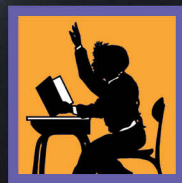


STAAR CONNECTION™

Diagnostic Series™

Science
3
teacher

(revised for streamlined TEKS)



KAMICO®
Instructional Media, Inc.

STAAR CONNECTION™

Science
3
teacher

Diagnostic Series™

XXIX/i/MMXXII

Version 2

(revised for streamlined TEKS)



KAMICO®

Instructional Media, Inc.

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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 **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 *STAAR CONNECTION Developmental Series™* consists of isolated activities and assessments to allow for the 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 has assessments on isolated standards 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 **DATA CONNECTION®** software prints student answer sheets on plain paper using a standard laser printer, scans answer sheets using a TWAIN-compliant scanner, scores assessments, and disaggregates student academic data, showing which goals and objectives are mastered and which goals and objectives are in need of reinforcement. The software is preprogrammed to work with all KAMICO® assessments. It is easily customized to work with other instructional materials and assessments as well as teacher-, school-, district-, or state-created assessments. **DATA CONNECTION®** analyzes academic data from individual students, classes, grade levels, and demographic groups. Reports are presented in tabular and graphic form. Item analysis is provided to help determine the most effective method of instruction.

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 3 Science
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NOTE:

TEA advises that the Scientific Investigation and Reasoning Skills "will be incorporated into at least 40% of the test questions in reporting categories 1-4 and will be identified along with content standards." KAMICO® has followed these guidelines. However, to ensure thorough coverage of the Scientific Investigation and Reasoning Skills, KAMICO® writers have included extra questions over just those skills to ensure student mastery.

Grade 3 Science
Texas Essential Knowledge and Skills

Scientific Investigation and Reasoning Skills

- (3.1) **Scientific investigation and reasoning.** The student conducts classroom and outdoor investigations following home and school safety procedures and environmentally appropriate practices. The student is expected to
- (A) demonstrate safe practices as described in Texas Education Agency-approved safety standards during classroom and outdoor investigations using safety equipment as appropriate, including safety goggles or chemical splash goggles, as appropriate, and gloves; and
 - (B) make informed choices in the use and conservation of natural resources by recycling or reusing materials such as paper, aluminum cans, and plastics.
- (3.2) **Scientific investigation and reasoning.** The student uses scientific practices during laboratory and outdoor investigations. The student is expected to
- (A) plan and implement descriptive investigations, including asking and answering questions, making inferences, and selecting and using equipment or technology needed, to solve a specific problem in the natural world;
 - (B) collect and record data by observing and measuring using the metric system and recognize differences between observed and measured data;
 - (C) construct maps, graphic organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate measured data;
 - (D) analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations;
 - (E) demonstrate that repeated investigations may increase the reliability of results; and
 - (F) communicate valid conclusions supported by data in writing, by drawing pictures, and through verbal discussion.

- (3.3) **Scientific investigation and reasoning.** The student knows that information, critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions. The student is expected to
- (A) analyze, evaluate, and critique scientific explanations by using evidence, logical reasoning, and experimental and observational testing;
 - (B) represent the natural world using models such as volcanoes or the Sun, Earth, and Moon system and identify their limitations, including size, properties, and materials; and
 - (C) connect grade-level appropriate science concepts with the history of science, science careers, and contributions of scientists.
- (3.4) **Scientific investigation and reasoning.** The student knows how to use a variety of tools and methods to conduct science inquiry. The student is expected to
- collect, record, and analyze information using tools, including cameras, computers, hand lenses, metric rulers, Celsius thermometers, wind vanes, rain gauges, pan balances, graduated cylinders, beakers, spring scales, hot plates, meter sticks, magnets, collecting nets, notebooks, and Sun, Earth, and Moon system models; timing devices; and materials to support observation of habitats of organisms such as terrariums and aquariums.

**Reporting Category 1:
Matter and Energy**

- (3.5) **Matter and energy.** The student knows that matter has measurable physical properties and those properties determine how matter is 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;
 - (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 such as ice becoming liquid water, condensation forming on the outside of a glass of ice water, or liquid water being heated to the point of becoming water vapor; and
 - (D) explore and recognize that a mixture is created when two materials are combined such as gravel and sand, or metal and plastic paper clips.

**Reporting Category 2:
Force, Motion, and Energy**

- (3.6) **Force, motion, and energy.** The student knows that forces cause change and that energy exists in many forms. The student is expected to
- (A) explore different forms of energy, including mechanical, light, sound, and thermal in everyday life;
 - (B) demonstrate and observe how position and motion can be changed by pushing and pulling objects such as swings, balls, and wagons; and
 - (C) observe forces such as magnetism and gravity acting on objects.

**Reporting Category 3:
Earth and Space**

- (3.7) **Earth and space.** The student knows that Earth consists of natural resources and its surface is constantly changing. The student is expected to
- (A) explore and record how soils are formed by weathering of rock and the decomposition of plant and animal remains;
 - (B) investigate rapid changes in Earth's surface such as volcanic eruptions, earthquakes, and landslides; and
 - (C) explore the characteristics of natural resources that make them useful in products and materials such as clothing and furniture and how resources may be conserved.
- (3.8) **Earth and space.** The student knows there are recognizable patterns in the natural world and among objects in the sky. The student is expected to
- (A) observe, measure, record, and compare day-to-day weather changes in different locations at the same time that include air temperature, wind direction, and precipitation;
 - (B) describe and illustrate the Sun as a star composed of gases that provides light and thermal energy;
 - (C) construct models that demonstrate the relationship of the Sun, Earth, and Moon, including orbits and positions; and
 - (D) identify the planets in Earth's solar system and their position in relation to the Sun.

**Reporting Category 4:
Organisms and Environments**

- (3.9) **Organisms and environments.** The student knows and can describe patterns, cycles, systems, and relationships within the environments. The student is expected to
- (A) observe and describe the physical characteristics of environments and how they support populations and communities of plants and animals within an ecosystem;
 - (B) identify and describe the flow of energy in a food chain and predict how changes in a food chain affect the ecosystem such as removal of frogs from a pond or bees from a field; and
 - (C) describe environmental changes such as floods and droughts where some organisms thrive and others perish or move to new locations.
- (3.10) **Organisms and environments.** The student knows that organisms undergo similar life processes and have structures that help them survive within their environments. The student is expected to
- (A) explore how structures and functions of plants and animals allow them to survive in a particular environment; and
 - (B) investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs, and lady beetles.

Name _____ Date _____

TEKS 3.1A
SIRS 3.1A

- 1 All of the field investigation practices are safe **except** —
- A wearing leather gloves while catching insects and other small animals.
 - B looking at the Sun while watching a solar eclipse.
 - C wearing long pants while studying insects and other small animals in a field.
 - D 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?

TEKS 3.2A
SIRS 3.2A

- F How many deer live in the park?
- G Do deer grow faster than dogs?
- H Do deer run faster than goats?

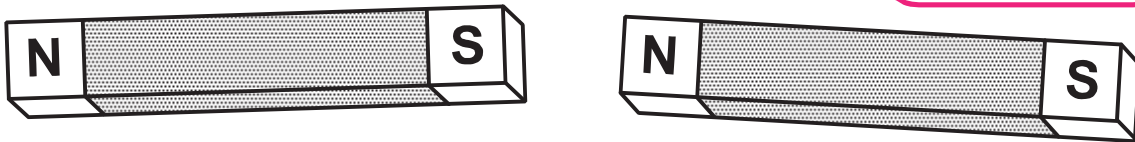
- 3 A teacher explains that many living things go through a change when the seasons change. She gives examples of changes that prepare living things for the winter. She says that some trees' leaves turn colors and fall off. She says that dogs grow thicker fur. She says that squirrels collect acorns.

Why should you believe the teacher's explanation?

TEKS 3.3A
SIRS 3.3A

- A The teacher gives three examples of changes that you know happen during the fall.
- B The teacher is an adult, and adults are always correct.
- C You know that one of the examples is true and that explanations need only one example to be true.
- D You have seen a tree that stays green all winter.
- 4 A science teacher holds up two metal bars. She tells the class to find out if the bars are magnets.

TEKS 1/3.5A
SIRS 3.4



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

- F one bar attracts the other one no matter how the bars are lined up.
- G one bar attracts a steel paper clip but the other one does not.
- H neither bar attracts a plastic paper clip.
- J 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?

- A some types of metal objects
- B plastic objects
- C wooden and cloth objects
- D all types of metal objects

TEKS 1/3.5A
SIRS 3.2D

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

- F mechanical energy
- G light energy
- H electrical energy
- J wind energy

TEKS 2/3.6A

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

TEKS 3/3.7A
SIRS 3.2A

- A When it rains, bedrock turns into mud. The mud dries and becomes soil.
- B Earthquakes break bedrock into soil.
- C When another layer of bedrock forms over it, the buried bedrock is crushed.
- D 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.

TEKS 3/3.8A
SIRS 3.2D

	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 —

- F Dallas.
- G Austin.
- H Houston.
- J San Antonio.

9 The part of the environment that supports the crow by providing what is needed to breathe and to fly is the —

- A land.
- B water.
- C air.
- D rocks.

TEKS 4/3.9A

10 Owls hunt mice and other small rodents at night.

TEKS 4/3.10A



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

- F layers of fat, warm feathers
- G thick fur, webbed feet
- H eyes that see well at night, sharp talons (claws)
- J short wings, loud screech

Student
Name:

STAAR CONNECTION™
Grade 3
Diagnostic Series Science

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

Assessment 1					Assessment 2				
Question Number	Answer	Reporting Category	TEKS	SIRS	Question Number	Answer	Reporting Category	TEKS	SIRS
1	B	SIRS	3.1A	3.1A	1	B	SIRS	3.1B	3.1B
2	F	SIRS	3.2A	3.2A	2	H	SIRS	3.2B	3.2B
3	A	SIRS	3.3A	3.3A	3	B	SIRS	3.3B	3.3B
4	J	1	3.5A	3.4	4	H	SIRS	3.1A	3.1A
5	A	1	3.5A	3.2D	5	C	1	3.5B	
6	G	2	3.6A		6	F	2	3.6B	3.2A
7	D	3	3.7A	3.2A	7	C	3	3.7B	
8	F	3	3.8A	3.2D	8	J	3	3.8B	
9	C	4	3.9A		9	A	4	3.9B	3.4
10	H	4	3.10A		10	H	4	3.10B	3.3A