STAAR CONNECTION™

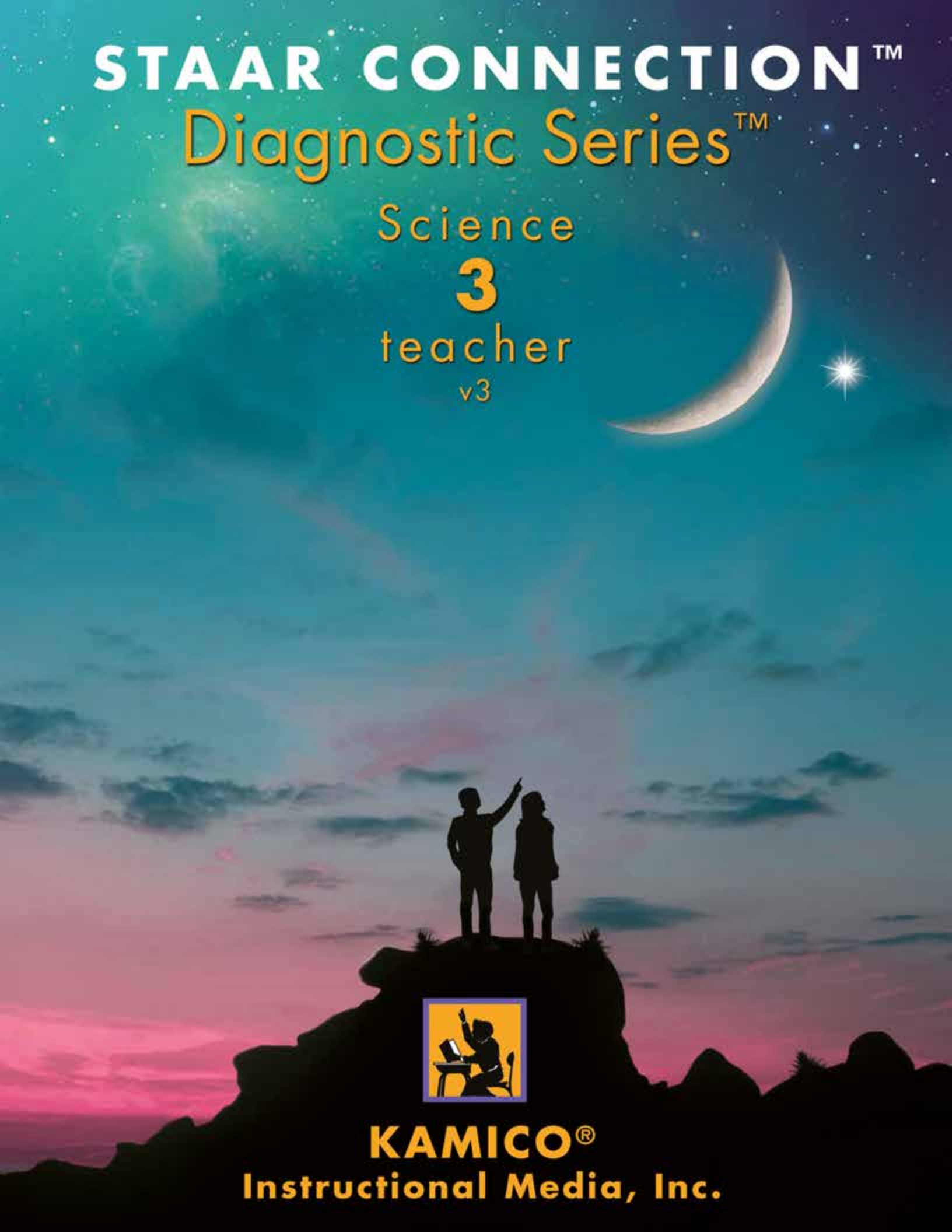
Diagnostic Series™

Science

3

teacher

v3



KAMICO®
Instructional Media, Inc.

STAAR CONNECTION™

Science
3
teacher

Diagnostic Series™

I/i/MMXXVI
Version 3



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KAMICO® Instructional Media, Inc.
STAAR CONNECTION™
Introduction

KAMICO® Instructional Media's program is validated by scientifically based research. **STAAR CONNECTION™ Diagnostic Series™** and **STAAR CONNECTION™ Developmental Series™** can be used in tandem to ensure mastery of TEKS. The *Diagnostic Series™* consists of a bank of assessments. Each assessment covers a mixture of 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 students, 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 *STAAR CONNECTION 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 *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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STAAR CONNECTION™
Diagnostic Series™
Grade 3 Science
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Grade 3 Science
Texas Essential Knowledge and Skills

(1) Scientific and engineering practices. The student asks questions, identifies problems, and plans and safely conducts classroom, laboratory, and field investigations to answer questions, explain phenomena, or design solutions using appropriate tools and models. The student is expected to:

(A) ask questions and define problems based on observations or information from text, phenomena, models, or investigations;

(B) use scientific practices to plan and conduct descriptive investigations and use engineering practices to design solutions to problems;

(C) demonstrate safe practices and the use of safety equipment during classroom and field investigations as outlined in Texas Education Agency-approved safety standards;

(D) use tools, including hand lenses; metric rulers; Celsius thermometers; wind vanes; rain gauges; graduated cylinders; beakers; digital scales; hot plates; meter sticks; magnets; notebooks; Sun, Earth, Moon system models; timing devices; materials to support observation of habitats of organisms such as terrariums, aquariums, and collecting nets; and materials to support digital data collection such as computers, tablets, and cameras, to observe, measure, test, and analyze information;

(E) collect observations and measurements as evidence;

(F) construct appropriate graphic organizers to collect data, including tables, bar graphs, line graphs, tree maps, concept maps, Venn diagrams, flow charts or sequence maps, and input-output tables that show cause and effect; and

(G) develop and use models to represent phenomena, objects, and processes or design a prototype for a solution to a problem.

(2) Scientific and engineering practices. The student analyzes and interprets data to derive meaning, identify features and patterns, and discover relationships or correlations to develop evidence-based arguments or evaluate designs. The student is expected to:

(A) identify advantages and limitations of models such as their size, scale, properties, and materials;

(B) analyze data by identifying any significant features, patterns, or sources of error;

(C) use mathematical calculations to compare patterns and relationships; and

(D) evaluate a design or object using criteria.

(3) Scientific and engineering practices. The student develops evidence-based explanations and communicates findings, conclusions, and proposed solutions. The student is expected to:

(A) develop explanations and propose solutions supported by data and models;

(B) communicate explanations and solutions individually and collaboratively in a variety of settings and formats; and

(C) listen actively to others' explanations to identify relevant evidence and engage respectfully in scientific discussion.

(4) Scientific and engineering practices. The student knows the contributions of scientists and recognizes the importance of scientific research and innovation for society. The student is expected to:

(A) explain how scientific discoveries and innovative solutions to problems impact science and society; and

(B) research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers.

(5) Recurring themes and concepts. The student understands that recurring themes and concepts provide a framework for making connections across disciplines. The student is expected to:

(A) identify and use patterns to explain scientific phenomena or to design solutions;

(B) identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems;

(C) use scale, proportion, and quantity to describe, compare, or model different systems;

(D) examine and model the parts of a system and their interdependence in the function of the system;

(E) investigate the flow of energy and cycling of matter through systems;

(F) explain the relationship between the structure and function of objects, organisms, and systems; and

(G) explain how factors or conditions impact stability and change in objects, organisms, and systems.

(6) Matter and energy. 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) measure, test, and record physical properties of matter, including temperature, mass, magnetism, and the ability to sink or float in water;

(B) describe and classify samples of matter as solids, liquids, and gases and demonstrate that solids have a definite shape and that liquids and gases take the shape of their container;

(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); and

(D) demonstrate that materials can be combined based on their physical properties to create or modify objects such as building a tower or adding clay to sand to make a stronger brick and justify the selection of materials based on their physical properties.

(7) Force, motion, and energy. 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; and

(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.

(8) Force, motion, and energy. The student knows that energy is everywhere and can be observed in cycles, patterns, and systems. The student is expected to:

(A) identify everyday examples of energy, including light, sound, thermal, and mechanical; and

(B) plan and conduct investigations that demonstrate how the speed of an object is related to its mechanical energy.

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

(A) construct models and explain the orbits of the Sun, Earth, and Moon in relation to each other; and

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

(10) Earth and space. The student knows that there are recognizable processes that change Earth over time. The student is expected to:

(A) compare and describe day-to-day weather in different locations at the same time, including air temperature, wind direction, and precipitation;

(B) investigate and explain how soils such as sand and clay are formed by weathering of rock and by decomposition of plant and animal remains; and

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

(11) Earth and space. The student understands how natural resources are important and can be managed. The student is expected to:

(A) explore and explain how humans use natural resources such as in construction, in agriculture, in transportation, and to make products;

(B) explain why the conservation of natural resources is important; and

(C) identify ways to conserve natural resources through reducing, reusing, or recycling.

(12) Organisms and environments. The student describes patterns, cycles, systems, and relationships within environments. The student is expected to:

(A) explain how temperature and precipitation affect animal growth and behavior through migration and hibernation and plant responses through dormancy;

(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;

(C) describe how natural changes to the environment such as floods and droughts cause some organisms to thrive and others to perish or move to new locations; and

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

(13) Organisms and environments. The student knows that organisms undergo similar life processes and have structures that function to help them survive within their environments. The student is expected to:

(A) explore and explain how external structures and functions of animals such as the neck of a giraffe or webbed feet on a duck enable them to survive in their environment; and

(B) explore, illustrate, and compare life cycles in organisms such as beetles, crickets, radishes, or lima beans.

Name _____ Date _____

1 All of the field investigation practices are safe **except** —

Ⓐ wearing leather gloves while catching insects and other small animals.

Ⓑ looking at the Sun while watching a solar eclipse.

Ⓒ wearing long pants while studying insects and other small animals in a field.

Ⓓ drinking water while studying plants in the desert.

2 Tim is planning a descriptive investigation about deer. Which question would be best for Tim to ask?

Ⓐ How many deer live in the park?

Ⓑ Do deer grow faster than dogs?

Ⓒ Do deer run faster than goats?

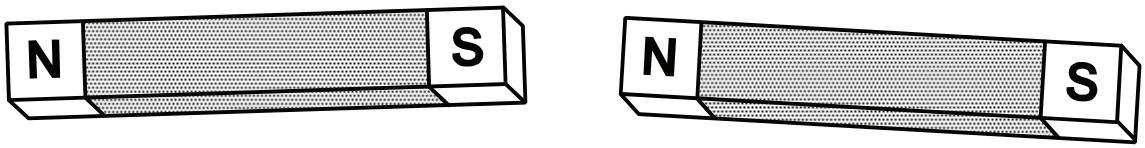
3 Four students measure the temperature at their school. They measure twice. They all measure at the same time.

Student	Morning Temperature (°F)	Afternoon Temperature (°F)
Alyssa	86	98
Robbie	85	99
Luca	75	87
Ginny	87	100

Whose thermometer is not working correctly? Write your answer in the space below.

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4 A science teacher holds up two metal bars. She tells the class to find out if the bars are magnets.



The class will know that both metal bars are magnets if —

Ⓐ one bar attracts the other one no matter how the bars are lined up.

Ⓑ one bar attracts a steel paper clip but the other one does not.

Ⓒ neither bar attracts a plastic paper clip.

Ⓓ both bars push away from each other when lined up a certain way.

5 Colton measures some physical properties of different objects. He records the measurements in the chart.

Object	Is the Object Attracted to a Magnet?	
	Yes	No
iron nail (metal)	✔	
paper clip (plastic)		✔
cork (wood)		✔
steel thumbtack (metal)	✔	
aluminum can (metal)		✔
button (plastic)		✔
pencil (wood)		✔
shirt (cloth)		✔

Based on the information in Colton's chart, which materials are magnetic?

Ⓐ some types of metal objects

Ⓑ plastic objects

Ⓒ wooden and cloth objects

Ⓓ all types of metal objects

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6 The Sun is the source of energy that supports life on Earth. Which type of energy comes from the Sun?

Ⓐ mechanical energy

Ⓑ light energy

Ⓒ electrical energy

Ⓓ wind energy

7 Bedrock is the layer of solid rock that lies underneath soil. How does bedrock turn into soil?

Ⓐ When it rains, bedrock turns into mud. The mud dries and becomes soil.

Ⓑ Earthquakes break bedrock into soil.

Ⓒ When another layer of bedrock forms over it, the buried bedrock is crushed.

Ⓓ Bedrock is broken down by weathering. The weathered rock mixes with other materials and becomes soil.

8 A cold front is moving through Texas. Look at the chart.

	Dallas	**Austin**	**Houston**	**San Antonio**
Temperature (°F)	56	77	88	82
Precipitation (inches)	2	0	0	0
Wind Direction	north to south	north to south	north to south	north to south

Based on information in the chart, a thunderstorm most likely moved through —

Ⓐ Dallas.

Ⓑ Austin.

Ⓒ Houston.

Ⓓ San Antonio.

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9 In winter, cold temperatures and a lack of food cause geese to [Ⓐ hibernate / Ⓑ migrate]. They fly south where it is [Ⓐ warmer / Ⓑ wetter] and there is [Ⓐ less / Ⓑ more] food.

10 Owls hunt mice and other small rodents at night.



What characteristics help owls get the food they need to survive?

Ⓐ layers of fat, warm feathers

Ⓑ thick fur, webbed feet

Ⓒ eyes that see well at night, sharp talons (claws)

Ⓓ short wings, loud screech

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STAAR CONNECTION™
Diagnostic Series™
Grade 3 Science
Answer Key

Assessment 1

1	**B**	looking at the Sun while watching a solar eclipse.
2	**A**	How many deer live in the park?
3		Luca's
4	**D**	both bars push away from each other when lined up a certain way.
5	**A**	some types of metal objects
6	**B**	light energy
7	**D**	Bedrock is broken down by weathering. The weathered rock mixes with other materials and becomes soil.
8	**A**	Dallas.
9	**B**	migrate
	A	warmer
	B	more
10	**C**	eyes that see well at night, sharp talons (claws)

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Student Name:	STAAR CONNECTION™ Grade 3 Diagnostic Series Science

Science assessment questions are listed below by strand and TEKS.
Circle the number of any question that has been answered incorrectly.
Next, circle the TEKS that needs additional reinforcement.

Assessment 1							
Question Number	**Strand**	**TEKS**	**TEKS**				
1	Scientific and Engineering Practices	1C					
2	Scientific and Engineering Practices	1A					
3	Scientific and Engineering Practices	2B					
4	Matter and Energy	6A	1B				
5	Matter and Energy	6A	3A				
6	Force, Motion, and Energy	8A					
7	Earth and Space	10B	5B				
8	Earth and Space	10A	5A				
9	Organisms and Environments	12A					
10	Organisms and Environments	13A	5F				

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