STAAR CONNECTION™

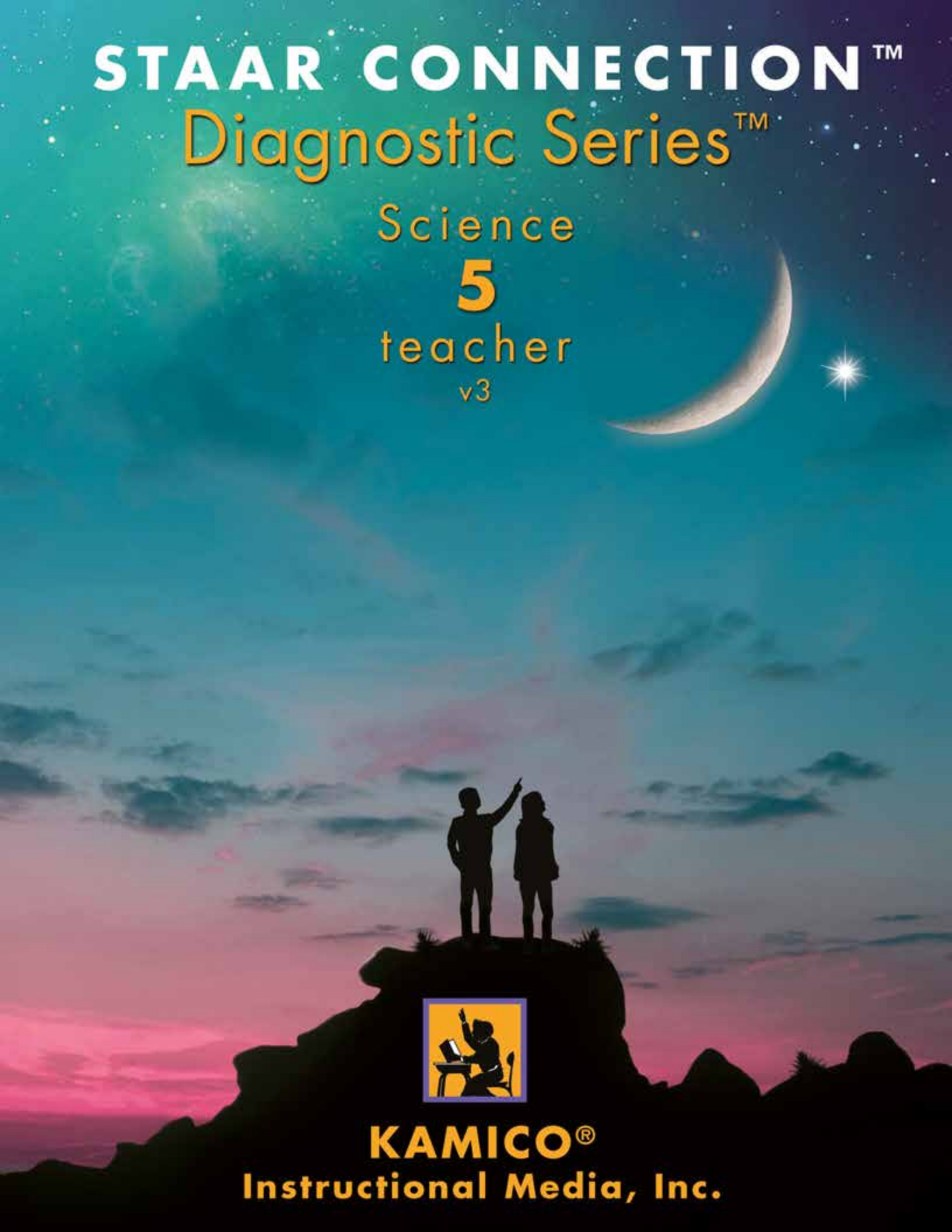
Diagnostic Series™

Science

5

teacher

v3



KAMICO®
Instructional Media, Inc.

STAAR CONNECTION™

Science
5
teacher

Diagnostic Series™

XXIX/x/MMXXVI
Version 3



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KAMICO® Instructional Media, Inc.
CONNECTION® to the TEKS
Introduction

KAMICO® Instructional Media's program is validated by scientifically based research. **STAAR CONNECTION™ Diagnostic Series™** and **CONNECTION® to the TEKS Developmental Series™** can be used in tandem to ensure mastery of Texas reporting categories and TEKS. The *Diagnostic Series™* consists of a bank of assessments. Each assessment covers a mixture of reporting categories and TEKS. This research-based format provides continual reinforcement for and ensures retention of mastered concepts. To take full advantage of this series, administer an assessment to students. After they have completed the assessment, use it as an instructional tool. Go over each item with the class, discussing all correct and incorrect answers. Then, use the assessment as a diagnostic tool to determine a standard for which students need remediation. Find that standard in the *Developmental Series™*.

Each book in the **CONNECTION® to the TEKS Developmental Series™** consists of instructional activities and assessments over isolated TEKS to allow for the remediation and development of specific TEKS. For every TEKS, there is at least one individual or group activity. The activities provide a fun, challenging, yet nonthreatening, way to develop mastery of the TEKS. In addition to these activities, each *Developmental Series™* book contains assessments on isolated TEKS to be used to identify mastery or the need for further skill development or reinforcement. Continue to alternate between the **STAAR CONNECTION™ Diagnostic Series™** and the **CONNECTION® to the TEKS Developmental Series™**.

KAMICO's **Game Gallery®** consists of over 300 board games in English and in Spanish. These games create a game-based learning environment to facilitate additional reinforcement of TEKS.

KAMICO® Instructional Media, Inc., supports efforts to ensure adequate yearly progress and eliminate surprises in high-stakes test results.

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KAMICO® Instructional Media, Inc.
STAAR CONNECTION™
Diagnostic Series™
Grade 5 Science
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State of Texas Assessments of Academic Readiness
Grade 5 Science Assessment
Eligible Texas Essential Knowledge and Skills

Matter and Energy

Grade 5

5.6 The student knows that matter has measurable physical properties that determine how matter is identified, classified, changed, and used. The student is expected to:

(A) compare and contrast matter based on measurable, testable, or observable physical properties, including mass, magnetism, relative density (sinking and floating using water as a reference point), physical state (solid, liquid, gas), volume, solubility in water, and the ability to conduct or insulate thermal energy and electric energy ***Readiness Standard***

(B) demonstrate and explain that some mixtures maintain physical properties of their substances such as iron filings and sand or sand and water ***Supporting Standard***

(C) compare the properties of substances before and after they are combined into a solution and demonstrate that matter is conserved in solutions ***Supporting Standard***

Grade 3

3.6 The student knows that matter has measurable physical properties that determine how matter is identified, classified, changed, and used. The student is expected to:

(C) predict, observe, and record changes in the state of matter caused by heating or cooling in a variety of substances such as ice becoming liquid water, condensation forming on the outside of a glass, or liquid water being heated to the point of becoming water vapor (gas) ***Supporting Standard***

Force, Motion, and Energy

Grade 5

5.7 The student knows the nature of forces and the patterns of their interactions. The student is expected to:

(A) investigate and explain how equal and unequal forces acting on an object cause patterns of motion and transfer of energy ***Supporting Standard***

(B) design a simple experimental investigation that tests the effect of force on an object in a system such as a car on a ramp or balloon rocket on a string ***Supporting Standard***

5.8 The student knows that energy is everywhere and can be observed in cycles, patterns, and systems. The student is expected to:

(B) demonstrate that electrical energy in complete circuits can be transformed into motion, light, sound, or thermal energy and identify the requirements for a functioning electrical circuit ***Readiness Standard***

(C) demonstrate and explain how light travels in a straight line and can be reflected, refracted, or absorbed ***Readiness Standard***

Grade 4

4.8 The student knows that energy is everywhere and can be observed in cycles, patterns, and systems. The student is expected to:

(A) investigate and identify the transfer of energy by objects in motion, waves in water, and sound ***Supporting Standard***

Grade 3

3.7 The student knows the nature of forces and the patterns of their interactions. The student is expected to:

(A) demonstrate and describe forces acting on an object in contact or at a distance, including magnetism, gravity, and pushes and pulls ***Supporting Standard***

(B) plan and conduct a descriptive investigation to demonstrate and explain how position and motion can be changed by pushing and pulling objects such as swings, balls, and wagons ***Supporting Standard***

Earth and Space

Grade 5

5.9 The student recognizes patterns among the Sun, Earth, and Moon system and their effects. The student is expected to:

(A) demonstrate that Earth rotates on its axis once approximately every 24 hours and explain how that causes the day/night cycle and the appearance of the Sun moving across the sky, resulting in changes in shadow positions and shapes ***Readiness Standard***

5.10 The student knows that there are recognizable patterns and processes on Earth. The student is expected to:

(A) explain how the Sun and the ocean interact in the water cycle and affect weather ***Supporting Standard***

(B) model and describe the processes that led to the formation of sedimentary rocks and fossil fuels ***Readiness Standard***

(C) model and identify how changes to Earth's surface by wind, water, or ice result in the formation of landforms, including deltas, canyons, and sand dunes ***Readiness Standard***

Grade 4

4.9 The student recognizes patterns among the Sun, Earth, and Moon system and their effects. The student is expected to:

(A) collect and analyze data to identify sequences and predict patterns of change in seasons such as changes in temperature and length of daylight ***Supporting Standard***

(B) collect and analyze data to identify sequences and predict patterns of change in the observable appearance of the Moon from Earth ***Supporting Standard***

4.10 The student knows that there are processes on Earth that create patterns of change. The student is expected to:

(A) describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process ***Supporting Standard***

(B) model and describe slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice ***Supporting Standard***

(C) differentiate between weather and climate ***Supporting Standard***

4.11 The student understands how natural resources are important and can be managed. The student is expected to:

(A) identify and explain advantages and disadvantages of using Earth's renewable and nonrenewable natural resources such as wind, water, sunlight, plants, animals, coal, oil, and natural gas ***Supporting Standard***

Grade 3

3.9 The student knows there are recognizable objects and patterns in Earth's solar system. The student is expected to:

(B) identify the order of the planets in Earth's solar system in relation to the Sun ***Supporting Standard***

3.10 The student knows that there are recognizable processes that change Earth over time. The student is expected to:

(C) model and describe rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides ***Supporting Standard***

Organisms and Environments

Grade 5

5.12 The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

(A) observe and describe how a variety of organisms survive by interacting with biotic and abiotic factors in a healthy ecosystem ***Readiness Standard***

5.13 The student knows that organisms undergo similar life processes and have structures and behaviors that help them survive within their environments. The student is expected to:

(A) analyze the structures and functions of different species to identify how organisms survive in the same environment ***Readiness Standard***

Grade 4

4.12 The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

(B) describe the cycling of matter and flow of energy through food webs, including the roles of the Sun, producers, consumers, and decomposers ***Supporting Standard***

Grade 3

3.12 The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

(B) identify and describe the flow of energy in a food chain and predict how changes in a food chain such as removal of frogs from a pond or bees from a field affect the ecosystem ***Supporting Standard***

(D) identify fossils as evidence of past living organisms and environments, including common Texas fossils ***Supporting Standard***

Name _____ Date _____

1 Jan is sorting materials based on their solubility in water. Write the name of each material in the correct column.

plastic	salt	sand	sugar	wool	dish soap

Dissolves in Water	**Does Not Dissolve in Water**

2 Amy gets a glass and fills it with one ice cube and warm water. What will most likely happen?

Ⓐ The ice cube will cool the water. The water will begin to freeze into a solid.

Ⓑ The water will warm the ice cube. The ice cube will begin to melt.

Ⓒ The ice cube will cool the water. The water will begin to evaporate as a gas.

Ⓓ The water will warm the ice cube. The ice cube will begin to evaporate as a gas.

3 A tennis player hits a ball with her racket. What happens to the motion energy of the racket?

Ⓐ It is transferred to the ground.

Ⓑ It spreads out in the air.

Ⓒ It is transferred to the ball.

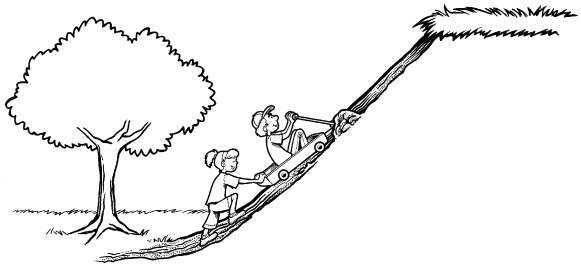
Ⓓ It is absorbed by the player.

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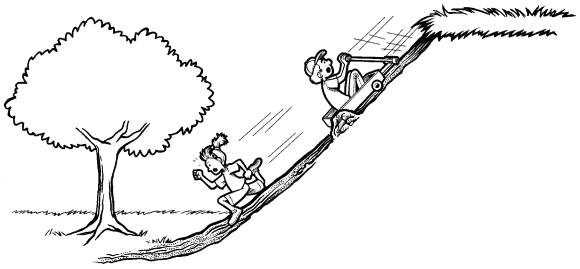
4 This question has two parts. First answer Part A. Then, answer Part B.

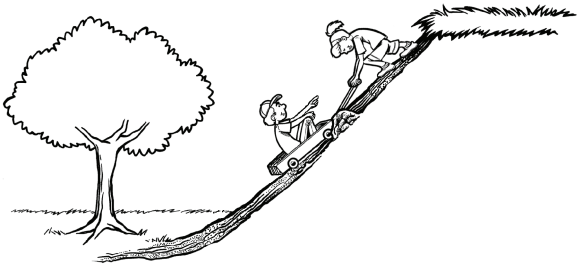
Part A

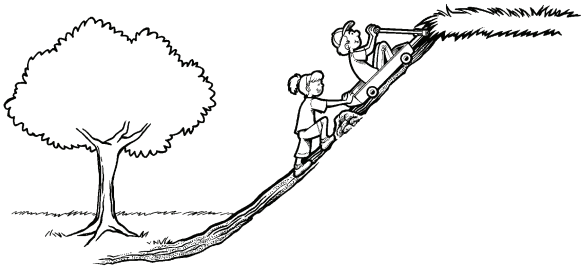
Aida is pushing her brother in a wagon up a hill.



Which drawing shows Aida's push force moving the wagon?

Ⓐ 

Ⓑ 

Ⓒ 

Part B

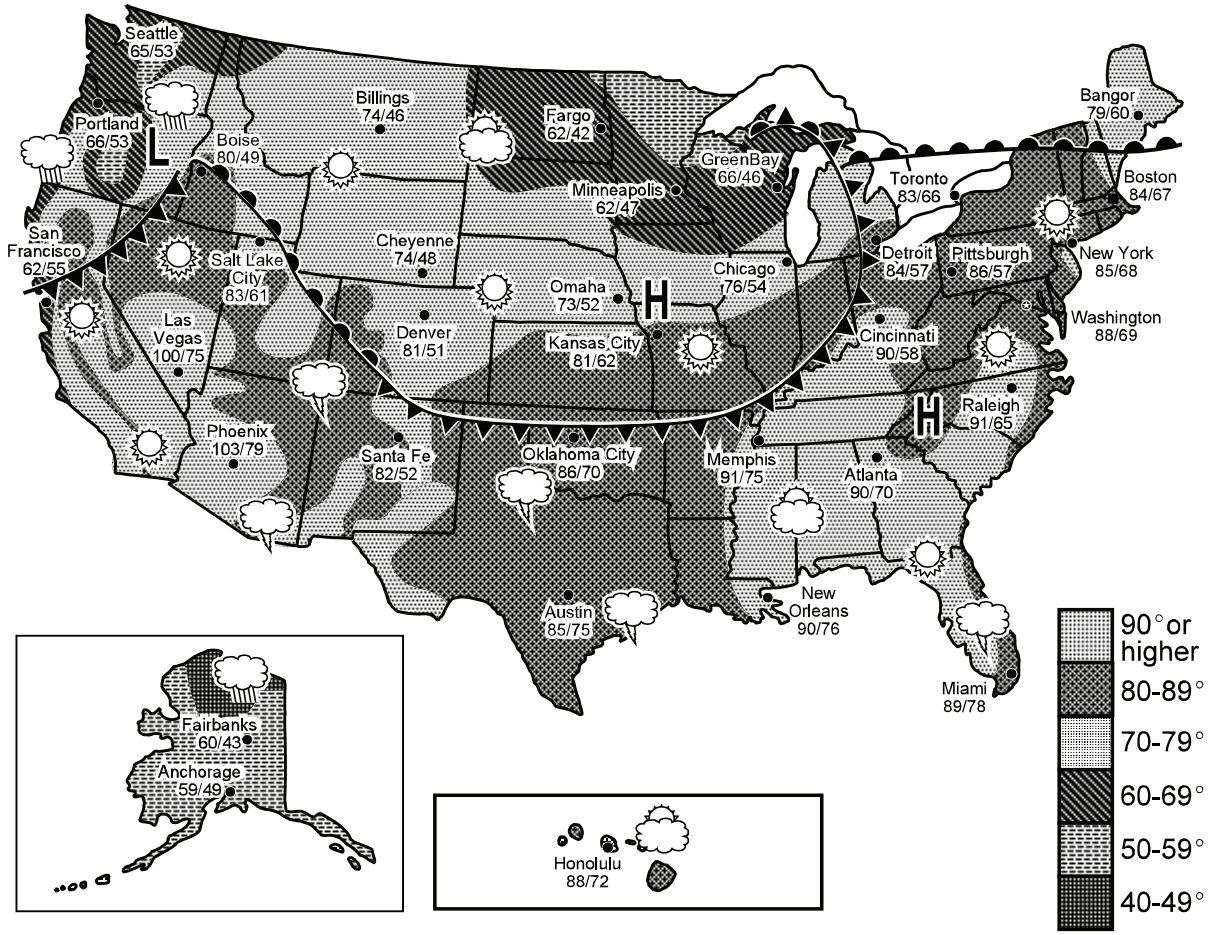
Explain how the position and motion of the wagon changes when Aida pushes it. Record your answer in the space provided.

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5 Coal and oil are fossil fuels that were formed hundreds of millions of years ago. Put a checkmark beside each of the **FOUR** main factors that are needed to turn the remains of dead organisms into fossil fuels.

	unlimited oxygen
	heat
	bacteria
	absence of oxygen
	water
	pressure
	time

6 Study the map of the United States.



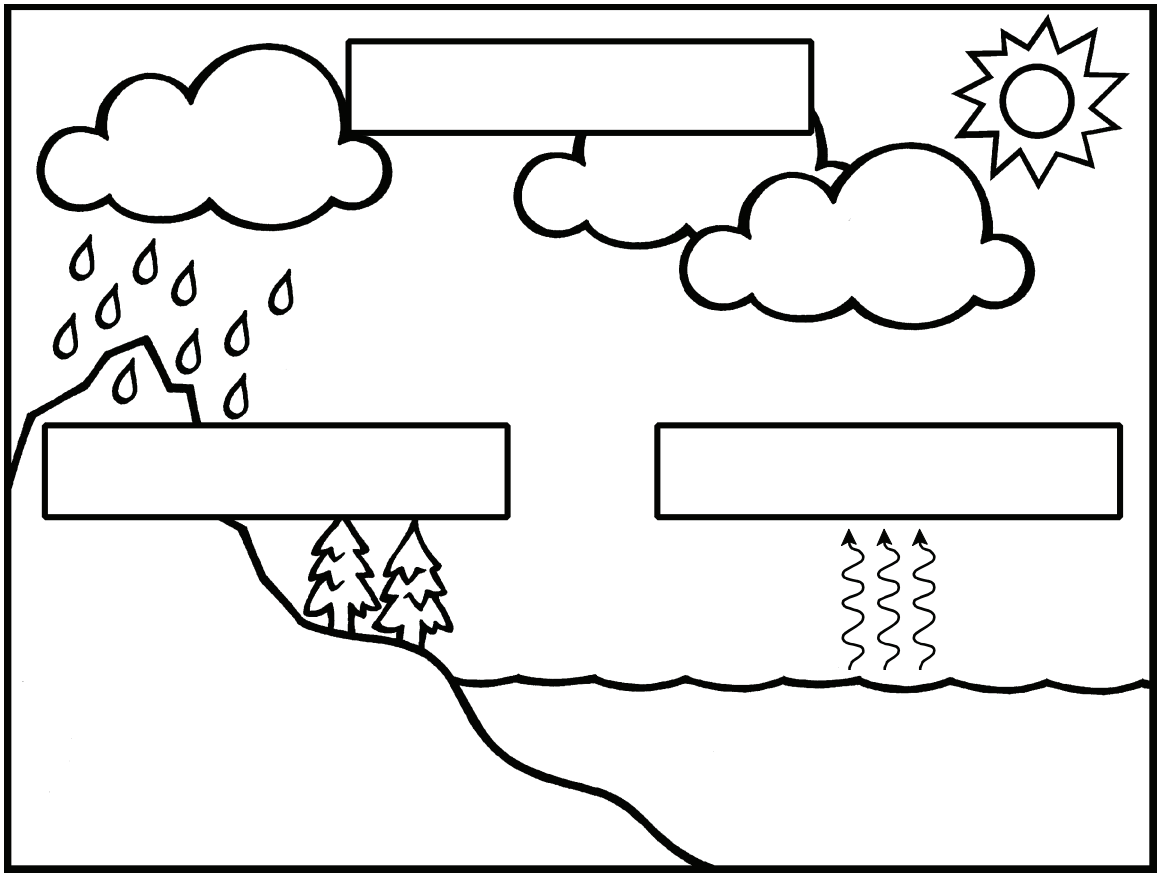
This map shows the [Ⓐ climate / Ⓑ weather] of the United States.

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7 Study the words.

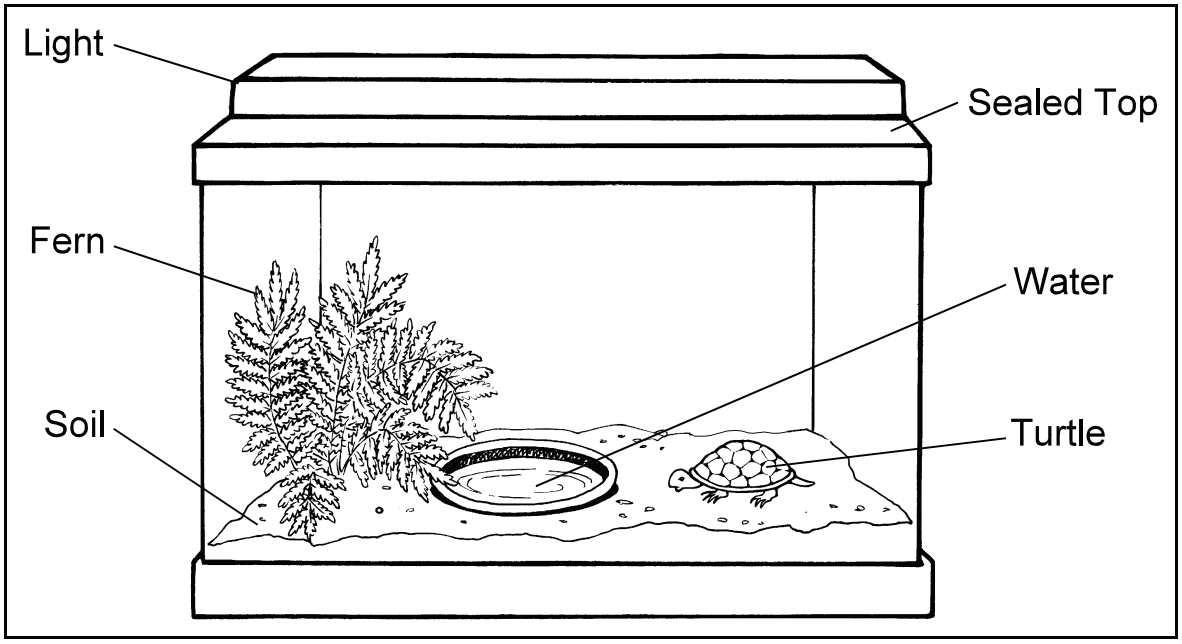
condensation	evaporation	precipitation

Use the words above to label the diagram of the water cycle.



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8 Examine the drawing.



The turtle and the fern live in a sealed terrarium. How do they interact with one another to obtain and supply a basic resource? The turtle depends on the fern to —

Ⓐ supply carbon dioxide, and the fern depends on the turtle to provide food.

Ⓑ supply oxygen, and the fern depends on the turtle to provide carbon dioxide.

Ⓒ supply water, and the fern depends on the turtle to provide oxygen.

Ⓓ supply food, and the fern depends on the turtle to provide oxygen.

9 Swans, frogs, turtles, and beavers are animals that live in or around ponds and rivers. What structure do these animals have in common, and what is the function of the structure?

Ⓐ These animals have strong legs that they use to kick predators.

Ⓑ These animals have sharp teeth to chew hard bark and tough plant stems.

Ⓒ These animals have webbed feet to help them swim through water.

Ⓓ These animals have thick layers of fat to protect them from cold.

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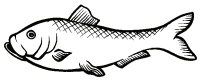
10 The images show organisms in a marine food chain. Draw arrows to show the flow of energy between the organisms in this food chain.



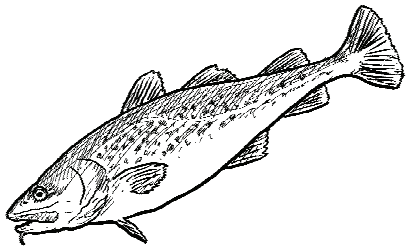
phytoplankton



krill



herring



cod

11 Adele accidentally burned herself by touching hot glassware in the classroom. The first thing Adele should do is —

Ⓐ put a bandage on the burn.

Ⓑ tell her teacher what happened.

Ⓒ run to the phone and call her parent.

Ⓓ pour rubbing alcohol on the burn.

12 Andy wants to study the growth of sunflowers for a science fair project. She knows she needs to have a well-defined question that can be tested reliably.

Which question would be best for Andy to ask?

Ⓐ Will sunflowers grow faster when they receive more sunlight than water?

Ⓑ Will sunflowers grow faster when they are given more fertilizer?

Ⓒ Will sunflowers grow faster when they are given more fertilizer and air?

Ⓓ Will sunflowers grow faster in a field or on a mountain top?

Ⓔ Will sunflowers grow faster if someone dances in circles around them and begs them to grow?

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STAAR CONNECTION™
Diagnostic Series™
Grade 5 Science
Answer Key

Assessment 1

1

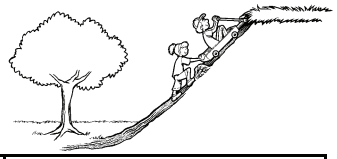
Dissolves in Water	Does Not Dissolve in Water
salt	sand
sugar	plastic
dish soap	wool

2 **B** The water will warm the ice cube. The ice cube will begin to melt.

3 **C** It is transferred to the ball.

4 **Part A**

C



Part B

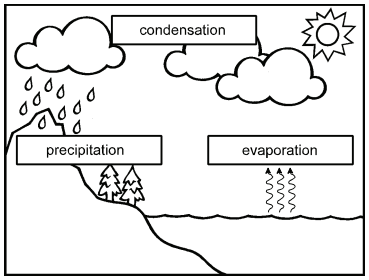
The position of the wagon changes from the bottom of the hill to the top of the hill. The motion of the wagon moves with force.

5

	unlimited oxygen
✔	heat
	bacteria
✔	absence of oxygen
	water
✔	pressure
✔	time

6 This map shows the Ⓐ climate ● weather of the United States.

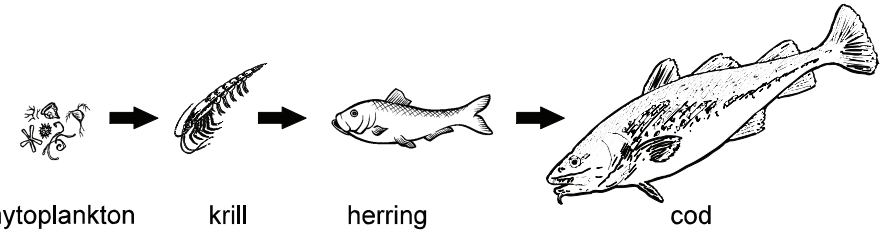
7



8 **B** supply oxygen, and the fern depends on the turtle to provide carbon dioxide.

9 **C** These animals have webbed feet to help them swim through water.

10



11 **B** tell her teacher what happened.

12 **B** Will sunflowers grow faster when they are given more fertilizer?

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STAAR CONNECTION™
Diagnostic Series™ Grade 5 Science
TEKS Alignment Chart

Assessment 1				
Question Number	**Reporting Category**	**TEKS**	**Readiness or Supporting Standard**	**SEP**
1	1	5.6A	Readiness	5.1A
2	1	3.6C	Supporting	5.1A
3	2	4.8A	Supporting	5.3A
4	2	3.7B	Supporting	5.3A
5	3	5.10B	Readiness	5.5B
6	3	4.10C	Supporting	5.5A
7	3	4.10A	Supporting	5.5A
8	4	5.12A	Readiness	5.3A
9	4	5.13A	Readiness	5.1A
10	4	3.12B	Supporting	5.5E
11	SEP	5.1C	SEP	5.1C
12	SEP	5.1A	SEP	5.1A

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