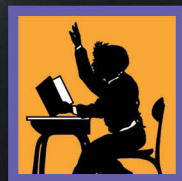


STAAR CONNECTION™

Diagnostic Series™

Science
2
teacher

(revised for streamlined TEKS)



KAMICO®
Instructional Media, Inc.

STAAR CONNECTION™

Science 2 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 2 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 2 Science
Texas Essential Knowledge and Skills

Scientific Investigation and Reasoning Skills

- (2.1) **Scientific investigation and reasoning:** The student conducts classroom and outdoor investigations following home and school safety procedures. The student is expected to
- (A) identify, describe, and demonstrate safe practices as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately; and
 - (B) identify and demonstrate how to use, conserve, and dispose of natural resources and materials such as conserving water and reuse or recycling of paper, plastic, and metal.
- (2.2) **Scientific investigation and reasoning:** The student develops abilities necessary to do scientific inquiry in classroom and outdoor investigations. The student is expected to
- (A) ask questions about organisms, objects, and events during observations and investigations;
 - (B) plan and conduct descriptive investigations;
 - (C) collect data from observations using scientific tools;
 - (D) record and organize data using pictures, numbers, and words;
 - (E) communicate observations and justify explanations using student-generated data from simple descriptive investigations; and
 - (F) compare results of investigations with what students and scientists know about the world.

- (2.3) **Scientific investigation and reasoning:** The student knows that information and critical thinking, scientific problem solving, and the contributions of scientists are used in making decisions. The student is expected to
- (A) identify and explain a problem and propose a task and solution for the problem;
 - (B) make predictions based on observable patterns; and
 - (C) identify what a scientist is and explore what different scientists do.
- (2.4) **Scientific investigation and reasoning:** The student uses age-appropriate tools and models to investigate the natural world. The student is expected to
- (A) collect, record, and compare information using tools, including computers, hand lenses, rulers, plastic beakers, magnets, collecting nets, notebooks, and safety goggles or chemical splash goggles, as appropriate; timing devices; weather instruments such as thermometers, wind vanes, and rain gauges; and materials to support observations of habitats of organisms such as terrariums and aquariums; and
 - (B) measure and compare organisms and objects.

Reporting Category 1: Matter and Energy

- (2.5) **Matter and energy:** The student knows that matter has physical properties and those properties determine how it is described, classified, changed, and used. The student is expected to
- (A) classify matter by physical properties, including relative temperature, texture, flexibility, and whether material is a solid or liquid;
 - (B) compare changes in materials caused by heating and cooling;
 - (C) demonstrate that things can be done to materials to change their physical properties such as cutting, folding, sanding, and melting to change their physical properties; and

- (D) combine materials that when put together can do things that they cannot do by themselves such as building a tower or a bridge and justify the selection of those materials based on their physical properties.

Reporting Category 2: Force, Motion, and Energy

- (2.6) **Force, motion, and energy:** The student knows that forces cause change and energy exists in many forms. The student is expected to
 - (A) investigate the effects on objects by increasing or decreasing amounts of light, heat, and sound energy such as how the color of an object appears different in dimmer light or how heat melts butter;
 - (B) observe and identify how magnets are used in everyday life; and
 - (C) trace and compare patterns of movement of objects such as sliding, rolling, and spinning over time.

Reporting Category 3: Earth and Space

- (2.7) **Earth and space:** The student knows that the natural world includes earth materials. The student is expected to
 - (A) observe, describe, and compare rocks by size, texture, and color;
 - (B) identify and compare the properties of natural sources of freshwater and saltwater; and
 - (C) distinguish between natural and manmade resources.
- (2.8) **Earth and space:** The student knows that there are recognizable patterns in the natural world and among objects in the sky. The student is expected to
 - (A) measure, record, and graph weather information, including temperature, wind conditions, precipitation, and cloud coverage, in order to identify patterns in the data;
 - (B) identify the importance of weather and seasonal information to make choices in clothing, activities, and transportation; and

- (C) observe, describe, and record patterns of objects in the sky, including the appearance of the Moon.

Reporting Category 4: Organisms and Environments

- (2.9) **Organisms and environments:** The student knows that living organisms have basic needs that must be met for them to survive within their environment. The student is expected to
 - (A) identify the basic needs of plants and animals;
 - (B) identify factors in the environment, including temperature and precipitation, that affect growth and behavior such as migration, hibernation, and dormancy of living things; and
 - (C) compare the ways living organisms depend on each other and on their environments such as through food chains.
- (2.10) **Organisms and environments:** The student knows that organisms resemble their parents and have structures and processes that help them survive within their environments. The student is expected to
 - (A) observe, record, and compare how the physical characteristics and behaviors of animals help them meet their basic needs;
 - (B) observe, record, and compare how the physical characteristics of plants help them meet their basic needs such as stems carry water throughout the plant; and
 - (C) investigate and record some of the unique stages that insects such as grasshoppers and butterflies undergo during their life cycle.

Name _____

Date _____

- 1 Sue has long hair. She is going to do a lab investigation. What should she do with her hair?

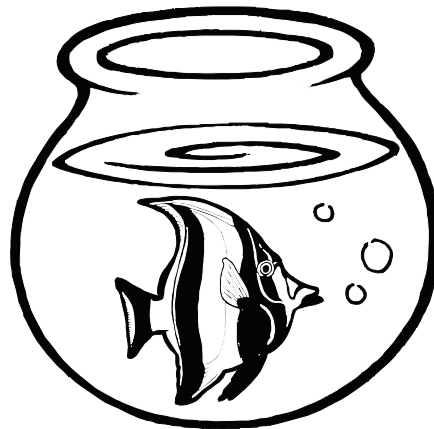
☐ A Color it.

☐ B Cut it.

☐ C Tie it back.

☐ D Comb it.

- 2 Look at the fish in the bowl. The fish needs air to stay alive.



You want to know how the fish stays alive underwater. What question should you ask?

☐ F What kind of food does the fish like to eat?

☐ G Why does the fish live in a bowl?

☐ H How does the fish get air underwater?

☐ J Why does the fish have scales?

3 The room is dark. You turn on a light switch. The light bulb flashes. It makes a popping noise. It goes dark. Based on what you know, explain the problem. Then explain how you can solve the problem.

☐ **A** Problem: The light switch broke.
Solution: Put a new switch in the wall.

☐ **B** Problem: The light bulb burned out.
Solution: Put a new switch in the wall.

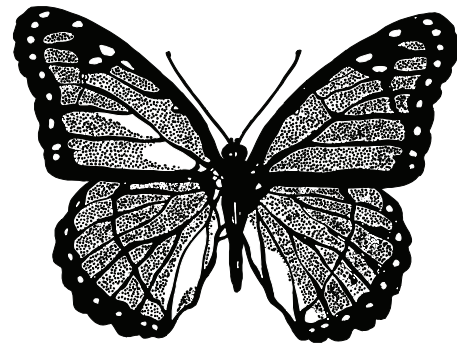
☐ **C** Problem: The light bulb burned out.
Solution: Replace the light bulb.

☐ **D** Problem: The light switch broke.
Solution: Call a plumber.

- 4 Laura uses a hand lens to look closely at a small butterfly.

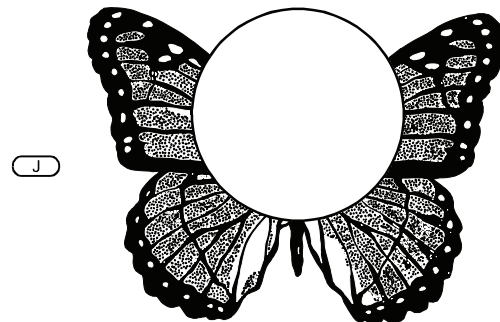
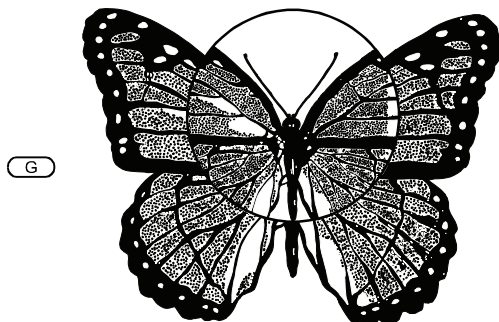
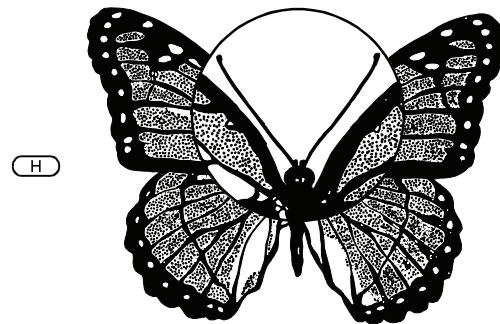
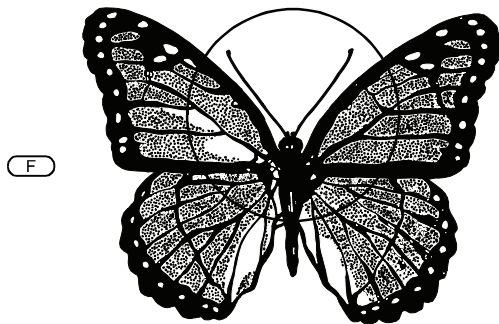


hand lens

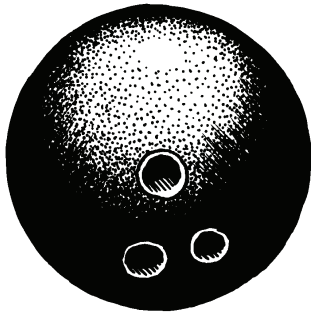


butterfly

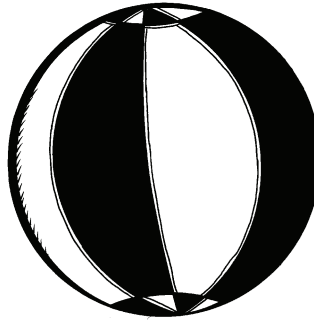
Laura looks at the butterfly's head and antennae. What does Laura see when she looks at those parts through the hand lens?



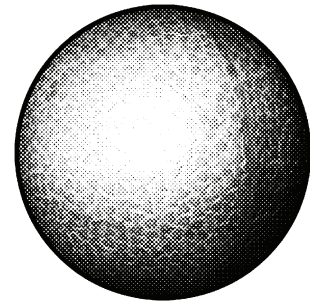
- 5 Mass is the amount of matter in a thing. Look at the drawings of three balls.



bowling ball



beach ball

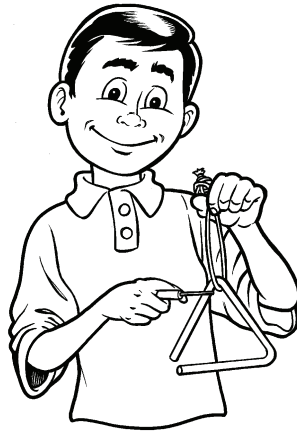


rubber ball

The three balls are the same size. Which ball has the greatest mass?

- ☐ A the bowling ball
- ☐ B the beach ball
- ☐ C the rubber ball

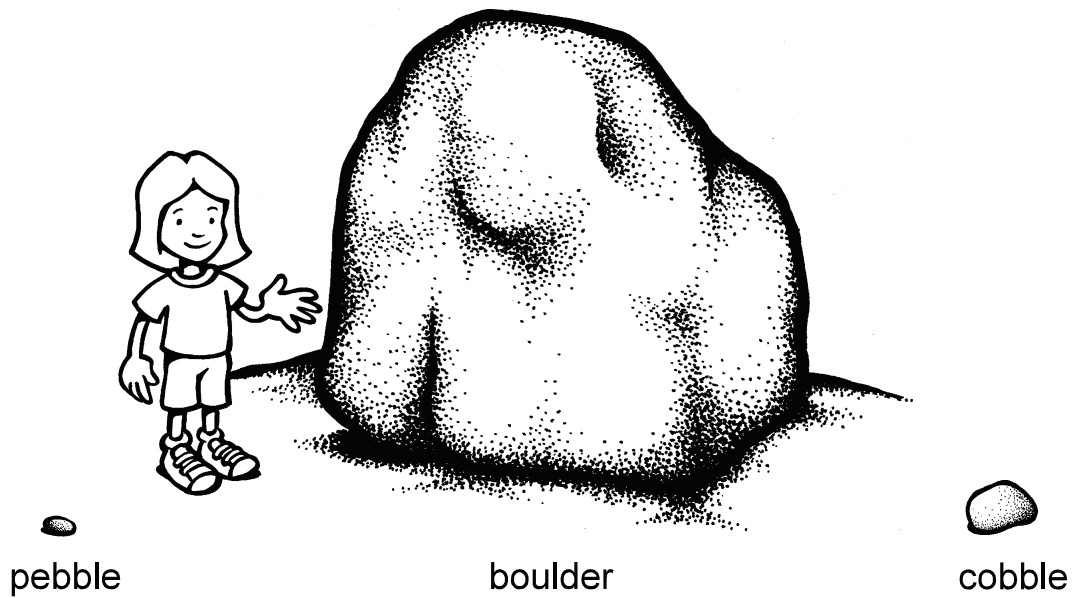
- 6 Juan plays the triangle in music class. The triangle plays a note when Juan hits it with a metal stick.



When Juan hits the triangle hard, the sound is loud. When Juan hits the triangle lightly, the sound is softer. What happens to the triangle when Juan hits it lightly?

- ☐ F The triangle vibrates less.
- ☐ G The triangle changes color.
- ☐ H The triangle vibrates more.
- ☐ J The triangle changes its note.

7 Look at the three types of rocks.



Which answer shows the types of rocks in order from smallest to largest?

- ☐ A cobble, pebble, boulder
- ☐ B boulder, cobble, pebble
- ☐ C pebble, boulder, cobble
- ☐ D pebble, cobble, boulder

- 8 Minnie checks the weather at her school. She records the amount of wind and cloud cover every hour.

	6:00 a.m.	7:00 a.m.	8:00 a.m.	9:00 a.m.	10:00 a.m.
Description of wind	calm, no wind	a small breeze	a little windy	windy	very windy
Amount of cloud coverage	clear skies	very few clouds	partly cloudy	cloudy	very dark clouds

Based on the weather data, what will the weather most likely be like at Minnie's school around 11:00 a.m.?

- ☐ F It will start to rain.
- ☐ G The sun will come out.
- ☐ H The wind will stop blowing.
- ☐ J The clouds will turn white.

- 9 Animals need certain things to live and grow. If even one of these needs is not met, they will die. Which list tells four basic needs of animals?

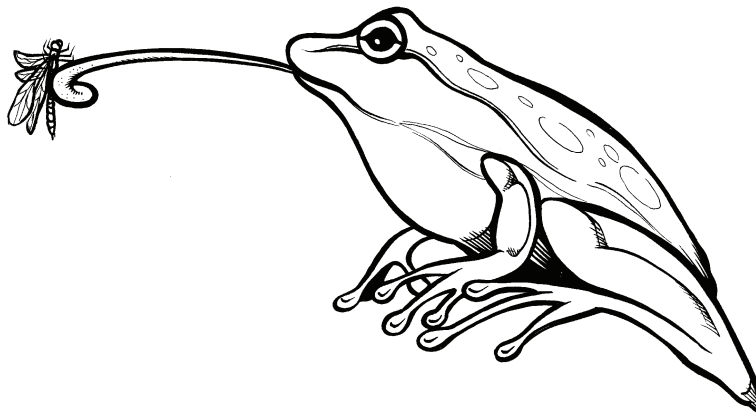
☐ A soil, scales, water, rocks

☐ B car, house, telephone, bed

☐ C fur, cave, grass, claws

☐ D food, water, air, shelter

- 10 Rocio watches a science movie. It shows a frog in a pond. The frog has a sticky tongue it can flick out of its mouth.



How does a sticky tongue help the frog?

☐ F A sticky tongue helps the frog catch flying insects to eat.

☐ G A sticky tongue helps the frog scare away flying insects that could hurt it.

☐ H A sticky tongue helps the frog jump from place to place.

Student
Name:

STAAR CONNECTION™
Grade 2
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	C	SIRS	2.1A	2.1A	1	B	SIRS	2.1A	2.1A
2	H	SIRS	2.2A	2.2A	2	J	SIRS	2.2B	2.2B
3	C	SIRS	2.3A	2.3A	3	C	SIRS	2.3B	2.3B
4	H	SIRS	2.2A 2.4A	2.4A	4	J	SIRS	2.4B	2.4B
5	A	1	2.5A	2.2A	5	A	1	2.5B	2.2A
6	F	2	2.6A	2.2A	6	J	2	2.6B	2.2A
7	D	3	2.7A		7	B	3	2.7B	
8	F	3	2.8A	2.3B	8	H	3	2.8B	2.2A
9	D	4	2.9A		9	C	4	2.9B	
10	F	4	2.10A	2.2A	10	H	4	2.10B	2.2A