

Released Form

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Grade 8 Science

**North Carolina
End-of-Grade
Assessment**



Public Schools of North Carolina

Department of Public Instruction | State Board of Education

Division of Accountability Services/North Carolina Testing Program

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Thomas Tomberlin, Senior Director, Office of Educator Preparation and Teacher Licensure, NCDPI
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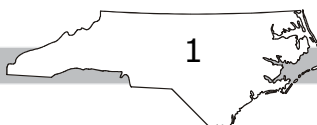


- 1 Paula discovered three sedimentary rock layers that contain fossils of a lizard species. The list below shows how Paula described the lizards' appearance in each layer.

- Top layer: The lizards had thick tails that were about 1 inch in length.
- Middle layer: The lizards had round tails that were about 2 inches in length.
- Bottom layer: The lizards had flexible tails that were about 3 inches in length.

Which conclusion do Paula's findings **best** support?

- A Lizards with short tails hunted the other types into extinction.
- B Lizards with long tails lived in the area for a longer period of time.
- C Lizards in the area gradually developed longer tails.
- D Lizards in the area gradually developed shorter tails.
- 2 How do plants contribute to the water cycle?
- A Plants absorb water vapor and then release water into the soil by the process of evaporation.
- B Plants absorb water vapor and then release water into the soil by the process of transpiration.
- C Plants absorb groundwater and then release water into the atmosphere by the process of evaporation.
- D Plants absorb groundwater and then release water into the atmosphere by the process of transpiration.



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- 3 What happens to water at the ocean's surface as it moves from the equator toward the Arctic Ocean?
- A The water cools, causing its density to decrease.
 - B The water cools, causing its density to increase.
 - C The water cools, causing its humidity to decrease.
 - D The water cools, causing its humidity to increase.
- 4 The list below describes the characteristics of the forelimbs of an American toad and a bottlenose dolphin.
- Each of the toad's forelimbs has four fingers. The toad uses its forelimbs to grasp objects and walk.
 - The dolphin's forelimbs are flippers with no fingers. The dolphin uses its flippers to change direction as it moves through water.
 - Both the toad's and dolphin's forelimbs contain bones that have many structural similarities.

Which conclusion does this information **best** support?

- A Random chance led to the development of two animals with different body structures.
- B These animals evolved separately from their own unique ancestors and do not share a common ancestor.
- C These animals share a common ancestor, and natural selection produced two animals that use their forelimbs for different purposes.
- D The toad's ancestors chose to be well-adapted to grasping, while the dolphin's ancestors chose to be well-adapted to moving through water.



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- 5 How can people be good stewards of water resources?
- A by preventing the addition of chemicals at water facilities
 - B by increasing the number of wells near farmland
 - C by limiting nonessential usage of water
 - D by building a dam near wetland areas
- 6 How is geothermal energy classified?
- A as a nonrenewable resource, because geothermal power plants produce greenhouse gases
 - B as a nonrenewable resource, because geothermal energy can be depleted
 - C as a renewable resource, because geothermal power plants do not produce greenhouse gases
 - D as a renewable resource, because geothermal energy cannot be depleted

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- 7 Permafrost is created when the water in the ground freezes and remains frozen year-round. Alaska has permafrost that has remained frozen for at least 12,000 years. Scientists have discovered that this permafrost contains powerful greenhouse gases, and the permafrost releases these gases to the atmosphere as it melts. What relationship might exist between global climate change and this permafrost?
- A Increasing air temperatures will cause more permafrost to melt, and then more greenhouse gases will be released into the atmosphere.
 - B Increasing air temperatures will cause less permafrost to melt, and then fewer greenhouse gases will be released into the atmosphere.
 - C The permafrost will cause global air temperatures to decrease, and then more greenhouse gases will get trapped in the permafrost.
 - D The permafrost will cause global air temperatures to increase, and then fewer greenhouse gases will get trapped in the permafrost.

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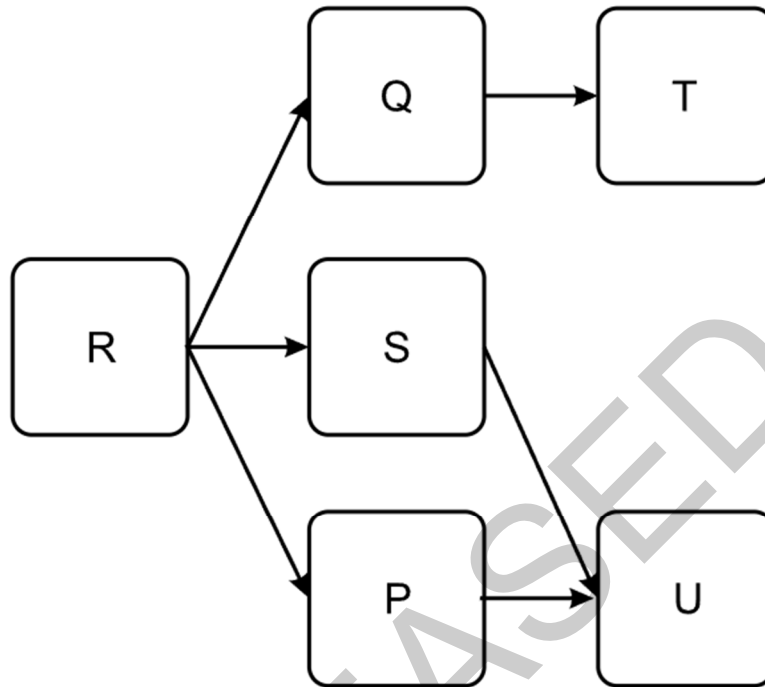


- 8 A community uses a hydroelectric dam to generate electricity. The dam's reservoir also flows into a water treatment plant to make the water suitable for human consumption. Suppose a drought were to occur in this community. What benefit would there be in conserving the water people use in their homes?
- A Conserving water would increase the sustainability of the reservoir, decreasing the amount of time the hydroelectric dam could be used as a source of electricity.
 - B Conserving water would increase the sustainability of the reservoir, increasing the amount of time the hydroelectric dam could be used as a source of electricity.
 - C Conserving water would decrease the sustainability of the reservoir, decreasing the amount of time the hydroelectric dam could be used as a source of electricity.
 - D Conserving water would decrease the sustainability of the reservoir, increasing the amount of time the hydroelectric dam could be used as a source of electricity.
- 9 How are viruses similar to parasites?
- A Viruses and parasites cause diseases that cannot be prevented or treated.
 - B Viruses and parasites cause diseases that can be treated with fungicides.
 - C Viruses and parasites are multicellular organisms.
 - D Viruses and parasites require a host organism.

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- 10 The food web below represents the interactions of organisms P through U.



Select (click) the **two** food sources for organism U.

- ☐ organism P
- ☐ organism Q
- ☐ organism R
- ☐ organism S
- ☐ organism T



- 11 Which choice describes a biotic factor in an ecosystem?
- A The temperature in the ecosystem stays above 70°F almost year-round.
 - B There is an average of 80 inches of rainfall per year in the ecosystem.
 - C The prevailing winds in the ecosystem are from the southwest.
 - D Plants provide shelter for insects living in the ecosystem.

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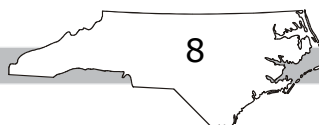
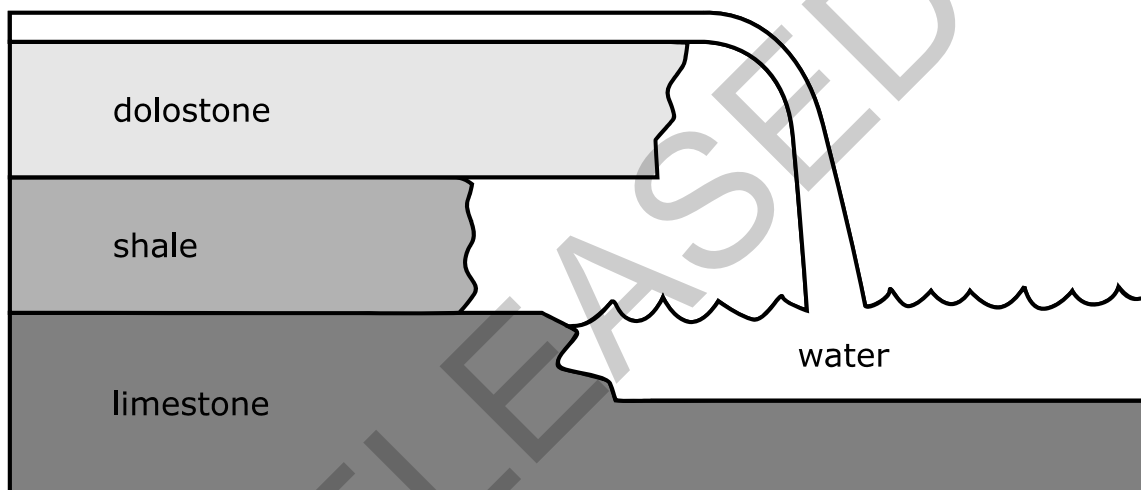
Questions 12–16 are part of an item set. Use the following information to answer the questions.

Timber Falls

One summer, Jody visits Timber Falls, a waterfall along the Timber River. Jody notices a cave behind the waterfall. She wonders what forces caused this cave to form.

Jody finds an illustration (Figure 1) showing the sedimentary rock layers in this region.

Figure 1: Timber Falls Rock Layers



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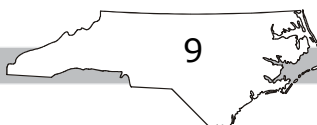


Jody learns about the composition of each rock type. She ranks the hardness of each rock type on a scale of 1 to 3, where 1 is the softest rock, and 3 is the hardest. The chemical composition and relative hardness of each rock type are shown below in Figure 2.

Figure 2: Rock Properties

Rock Type	Chemical Composition	Relative Hardness
dolostone	calcium, magnesium, carbon, oxygen	3
shale	calcium, silicon, oxygen, sodium	1
limestone	calcium, carbon, oxygen	2

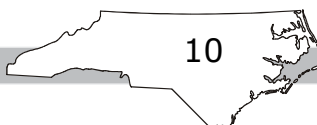
At the Timber Falls visitor center, Jody learns trilobite fossils can be found in the shale rock layer. Trilobites are extinct invertebrate organisms that lived in the ocean. On display is a fossil of the trilobite species *Dalmanites limulus*. Members of the genus *Dalmanites* existed on Earth between 450 and 415 million years ago.



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- 12 Jody learns that water moving over the falls formed the cave. Which choice **best** explains how the cave formed?
- A The moving water deposited minerals in the shale, creating a cave.
 - B The moving water deposited minerals in the limestone, creating a cave.
 - C The moving water weathered the shale layer faster than the other layers, creating a cave.
 - D The moving water weathered the dolostone layer faster than the other layers, creating a cave.
- 13 Jody notices a fossil of a dinosaur, *Stegosaurus*, discovered in the dolostone layer of Timber Falls. What can Jody conclude about when *Dalmanites* and *Stegosaurus* lived?
- A *Stegosaurus* lived on Earth more recently than *Dalmanites*.
 - B *Dalmanites* lived on Earth more recently than *Stegosaurus*.
 - C *Stegosaurus* and *Dalmanites* lived on Earth at the same time.
 - D There is not enough information to know when these organisms lived.
- 14 Jody finds a rock at the bottom of the falls. She suspects that this rock originated from the rock layers at Timber Falls. What evidence could show what type of rock she has found?
- A the rock's volume
 - B the rock's relative hardness
 - C how far the rock is from Timber Falls
 - D the amount of water stored in the rock



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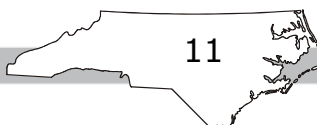
15 Jody claims that moving water at Timber Falls caused the shale layer to weather. What evidence could be used to support her claim?

- A Rock fragments containing magnesium were discovered upstream of Timber Falls.
- B Rock fragments containing oxygen were discovered upstream of Timber Falls.
- C Rock fragments containing calcium were discovered downstream of Timber Falls.
- D Rock fragments containing silicon were discovered downstream of Timber Falls.

16

Select (click) **two** factors that explain why the limestone in this region weathers faster than the dolostone.

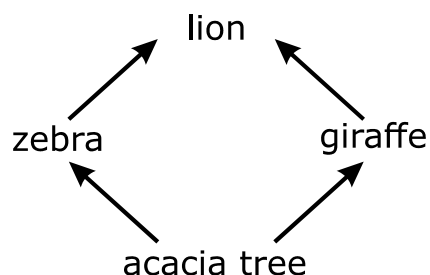
- ☐ Limestone is softer than dolostone.
- ☐ These rock layers are separated by the shale layer.
- ☐ Moving water strikes the limestone's surface with more force than the water in contact with the dolostone.
- ☐ The limestone layer contains fewer fossils than the dolostone layer.
- ☐ Water is more chemically reactive with dolostone than it is with limestone.



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17 The diagram below shows a food web.



Place (click and drag) one option from each list into the table to identify the roles of the zebra, giraffe, and lion. Fill in all of the cells.

	1	2	3
zebra:		giraffe:	
		lion:	

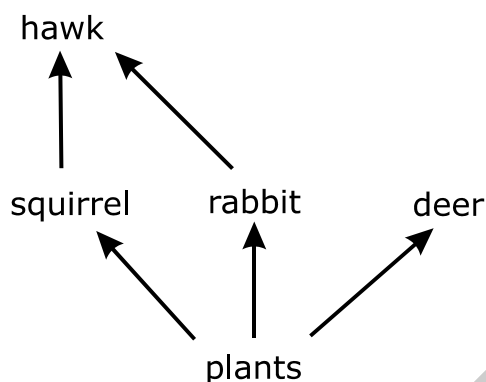
1	2	3
primary consumer	primary consumer	primary consumer
producer	producer	producer
secondary consumer	secondary consumer	secondary consumer

18 Which situation is **most likely** to prevent a viral epidemic from becoming a pandemic?

- A warm weather conditions
- B cold weather conditions
- C consistent public use of antibiotics
- D consistent public use of vaccines

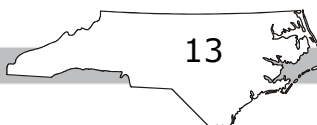


- 19 The diagram below shows a food web for a forest ecosystem.



A scientist introduces a population of wolves into this ecosystem. The wolves have been observed to only prey on deer. What effect would the introduction of wolves have on this ecosystem?

- A There would be fewer resources available for the squirrel and rabbit populations.
- B There would be more resources available for the squirrel and rabbit populations.
- C The hawk population would likely decrease because the hawks and wolves have a mutualistic relationship.
- D The hawk population would likely decrease because the hawks and wolves have a competitive relationship.



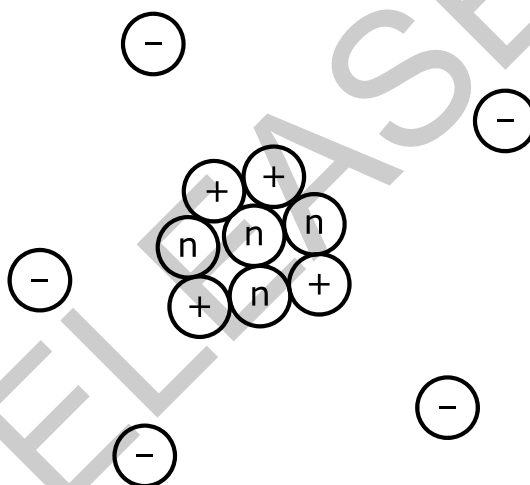
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- 20 Which information can **best** help scientists determine if two different organisms are members of the same species?
- A the diets of the organisms
 - B the habitats of the organisms
 - C the behaviors of the organisms
 - D the physical structures of the organisms
- 21 The marine iguana is a swimming lizard that only exists on the Galapagos Islands. A species of land iguana also exists on the Galapagos Islands and other places on Earth. Scientists think that the marine iguana and the land iguana share a common ancestor. Today, most of the marine iguana's diet is algae collected from the ocean floor. The land iguana mostly eats plants on dry land. The ancestors of the marine iguana likely spent more and more time eating algae in the ocean until the population inherited traits that made them better swimmers than land iguanas.
- Which choice **best** summarizes this information?
- A The marine iguana is a product of human intervention.
 - B The marine iguana species is a result of natural selection.
 - C One marine iguana ancestor changed its DNA to acquire new traits.
 - D One marine iguana ancestor chose to be different from land iguanas.



- 22 A student pours a cloudy liquid through a thin piece of paper and into a beaker. The student observes the collected liquid is not cloudy. How should the student classify the original cloudy liquid?
- A as a mixture, because the cloudy liquid was separated by evaporation
 - B as a mixture, because the cloudy liquid was separated by filtration
 - C as a compound, because the cloudy liquid was separated by evaporation
 - D as a compound, because the cloudy liquid was separated by filtration
- 23 Wendy draws this model to represent a neutral beryllium (Be) atom.



Wendy's teacher says there is an error in her model. What is the error?

- A The model has too many protons.
- B The model has too many electrons.
- C The model shows protons in the wrong location.
- D The model shows electrons in the wrong location.



24 How are the properties of helium (He) and krypton (Kr) similar?

- A Both are nonreactive gases at room temperature.
- B Both are nonreactive liquids at room temperature.
- C Both are reactive gases at room temperature.
- D Both are reactive liquids at room temperature.

25 A scientist experiments on a piece of solid copper.

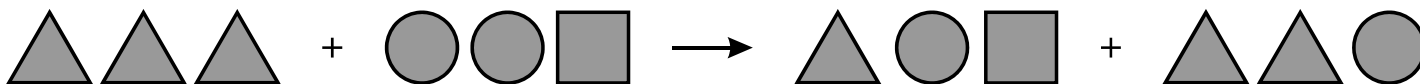
- The scientist heats the copper piece and observes the copper's density decreases as its temperature increases.
- The scientist continues to heat the copper until it melts.

How are the decrease in density and the melting similar?

- A They are both physical changes, because the composition of the copper piece remains the same.
- B They are both chemical changes, because the composition of the copper piece remains the same.
- C They are both physical changes, because the new substance has different chemical properties than copper.
- D They are both chemical changes, because the new substance has different chemical properties than copper.



- 26 Terry is learning about chemical reactions in science class. Terry's teacher draws this equation on the chalkboard, and explains that the equation uses a triangle, a circle, and a square as symbols to represent elements. Each symbol represents a different element.



Terry claims the equation demonstrates the law of conservation of mass. What evidence supports Terry's claim?

- A The same symbols appear in the reactants and products.
- B The equation shows this reaction produced new substances.
- C There are equal numbers of each symbol in the reactants and products.
- D The arrangement of the symbols in the reactants is the same as their arrangement in the products.



27

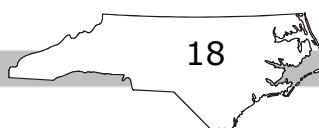
Jonathan lives in a town near an estuary. The estuary is a part of the Windy River basin. The table below shows average and 2018 monthly rainfall amounts from June to September for Jonathan's town.

Month	Precipitation in 2018 (inches)	Average Precipitation (inches)
June	4.8	4.3
July	5.3	4.7
August	5.0	4.3
September	5.1	4.1

Select (click) **two** claims supported by this scenario.

- ☐ Water flows from streams and tributaries in the Windy River basin into the estuary.
- ☐ Water flows from the estuary into the Windy River basin streams and tributaries.
- ☐ Precipitation in 2018 was higher than average, so the estuary will be less salty than in years with normal precipitation.
- ☐ Precipitation in 2018 was lower than average, so the estuary will be more salty than in years with normal precipitation.
- ☐ Precipitation in 2018 was about the same as in previous years, so the salinity of the estuary would be the same as in any other year.

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28

Each column of this table displays the properties of an element. Place (click and drag) each element into its correct position in the top row of the table. Fill in all of the cells.

Element Name			
State of Matter at Room Temperature	solid	gas	gas
Reactivity	very reactive	not reactive	very reactive

fluorine (F)	argon (Ar)	lithium (Li)
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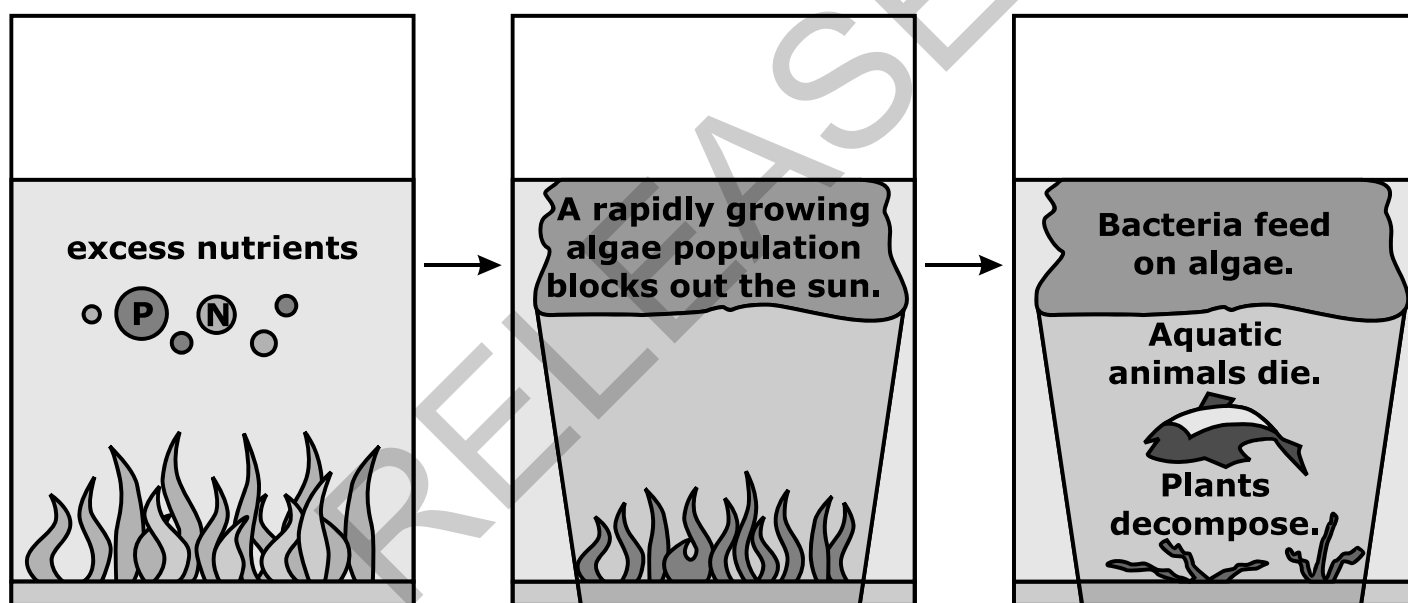
Questions 29–33 are part of an item set. Use the following information to answer the questions.

Calm Lake Investigation

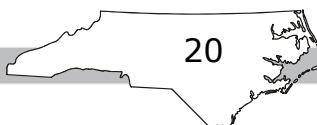
Xavier lives near Calm Lake. One summer, he notices the lake appears darker than it has in the past. Xavier finds a news article claiming that nutrient pollution has caused the change in the water's color.

Xavier wants to learn more about nutrient pollution. He finds a diagram on the U.S. Geological Survey's website that shows how phosphorus (P) and nitrogen (N) contribute to nutrient pollution. Figure 1 shows the diagram.

Figure 1: Nutrient Pollution



Source: U.S. Geological Survey



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Xavier wonders how nutrient pollution may have changed the water quality. He contacts a scientist who has been studying algae in Calm Lake. The scientist explains that the algae are photosynthetic. The list below describes how the scientist measures the algae content in the lake.

- He collects a 1-liter water sample from the lake.
- He filters the algae from the water.
- He removes the chlorophyll contained in each alga cell using a chemical.

To help Xavier in his investigation, the scientist provides him with two sets of measurements taken from Calm Lake over the past 30 days: the chlorophyll content and dissolved oxygen content. Figure 2 and Figure 3 show the two sets of measurements.

Figure 2: Chlorophyll Content

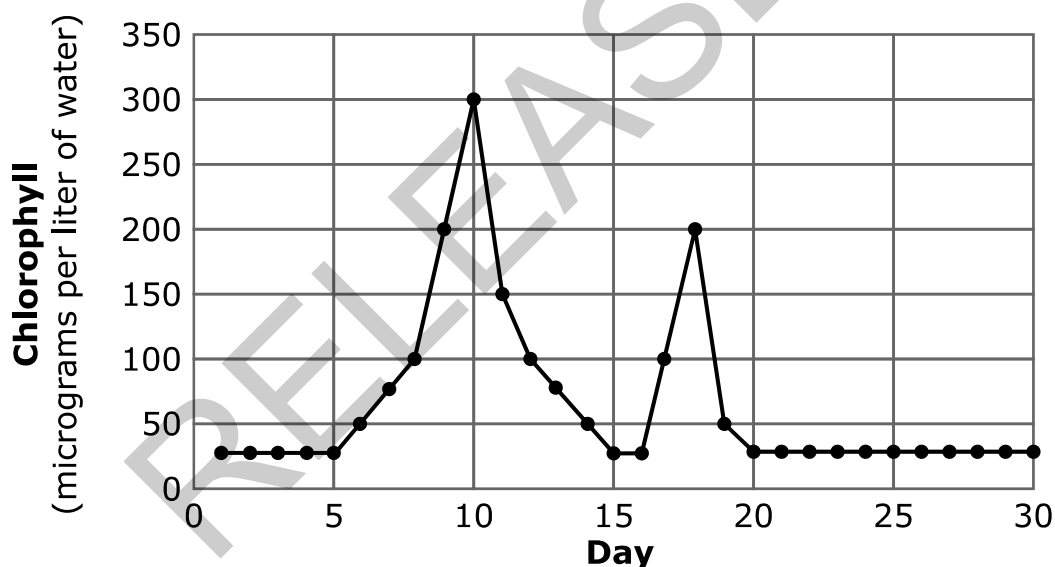
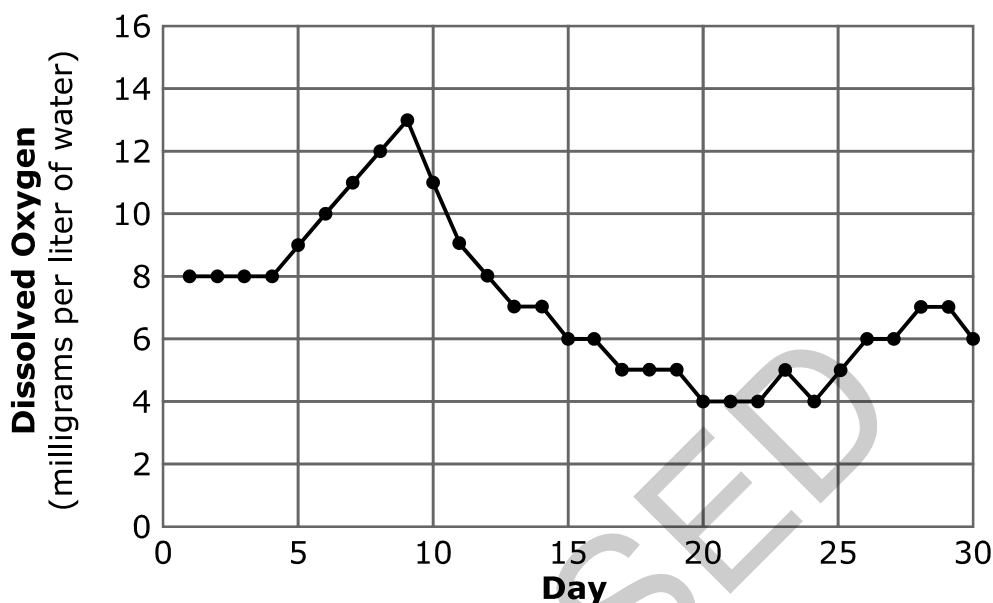




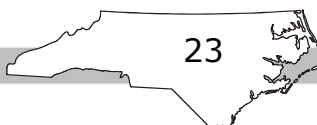
Figure 3: Dissolved Oxygen Content



- 29 Xavier learns that aquatic bacteria decrease the lake's dissolved oxygen content as they grow and reproduce. How could Xavier revise Figure 1 to better represent an effect of an increase in aquatic bacteria?
- A by drawing an arrow pointing from "Bacteria feed on algae." to "excess nutrients"
 - B by drawing an arrow pointing from "excess nutrients" to "Bacteria feed on algae."
 - C by drawing an arrow pointing from "Bacteria feed on algae." to "Aquatic animals die."
 - D by drawing an arrow pointing from "Aquatic animals die." to "Bacteria feed on algae."



- 30 Under normal conditions, how do the algae in Calm Lake contribute to the cycling of matter?
- A Algae remove O_2 from the water, then use O_2 and sunlight to produce food.
 - B Algae remove CO_2 from the water, then use CO_2 and sunlight to produce food.
 - C Algae acquire food by consuming other microscopic organisms and contribute O_2 to the water as they digest food.
 - D Algae acquire food by consuming other microscopic organisms and contribute CO_2 to the water as they digest food.
- 31 Which choice **best** describes the amount of nutrient pollution in Calm Lake from Day 25 to Day 30?
- A The algae population remained constant during this period, which shows that nutrient pollution was low.
 - B The algae population remained constant during this period, which shows that nutrient pollution was high.
 - C The dissolved oxygen remained constant during this period, which shows that nutrient pollution was low.
 - D The dissolved oxygen remained constant during this period, which shows that nutrient pollution was high.



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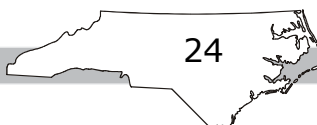
32 Use Figure 2 and Figure 3 to answer this question:

What does the change from Day 9 to Day 10 indicate?

- A The algae population decreased to the point where it was unable to photosynthesize, which caused the dissolved oxygen to decrease.
- B The algae population decreased to the point where it was unable to photosynthesize, which caused the dissolved oxygen to increase.
- C The algae population increased to the point where it began blocking sunlight from other plants, causing a decrease in dissolved oxygen.
- D The algae population increased to the point where it began blocking sunlight from other plants, causing an increase in dissolved oxygen.

33 A fish population lives in Calm Lake. The lake water is considered unsafe for these fish if the dissolved oxygen content drops below 6 milligrams per liter of water. What does Figure 3 show about the safety of Calm Lake for these fish?

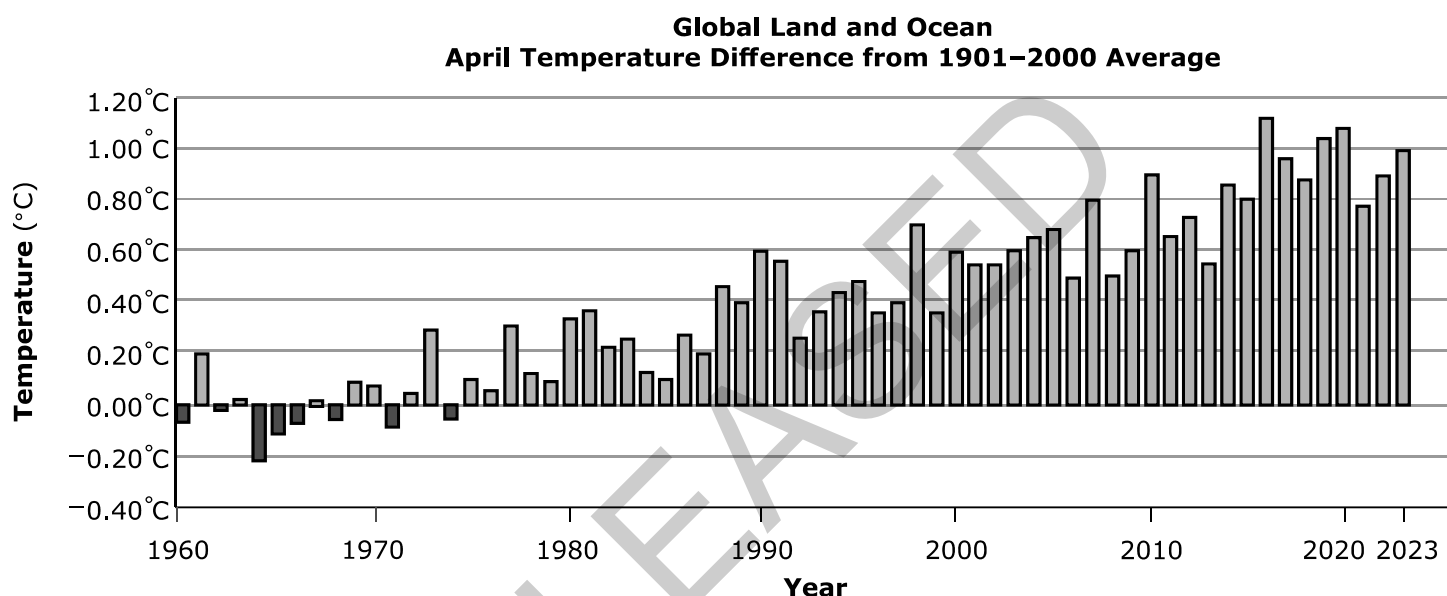
- A Calm Lake was safe for the fish from Day 1 through Day 30.
- B Calm Lake became unsafe for the fish on Day 9 and remained unsafe for several days.
- C Calm Lake became unsafe for the fish on Day 17 and remained unsafe for several days.
- D Calm Lake became unsafe for the fish on Day 22, but these unsafe conditions only lasted one day.



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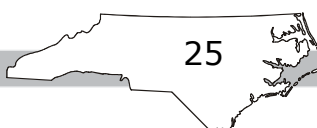
- 34 Scientists used atmospheric temperature data from 1901 to 2000 and determined that the average global temperature, over both land and ocean, in the month of April was 13.7°C . To measure changes in climate, scientists compare a year's average April temperature to 13.7°C . The graph below is a collection of these measurements from 1960 to 2023. In the graph, a positive temperature measurement indicates that April of that year was warmer than 13.7°C . A negative measurement indicates it was colder than 13.7°C .



Source: National Oceanic and Atmospheric Administration

Which choice is the **best** interpretation of the graph?

- A The graph shows a trend: Earth's atmosphere has experienced a period of overall cooling since 1960.
- B The graph shows a trend: Earth's atmosphere has experienced a period of overall warming since 1960.
- C The graph does not show a trend. Sometimes temperatures increased, but other times the temperature decreased.
- D The graph does not show a trend. A 1°C change in temperature would not have any meaningful effect on Earth systems.



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- 35 A person has recently started riding a bike to work instead of driving a gasoline-powered car. How will this action affect the availability of fossil fuels?
- A This person is conserving a renewable resource, which will increase Earth's reserves of fossil fuels.
 - B This person is conserving a nonrenewable resource, which will increase Earth's reserves of fossil fuels.
 - C This person is conserving a renewable resource, which will increase the rate at which this resource is depleted.
 - D This person is conserving a nonrenewable resource, which will decrease the rate at which this resource is depleted.
- 36 An infection causes serious illness in one of four people who contract it. Scientists do not recognize the pathogen and have no way to treat it. Smaller than a cell, the pathogen is spread through air. It forces a cell to create many copies of the original pathogen and destroys the cell in the process. What is the cause of this disease, and what could scientists do to protect public health?
- A The cause is a virus, and scientists could work on creating a vaccine to prevent the spread of the disease.
 - B The cause is a parasite, and scientists could work on a toxin to kill it.
 - C The cause is a virus, and scientists could work on creating an antibiotic to kill it.
 - D The cause is a fungus, and scientists could work on an antifungal treatment.



- 37 Residents in a neighborhood complain that there are too many snakes in the neighborhood. A pest-control company says it can eliminate the snakes from the neighborhood. The food chain below shows how snakes participate in this ecosystem.

plants → beetle → snake → hawk

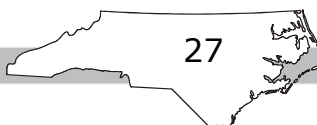
How would eliminating snakes affect this ecosystem?

- A The beetle and hawk populations would decrease.
 - B The beetle and hawk populations would increase.
 - C The beetle population would increase, and the hawk population would decrease.
 - D The beetle population would decrease, and the hawk population would increase.
- 38 The diagram below represents a region's food chain.

plants → squirrel → coyote

Which change would increase the amount of carbon available to coyotes?

- A an increase in the coyote population
- B an increase in the squirrel population
- C introducing a species that competes with coyotes
- D introducing a species that competes with squirrels



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The list below describes two different diseases.

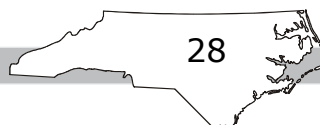
- Disease 1 causes facial swelling and nasal congestion. It is transmitted when an animal breathes in spores released from decaying organic matter in the environment. The pathogen that causes this disease is eukaryotic, multicellular, and can reproduce sexually and asexually.
- Disease 2 causes itchy bumps on an animal's skin. It is transmitted to animals through physical contact. The pathogen that causes this disease is a nonliving particle and requires a host cell to reproduce.

Select (click and drag) the choices to classify the pathogen that causes each disease. Fill in all of the cells.

	1	2
Disease 1 pathogen:		Disease 2 pathogen:

1	2
virus	virus
bacterium	bacterium
fungus	fungus
parasite	parasite

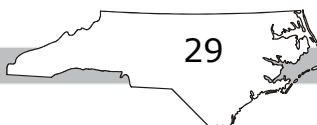
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- 40 Methane is a pure substance and exists as a gas at room temperature. Each methane molecule is made up of one carbon atom chemically bonded to four hydrogen atoms. How is methane classified?
- A as an element
 - B as a compound
 - C as a homogeneous mixture
 - D as a heterogeneous mixture
- 41 An unidentified pure solid is composed of an element. The substance is metallic and reacts vigorously when placed in water. Where is this element **most likely** found on the periodic table?
- A at the top of the periodic table
 - B at the bottom of the periodic table
 - C on the left side of the periodic table
 - D on the right side of the periodic table



Go to the next page.



42 The list below describes the process of inflating a hot-air balloon.

- A flame heats the air near the bottom opening of the deflated balloon. The air expands and rises as a result of the heating.
- The hot air expands inside the deflated balloon. Then, the hot air applies pressure on the balloon's fabric walls, causing the balloon to change shape.

How does the air expanding compare to the balloon changing shape?

- A Both the air expanding and the balloon changing shape are physical changes.
- B Both the air expanding and the balloon changing shape are chemical changes.
- C The air expanding is a physical change, and the balloon changing shape is a chemical change.
- D The air expanding is a chemical change, and the balloon changing shape is a physical change.

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- 43 Suppose a large coal reserve is discovered on a mountaintop. The coal is extracted using a strip mine, where

- the topsoil is removed by large trucks and
- rocks are cleared by blasting with dynamite.

A town exists at the foot of the mountain.

How will this strip mine affect the environment?

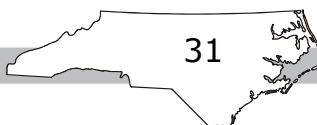
- A Water that runs down the mountain will carry sediment and heavy metals from the strip mine, contaminating local freshwater supplies.
- B Water that runs down the mountain will carry coal particles, fertilizing the soil.
- C The strip mine will increase the amount of precipitation in the area, increasing the risk of flooding.
- D The strip mine will decrease the amount of precipitation in the area, decreasing the risk of flooding.

- 44 Olivia finds two dinosaur fossils in a museum:

- *Apatosaurus* fossil: 150 million years old
- *Diplodocus* fossil: 154 million years old

What evidence would show these organisms share a common ancestor?

- A a 140-million-year-old *Diplodocus* fossil
- B a 160-million-year-old *Diplodocus* fossil
- C a 140-million-year-old fossil of an organism with anatomical features similar to both
- D a 160-million-year-old fossil of an organism with anatomical features similar to both



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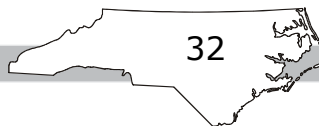


Directions:

This is the end of the Science test.

- 1. Look back over your answers for the test questions.**
- 2. Put all of your papers inside your test book and close your test book.**
- 3. Stay quietly in your seat until your teacher tells you that testing is finished.**

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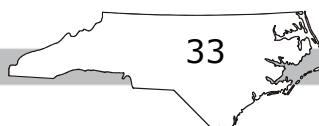


GRADE 8 SCIENCE—RELEASED FORM

Grade 8 Science Released Form 2024 Answer Key

Table 1

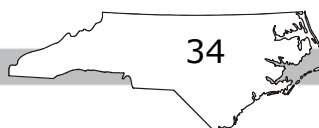
Question Number	Question Type ¹	Key	Objective
1	MC	D	ESS.8.1.2
2	MC	D	ESS.8.2.1
3	MC	B	ESS.8.2.2
4	MC	C	LS.8.3.1
5	MC	C	ESS.8.3.2
6	MC	D	ESS.8.4.1
7	MC	A	ESS.8.4.3
8	MC	B	ESS.8.4.4
9	MC	D	LS.8.1.1
10	MS	See Table 2	LS.8.2.3
11	MC	D	LS.8.2.1
12	MC	C	ESS.8.1.1
13	MC	A	ESS.8.1.1
14	MC	B	ESS.8.1.2
15	MC	D	ESS.8.1.2
16	MS	See Table 2	ESS.8.1.2
17	TD	See Table 2	LS.8.2.2



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GRADE 8 SCIENCE—RELEASED FORM

Question Number	Question Type ¹	Key	Objective
18	MC	D	LS.8.1.2
19	MC	B	LS.8.2.4
20	MC	D	LS.8.3.1
21	MC	B	LS.8.3.2
22	MC	B	PS.8.1.1
23	MC	B	PS.8.1.2
24	MC	A	PS.8.1.3
25	MC	A	PS.8.1.4
26	MC	C	PS.8.1.5
27	MS	See Table 2	ESS.8.2.1
28	DD	See Table 2	PS.8.1.3
29	MC	C	ESS.8.3.1
30	MC	B	LS.8.2.3
31	MC	A	ESS.8.3.1
32	MC	C	ESS.8.3.1
33	MC	C	ESS.8.3.1
34	MC	B	ESS.8.4.3
35	MC	D	ESS.8.4.4
36	MC	A	LS.8.1.1
37	MC	C	LS.8.2.1
38	MC	B	LS.8.2.4
39	TD	See Table 2	LS.8.1.1



Go to the next page.

GRADE 8 SCIENCE—RELEASED FORM

Question Number	Question Type ¹	Key	Objective
40	MC	B	PS.8.1.1
41	MC	C	PS.8.1.3
42	MC	A	PS.8.1.4
43	MC	A	ESS.8.4.2
44	MC	D	LS.8.3.1

¹Question Type:

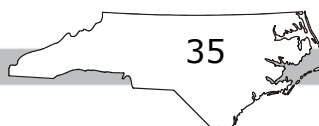
MC = multiple choice

MS = multiselect

DD = drag and drop

TD = targeted drop

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GRADE 8 SCIENCE—RELEASED FORM

Table 2

Question	Technology Enhanced Item Solution
10	Organism P, Organism S
16	Limestone is softer than dolostone. Moving water strikes the limestone's surface with more force than the water in contact with the dolostone.
17	primary consumer; primary consumer; secondary consumer
27	Water flows from streams and tributaries in the Windy River basin into the estuary. Precipitation in 2018 was higher than average, so the estuary will be less salty than in years with normal precipitation.
28	lithium (Li); argon (Ar); fluorine (F)
39	fungus; virus

