monthly board meeting per year. In addition, members must participate in at least one other committee. The founding Board of Directors will participate in the state mandated board training as required by the state and as a service to the school. Board members will financially participate in support of the school to the extent of their ability.

#### Section 7. Quorum.

A majority of the Board of Directors shall constitute a quorum for the transaction of business at any meeting of the Board of Directors provided that, if less than a majority of the directors is present at said meeting, a majority of the directors present may adjourn the meeting to another time without further notice.

#### Section 8. Manner of Acting/ Conflict of Interest.

The act of a majority of the directors' present at a meeting at which a quorum is present shall be the act of the Board of Directors, unless the act of a greater number is required by statute, these bylaws, or the Articles of Incorporation. No director may act by proxy on any matter. Additionally, directors individually must exercise reasonable care when he or she makes a decision as a steward of the organization (Duty of Care). No board member can use information obtained as a member for personal gain, but must act in the best interest of the organization. Board members are not permitted to act in a way that is inconsistent with the central goals of the organization.

#### Section 9. Informal Action.

Any action required to be taken at a meeting of the Board of Directors or any action which may be taken at a meeting of the Board of Directors may be taken without a meeting if a consent in writing, setting forth the action so taken, is signed by all of the members entitled to vote with respect to the subject matter thereof.

#### Section 10. Vacancies.

Any vacancy occurring in the Board of Directors shall be filled by the Board of Directors unless the articles of incorporation, a statute, or these bylaws provide that a vacancy or a directorship so created

shall be filled in some other manner, in which case such provision shall control. A director elected or appointed, as the case may be, to fill a vacancy shall be elected no more than 90 days after the vacancy occurs, and the term of such director shall be for the unexpired term of his or her predecessor in office. The vacant position shall be filled in the same manner in which the vacating director was most recently selected.

#### Section 11. Resignation and Removal of Directors.

A director may resign at any time upon written notice to the Board of Directors. A director may be removed with or without cause by the affirmative vote of five of the total directors.

#### Section 12. Compensation.

Members of the Board of Directors shall not receive any salary for their services as members of the Board, but by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, may be allowed for attendance at each regular or special meeting of the Board; provided, that nothing herein contained shall be construed to preclude any director from serving the Corporation in any other capacity and receiving compensation therefor.

### **ARTICLE VI. COMMITTEES**

#### Section 1. Committees.

The Board of Directors may by resolution designate one or more committees not otherwise provided for in Section 2 of this Article VI. Each committee, whether created by such resolution or provided for in Section 2 of this Article 2, shall consist of one or more directors, may be chaired by a director, with at least one committee member being a parent of a child currently enrolled at The Experiential School of Greensboro; provided, however, that the Nominating Committee may be composed entirely of non-directors, and that the Excellence in Educational Programs Advisory Committee be composed as stated in Article VI, Section 2 (E) and the Governance Committee shall be composed as stated in Article VI, Section 2 (F) and the Communications, Public Relations, and Fundraising Committee shall be composed as state in Article VI, Section 2 (G). Except as otherwise prohibited by the North Carolina General Not For Profit Act, each committee shall have and exercise the authority of the Board of Directors in the management of the Corporation to the extent provided in the resolution creating such committee; but the designation of such committees and the delegation thereto of authority shall not operate to relieve the Board of Directors, or any individual director, of any responsibility imposed upon them by law.

#### Section 2. Standing Committees.

The Corporation shall have the following standing committees, all members of which, unless otherwise noted, will be appointed by the President:

(A) Executive Committee. The Executive Committee shall consist of all officers of the Corporation, and the Head of School, and any other individuals appointed by the President and approved by the Board of Directors. The committee shall be chaired by the President and shall be fully authorized, unless such authority be otherwise specifically limited by the Board of Directors, to act on behalf of the Corporation during the intervals between meetings of the Board of Directors. Actions taken by the Executive Committee shall be reported to the Board of Directors for ratification at the next regular meeting thereof. The Executive Committee shall also be responsible for the community relations

activities of the Corporation, including without limitation exploring ways to encourage greater public awareness of the Corporation and its mission, evaluating the efforts of the Corporation to educate the community about the Corporation's purpose, function and role, and publicizing its role, function and capabilities to others.

(B) Human Resources Committee. The Human Resources Committee shall consist of individuals appointed by the President and will be responsible for interviewing and recommending individuals to the Board of Directors for the position of Head of the School in anticipation of such position becoming vacant in the near future. The Human Resources Committee will provide a written evaluation of the performance of the Head of the School annually, and will establish performance criteria linked to, among other things, adherence of the Corporation to its charter. The evaluation shall include input from the Finance Committee to determine the extent to which the Head of School has satisfactorily managed the fiscal affairs of the Corporation in the respective departments. After the chairperson of the Human Resources Committee reviews the annual evaluation with the Head of the School and the Head of the School has had an opportunity to respond, the evaluation will be presented to the Board of Directors at a meeting from which the Head of the School has been excused. The Human Resources Committee will thereupon present to the Board of Directors any recommendations for modification, if any, of the compensation and benefit package of the Head of the School. The Human Resource Committee will also oversee staff relations and coordinate the establishment of personnel policies.

(C) Nominating Committee. The Nominating Committee may consist of no more than three, but not less than one, individual(s) appointed by the President, as well as two parent representatives. Except for directors elected by the parent body of the Corporation, the Nominating Committee will develop a slate for election to the Board of Directors to fill any vacancies that may result from expiration of terms of office, resignations or removals, or from any newly created directorships created by amendment of these Bylaws. The slate will be presented at the annual meeting or any regular meeting of the Board of Directors in an effort to keep director positions filled.

(D) Finance Committee. The Finance Committee shall be appointed by the President and shall include the Treasurer. It shall be responsible for oversight of the compilation of the annual budget for submission to the Board of Directors for approval, assisting the Corporation in the interviewing and selecting of accounting professionals to conduct the annual audit and reviewing any recommendations thereof upon completion of the audit, and reviewing insurance coverage and insurance companies for the Corporation. The Finance Committee will review the financial reports of the Corporation not less than quarterly to determine the relationship of budgeted items to actual expenditures and revenues, and the chairperson of the Finance Committee shall report the results of such review to the Board of Directors at the next regular meeting of the Board of Directors.

(E) Excellence in Academic Programs Advisory Committee: The committee composition shall include at a minimum one Board of Director Member, the Head of School, Assistant Head of School, and two lead teachers, for a total of five committee members. The Committee Chair and the Head of School will nominate individuals who shall then be appointed by the Board President. The Excellence in Educational Programs Advisory Committee is commissioned by and responsible to the Board of Directors to assume the primary responsibility of working with the Head of School and Assistant Head of School in an advisory role to define indicators of student achievement (in such areas as environmental stewardship, citizenship, and standardized achievement tests). The committee will ensure that all board



members know the charter promises made to the community and NC DPI regarding student achievements and to devise clear and consistent measures to monitor these goals.

(F) Communications, Public Relations, and Fundraising Committee: The committee composition shall include at a minimum one Board of Director Members appointed by the President of the Board of Directors, one of which shall serve as Committee Chair, and other individuals recommended by the Committee chair in sufficient number as to assure adequate manpower to carry out the work scope of the committee. The Communications, Public Relations, and Fundraising Committee will address issues germane to internal communication and corporate branding, issues germane to corporation public relations, and issues germane to fundraising activities sufficient to sustain the corporation including policies and procedures governing the management of fundraising activities carried out by the staff of the corporation.

### Section 3. Other Bodies.

The Board of Directors by resolution may designate commissions, task forces, advisory bodies or other such bodies not having or exercising the authority of the Board of Directors in the management of the Corporation. The Board of Directors shall from time to time designate by resolution the scope and authority of any such body. Except as otherwise provided in such resolution, members need not be directors of the Corporation, and the President shall appoint the members thereof. Any member of such bodies may be removed by the President whenever in the judgment of the President the best interests of the Corporation would be served by such removal.

### Section 4. Advisory Board.

The Advisory Board shall be a separate body pursuant to Section 3 of this Article VI. Members of the Advisory Board have no power to bind or act on behalf of the Corporation. The purpose of the Advisory Board is to help the Corporation expand its perspective and achieve goals based upon its charter. Members of the Advisory Board shall be appointed for three-year terms. They are expected to visit the facilities of the Corporation at least once per year, and may be contacted for advice on an occasional basis. There shall be an annual meeting of the Advisory Board. Members will serve as volunteers, although the Corporation may provide travel and incidental expenses as determined by the Board of Directors.

### Section 5. Term of Office.

Each member of a committee or other body shall continue until the member resigns, is removed or ceases to qualify as a member thereof, unless the committee or other body is sooner terminated.

### Section 6. Chairperson.

Unless otherwise specified in this Article VI, one member of each committee or other body shall be chosen by said committee at the annual meeting of that committee.

### Section 7. Vacancies.

Vacancies in the membership of any committee or other body may be filled by appointments in the same manner as provided in the case of the original appointments.

### Section 8. Quorum.

Unless otherwise provided in the resolution of the Board of Directors designating a committee or other body, a majority of the entire committee shall constitute a quorum, and the act of a majority of the members present at a meeting in which a quorum is present shall be the act of the committee or other body.

#### Section 9. Subcommittees or Sub-Bodies.

Each committee or other body may create by resolution subcommittees or sub-bodies to assist in fulfilling its purpose, which subcommittees or sub-bodies shall operate in accordance with such resolution. The chairperson of the particular committee or body shall appoint the chairperson of each its subcommittees or sub-bodies.

### **ARTICLE VII. OFFICERS**

#### Section 1. Officers.

The officers of the Corporation shall be a President, a Vice-President, a Treasurer, a Secretary, and such other officers as may be elected or appointed by the Board of Directors. Officers whose authority and duties are not prescribed in these bylaws shall have the authority and perform the duties prescribed, from time to time, by the Board of Directors. Not more than two offices may be held by the same person.

#### Section 2. Election and Term of Office.

The founding Board of Directors shall elect officers to serve a consecutive term of three years. At the end of the first three years the President and Secretary position will be elected for a two-year term. The following year the Vice President and Treasurer will be elected for a two-year term. For the remainder of the Corporation, the officers of the Corporation shall be elected at each regular annual meeting of the Board of Directors in accordance with their term. Vacancies may be filled or new offices created and filled at any meeting of the Board of Directors. Each officer shall hold office until his or her successor shall have been duly elected and shall have qualified or until his or her death or until he or she shall resign or shall have been removed in the manner herein provided. Election of an officer shall not of itself create contractual rights.

#### Section 3. Removal.

Any officer elected or appointed by the Board of Directors may be removed by the Board of Directors whenever in its judgment the best interests of the Corporation would be served thereby.

#### Section 4. President.

The President shall be the principal executive officer of the Corporation. Subject to the direction and control of the Board of Directors, he or she shall be in charge of the business and affairs of the Corporation.

#### Section 5. Vice-President.

The Vice-President shall assist the President in the discharge of his or her duties as the President may direct, and shall perform such other duties as from time to time may be assigned to him or her by the President or the Board of Directors. In the absence of the President or in the event of his or her inability

or refusal to act, the Vice-President shall perform the duties of the President and, when so acting, shall have all the powers of and be subject to all the restrictions upon the President.

#### Section 6. Treasurer.

The Treasurer shall be the principal accounting and financial officer of the Corporation. The Treasurer shall (a) have charge of and be responsible for the maintenance of adequate books of account for the Corporation; (b) have charge and custody of all funds and securities of the Corporation, and be responsible thereof, and for the receipt and disbursement thereof; and (c) perform all the duties incident to the office of Treasurer and such other duties as from time to time may be assigned to him or her by the President or by the Board of Directors.

#### Section 7. Secretary.

The Secretary shall (a) record the minutes of the meetings of the Board of Directors in one or more books provided for that purpose; (b) see that all notices, including without limitation annual notice of the dates of all regularly scheduled meetings of the Board of Directors, are duly given in accordance with the provisions of these bylaws or as required by law; (c) be a custodian of the corporate records; (d) keep a register of the post office address of each member of the Board of Directors and the Advisory Board which shall be furnished to the Secretary by such members; and (e) perform all duties incident to the office of Secretary and such other duties as from time to time may be assigned to him or her by the President or by the Board of Directors.

### **ARTICLE VIII. CONTRACTS, CHECKS, DEPOSITS, AND FUNDS**

#### Section 1. Contracts.

The Board of Directors may authorize any agent or agents of the Corporation, in addition to the officers so authorized by these bylaws, to enter into any contract or execute and deliver any instrument in the name of and on behalf of the Corporation and such authority may be general or confined to specific instances.

#### Section 2. Checks, Drafts, etc.

All checks, drafts or other orders for the payment of money, notes or other evidences of indebtedness issued in the name of the Corporation shall be signed by such officer or officers, agent or agents of the Corporation and in such manner as shall from time to time be determined by resolution of the Board of Directors. In the absence of such determination by the Board of Directors, such instruments shall be signed by the Treasurer and countersigned by the President or Vice-President of the Corporation.

#### Section 3. Deposits.

All funds of the Corporation shall be deposited from time to time to the credit of the Corporation in such banks, trust companies, or other depositories as the Board of Directors may select.

#### Section 4. Gifts.

The Board of Directors, or person designated by the Board of Directors, or an officer of the Corporation, may accept on behalf of the Corporation any contribution, gift, bequest or devise for the general purpose or for any special purpose of the Corporation.

## **ARTICLE IX. BOOKS AND RECORDS**

The Corporation shall keep correct and complete books and records of account and shall also keep minutes of the proceedings of its Board of Directors, and committees having any of the authority of the Board of Directors.

## **ARTICLE X. FISCAL YEAR**

The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors.

## **ARTICLE XI. CORPORATE SEAL**

The Corporation shall not have or use a corporate seal.

## **ARTICLE XII. WAIVER OF NOTICE**

Whenever any notice whatsoever is required to be given under the provisions of the North Carolina Nonprofit Corporation Act. (1993, c. 398, s. 1.) § 55A-1-02 or under the provisions of the Articles of Incorporation or the bylaws of the Corporation, a waiver thereof in writing signed by the person or persons entitled to such notice, whether before or after the time stated therein, shall be deemed equivalent to the giving of such notice.

## **ARTICLE XIII. INDEMNIFICATION**

### Section 1. Indemnification of Officers and Directors.

The Corporation may indemnify all officers and directors of the Corporation to the fullest extent permitted by the North Carolina Nonprofit Corporation Act. (1993, c. 398, s. 1.) § 55A-1-02. In each specific instance, the Corporation shall indemnify an officer or director if authorized by a resolution of the Board of Directors to do so.

### Section 2. Insurance.

The Corporation is entitled to purchase insurance for purposes of the indemnifications provided in the Article to the full extent as determined from time to time by the Board of Directors.

## **ARTICLE XIV. AMENDMENTS**

The power to alter, amend, or repeal the bylaws or adopt new bylaws shall be vested in the Board of Directors unless otherwise provided in the Articles of Incorporation or the bylaws. Such action must be adopted by no less than two-thirds of the members of the Board of Directors at a regular meeting for which written notice of the purpose shall be given; provided, however, that no amendment to the bylaws may be adopted unless such amendment is first presented for consideration at a prior regular meeting of the Board of Directors. The bylaws may contain any provisions for the regulations and management of the affairs of the Corporation not inconsistent with the law or the Articles of Incorporation.



# NORTH CAROLINA

## Department of the Secretary of State

Appendix H

**To all whom these presents shall come, Greetings:**

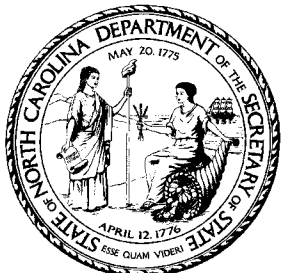
I, Elaine F. Marshall, Secretary of State of the State of North Carolina, do hereby certify the following and hereto attached to be a true copy of

### ARTICLES OF INCORPORATION

OF

### THE EXPERIENTIAL SCHOOL OF GREENSBORO, INC.

the original of which was filed in this office on the 8th day of September, 2016.



Scan to verify online.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal at the City of Raleigh, this 8th day of September, 2016.

*Elaine F. Marshall*

Secretary of State

State of North Carolina  
Department of the Secretary of State

ARTICLES OF INCORPORATION  
NONPROFIT CORPORATION

Pursuant to §55A-2-02 of the General Statutes of North Carolina, the undersigned corporation does hereby submit these Articles of Incorporation for the purpose of forming a nonprofit corporation.

1. The name of the nonprofit corporation is: The Experiential School of Greensboro, Inc.

2.  (Check only if applicable.) The corporation is a charitable or religious corporation as defined in NCGS §55A-1-40(4).

3. The name of the initial registered agent is: Northwest Registered Agent Service, Inc.

4. The street address and county of the initial registered agent's office of the corporation is:

Number and Street: 4030 Wake Forest Road, STE 349  
City: Raleigh State: NC Zip Code: 27609 County: Wake

The mailing address *if different from the street address* of the initial registered agent's office is:

Number and Street or PO Box: \_\_\_\_\_  
City: \_\_\_\_\_ State: NC Zip Code: \_\_\_\_\_ County: \_\_\_\_\_

5. The name and address of each incorporator is as follows:

Melissa Bocci 4604 Kinnakeet Way, Greensboro, NC 27455

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

6. (Check either a or b below.)

a.  The corporation will have members.

b.  The corporation will not have members.

7. Attached are provisions regarding the distribution of the corporation's assets upon its dissolution.

8. Any other provisions which the corporation elects to include are attached.

9. The street address and county of the principal office of the corporation is:

Principal Office Telephone Number: 336-382-2454

Number and Street: 4604 Kinnakeet Way

City: Greensboro State: NC Zip Code: 27455 County: Guilford

The mailing address *if different from the street address* of the principal office is:

Number and Street or PO Box: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_ County: \_\_\_\_\_

10. (Optional): Please provide a business e-mail address: **Privacy Redaction**

The Secretary of State's Office will e-mail the business automatically at the address provided at no charge when a document is filed. The e-mail provided will not be viewable on the website. For more information on why this service is being offered, please see the instructions for this document.



11. These articles will be effective upon filing, unless a future time and/or date is specified: \_\_\_\_\_

This is the 8 day of September, 2016.

The Experiential School of Greensboro, Inc.

(Incorporator Business Entity Name)

**Melissa Bocci** Digitally signed by Melissa Bocci  
Date: 2016.09.08 10:17:19 -04'00'

*Signature of Incorporator*

**Melissa Bocci, Initial Director**

*Type or print Incorporator's name and title, if any*

NOTES:

1. Filing fee is \$60. This document must be filed with the Secretary of State.

**Item 7: Provisions Regarding the Distribution of the Corporation's Assets upon its Dissolution**

**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 principal office of the corporation 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.





**Purpose of Corporation**

This corporation is organized for the following purpose(s) (*check as applicable*):

religious,

charitable,

educational,

testing for public safety,

scientific,

literary,

fostering national or international amateur sports competition, and/or

prevention of cruelty to children or animals,

including, for such purposes, the making of distributions to organizations that qualify as exempt organizations under Sections 501(c)(3) and 170(c)(2) of the Internal Revenue Code of 1986 (herein the "Code") (or the corresponding provisions of any future United States Internal Revenue Code).

**Prohibited Activities**

No part of the net earnings of the corporation shall inure to the benefit of or be distributable to, its members, directors, officers, or other private persons except that the corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of purposes set forth in these articles of incorporation. No substantial part of the activities of the corporation shall be the carrying on of propaganda or otherwise attempting to influence legislation, and the corporation shall not participate in or intervene in (including the publishing or distribution of statements) any political campaign on behalf of or in opposition to any candidate for public office. Notwithstanding any other provisions of these articles, the corporation shall not carry on any other activities not permitted to be carried on (a) by a corporation exempt from federal income tax under Section 501(c)(3)

of the Code or (b) by a corporation, contributions to which are deductible under Section 170(c)(2) of the Code.

### **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 principal office of the corporation 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.

# INSURANCE PEOPLE

Below are the **estimated annual premiums** for The Experiential School of Greensboro:

**Property Premium Estimate** **\$450**

Contents	\$240,000
Deductible	\$1,000
Form	Special
Equipment Breakdown	Included

**General Liability Premium Estimate** **\$1,441**

<b>Rating Basis:</b>	Students	240
	Faculty	26

**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** **\$4,380**

	\$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

<b>Fidelity Bond Estimate</b>		<b>\$332</b>
Limit	\$250,000	
<b>Auto Premium Estimate</b>		<b>\$181</b>
Hired & Non Owned Autos Only		
Limit of Liability	\$1,000,000	
<b>Head of Class Endorsement</b>		<b>\$82</b>
<b>Workers Compensation Premium Estimate</b>		<b>\$6,057</b>
Statutory State - NC		
Employers Liability	\$500/ \$500/ \$500	
Payroll Estimate	\$1,010,000	
<b>Umbrella Premium Estimate</b>		<b>\$2,387</b>
Limit of Liability	\$1,000,000	
<b>TOTAL ESTIMATED PREMIUM</b>		<b>\$15,310</b>
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

09/07/2016

September 1st, 2016

To Whom It May Concern:

It is my pleasure to support The Experiential School of Greensboro. It would be an important and exciting addition to Greensboro's downtown. The city has developed Elm Street from Lebauer Park to Union Square Campus and this k-8 school would round out this venture.

Board members Leila Villaverde and George Scheer approached me about potential facilities. We discussed the Old Greensborough Gateway Center which I will be renovating this year. It's horizontal to the Union Square Campus and its ample space can meet the school's need of 20,000+ sq ft. The space's estimated rental cost will be \$15-17 range per sq. ft., though for the school, this rate will be negotiable as it is on the higher end for downtown.

I'm very excited about The Experiential School of Greensboro's educational program and think it will provide a unique opportunity for Greensboro families. Its mission also aligns well with Guilford County Schools' partner The Say Yes! To Education foundation. As a member of the downtown Greensboro community, TESSG would continue the revitalization efforts in the city and support the various business and cultural organizations in the vicinity.

Sincerely,

  
Andy Zimmerman

# elsewhere

a living museum from a former thrift store

September 5th, 2016

To Whom It May Concern:

As Executive Director and Co-Founder of Elsewhere Living Museum in downtown Greensboro, I'm very enthusiastic about supporting The Experiential School of Greensboro. It's such an exciting added value to Greensboro's downtown. Over time we have seen downtown revitalized and to see youth be a central part of that makes it all come full circle. We are on south elm, proximal to where the school would be ideally located. We are eager to partner with The Experiential School of Greensboro and extend arts education there. We host various artist residencies during the year and often have teaching artists that would love to partner with k-12 educators and students.

Board member Leila Villaverde approached me some time ago about potential collaborations and we immediately jumped on the possibility, in fact I joined the board and donated to the fundraiser for the application fee to the charter. I feel that strongly about how a school designed like this one could offer so much to the city and surrounding communities. The Experiential School of Greensboro's educational program is unlike anything in Greensboro and therefore will provide an exceptional opportunity for Greensboro families. I'm looking forward to planning and establishing the school with the board.

Sincerely,



George Scheer  
Executive Director and Co-Founder  
Elsewhere Living Museum

Appendix P

Appendix P:

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: Kimberly Herrick, Attorney at Law

○ Date of Review: 9.9.16

○ Signature of Board Members Present (Add Signature Lines as Needed):

- [Signature]
- Heather Moore
- Lulattifavende
- [Signature]
- [Signature]
- [Signature]
- [Signature]
- [Signature]
- [Signature]
- [Signature]
- [Signature]

❖ 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: LBA Haynes Strand, PLLC Courtney LaLone, CPA

○ Date of Review: 9.9.16

○ Signature of Board Members Present (Add Signature Lines as Needed):

- [Signature]
- Heather Moore
- Lulattifavende
- [Signature]
- [Signature]
- [Signature]
- [Signature]
- [Signature]
- [Signature]
- [Signature]
- [Signature]



❖ 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 TESof G will assume it's own management

○ Date of Review: 9.9.16

○ Signature of Board Members Present (Add Signature Lines as Needed):

▪ Melvin Colquhoun  
▪ Heather Moore  
▪ Jula Klifarew  
▪ James [unclear]  
▪ [unclear]  
▪ [unclear]  
▪ [unclear]  
▪ [unclear]  
▪ [unclear]

❖ 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: Marianne LeVigne

○ Name of the Selected Financial Service Provider: LBA Haynes Strand, PLLC

○ Date of Review: 9.9.16

○ Signature of Board Members Present (Add Signature Lines as Needed):

▪ Melvin Colquhoun  
▪ Heather Moore  
▪ Jula Klifarew  
▪ James [unclear]  
▪ [unclear]  
▪ [unclear]  
▪ [unclear]  
▪ [unclear]

❖ 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 TESofG will use it through the state/in house management

○ Name of the Selected PowerSchool Service Provider: \_\_\_\_\_

○ Date of Review: 9.9.16

○ Signature of Board Members Present (Add Signature Lines as Needed):

▪ Melvin Colquhoun  
▪ Heather Moore  
▪ Jula Klifarew  
▪ James [unclear]  
▪ [unclear]  
▪ [unclear]

■ \_\_\_\_\_  
■ \_\_\_\_\_  
■ *Melissa Bocci*  
■ \_\_\_\_\_

**Certification**

I, Melissa Bocci, 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 The Experiential School of Greensboro Charter School is true and correct in every respect.

*Melissa Bocci*  
Signature

9-9-2016  
Date