

Not for student use.

Minnesota Comprehensive Assessments-Series III

Science Item Sampler Script
Grade 5



**ITEM SAMPLERS ARE NOT SECURE TEST MATERIALS. THIS ITEM
SAMPLER SCRIPT MAY BE COPIED OR DUPLICATED.**

**MINNESOTA COMPREHENSIVE ASSESSMENTS
ITEM SAMPLER
GRADE 5 SCIENCE SCRIPT**

INSTRUCTIONS CONTAINED IN THE ITEM SAMPLER REFLECT THE CONTENT OF THE ACTUAL TEST AND MAY NOT APPLY TO THE ADMINISTRATION OF THE ITEM SAMPLER.

This script is for Test Monitor use only. Students take the test online or in a large print or braille test book while the Test Monitor reads from the script.

PRIOR TO ONLINE TEST ADMINISTRATION:

- **ATTENTION:** Prior to administering the script in conjunction with an online test, verify with your District or School Assessment Coordinator that the correct test for the science script has been assigned. **If not set up correctly, the student’s test will not match the script.**

GENERAL INSTRUCTIONS FOR TEST MONITORS:

- Prior to test administration, review the *Directions for Online Administrations* or *Directions for Paper Administrations* for detailed policy and procedure information for test administration (e.g., stopping testing for the day).
- Read scripted test instructions to students, as directed, and refer to the applicable *Directions for Administrations* throughout the test administration.
 - Refer to the *Directions for Online Administrations* if using the script in conjunction with the online test.
 - Refer to the *Directions for Paper Administrations* if using the script in conjunction with the large print or braille test.
- For braille, Test Monitors should also refer to the *Test Monitor Notes for Braille* included with the braille test book.
- This script contains two sets of instructions: the first set is used for administering the script with the online test and the second set is used for administering the script in conjunction with a large print or braille test book. Use tabs on the pages to confirm you are using the correct script.
 - Refer to pages 6-25 when using the script in conjunction with an online test.
 - Refer to pages 26-40 when using the script in conjunction with a large print or braille test.
 - In these sections, read aloud to students **ONLY** what is in **BOLD TYPE**.
- Do not discuss test content with the student during or after the test.
- Do not discuss any portion of the test or the student’s performance with others.
- Read the applicable guidelines on the following pages for reading the script aloud or signing the script (if the student requires the script to be signed).

GUIDELINES FOR READING THE SCRIPT ALOUD

Read Aloud ONLY what is in BOLD TYPE

- Read test content exactly as written, as steadily and clearly as possible without changing, emphasizing, or adding information.
- Do not paraphrase, clarify, define, or translate any part of the questions, answer options, or instructions in the script.
- This script is the only source you may use to read the test to the student. Reading any test content from the test book or screen is not allowed and may require the test to be invalidated.
- Respond to student questions using only scripted directions from the *Directions for Online Administrations* or *Directions for Paper Administrations*.

Respond to the Student's Needs

- Adjust your reading speed and volume if requested by the student.
- After a question has been read, allow the student time to respond. If the pause has been lengthy, you may ask, "Do you want me to repeat the question or any part of it again?" before continuing.

Maintain Neutrality

- Communicate in a neutral tone and maintain a neutral facial expression and posture.
- Do not attempt to solve questions, or determine the correct answer to a question while reading, as this may result in pauses or changes in inflection which may mislead the student.
- Be careful to give equal emphasis to each answer option. If the student chooses an answer before all the answer options have been read, ask, "Do you want the other answer options read?" before continuing.

GUIDELINES FOR SIGNED INTERPRETATION OF SCRIPT

Sign ONLY what is in BOLD TYPE

- Sign test content exactly as written, as steadily and clearly as possible without changing, emphasizing, or adding information.
- Do not clarify or define any part of the questions, answer options, or instructions in the script.
- This script is the only source you may use to sign the test to the student. Signing any test content from the test book or screen is not allowed and may require the test to be invalidated.
- Respond to student questions using only scripted directions from the *Directions for Online Administrations* or *Directions for Paper Administrations*.

Use Professional Judgment when Signing

- Do your best to use the same signs if the student requests a portion to be repeated.
- Use signs that are conceptually accurate, with or without simultaneous voicing.
- When using an ASL sign that can represent more than one concept or English word, you must adequately contextualize the word to reduce any ambiguity. You may also spell the word after signing it to remove any doubt about which word is intended.
- If you are unsure how to sign and/or pronounce an unfamiliar word, advise the student of the uncertainty and spell the word.
- In cases where signs give clues to the answer, finger spelling must be used.

Respond to the Student's Needs

- Adjust your signing speed if requested by the student.
- Spell any words requested by the student during the test administration.
- After a question has been signed, allow the student time to respond. If the pause has been lengthy, you may ask, "Do you want me to sign the question or any part of it again?" before continuing.

Use Appropriate Physical/Facial Expressions

- Use facial expressions consistent with sign-language delivery; do not use expressions which may be interpreted by the student as approval or disapproval of the student's responses.
- Do not attempt to solve questions, or determine the correct answer to a question while signing, as this may result in pauses or changes in inflection which may mislead the student.
- Be careful to give equal emphasis to each answer option. If the student chooses an answer before all the answer options have been signed, ask, "Do you want the other answer options signed?" before continuing.

SCRIPT FOR USE WITH THE ONLINE ITEM SAMPLER

After reading the applicable scripted instructions in the *Directions for Online Administrations*, say the following before you begin reading the questions on page 7.

After I read each question, I will pause for as much time as you need to answer the question. Then I will read the next question. You may ask me to repeat any question as many times as you need.

READ ONLY WHAT IS IN BOLD TYPE

GRADE 5 SCIENCE ITEM SAMPLER SCRIPT
FOR USE WITH ONLINE ITEM SAMPLER

Title Page:

Electromagnets

Select the Blue arrow at the top to go on.

Scene:

Electromagnets can be used to separate materials at recycling centers.

Question number one (1):

Identify each of the tasks at the recycling center that an electromagnet is designed to help perform.

Select each task you want to choose.

The answer options are titled: Tasks. The top row of options is labeled, from left to right: Moving large objects, Cleaning dirty objects. The bottom row of options is labeled, from left to right: Recycling materials, Sorting materials.

Select the Blue arrow at the top to go on.

Question number two (2):

The materials picked up by an electromagnet at a recycling center can be weighed.

Select a word that completes the sentence:

Weight is measured with a Choose: balance, metric ruler, thermometer, graduated cylinder.

Select the Blue arrow at the top to go on.

Question number three (3):

Identify the map that is most useful when finding a recycling center.

Select the map you want to choose.

The answer options are titled: Maps. The top row of options is labeled, from left to right: Weather map, State map. The bottom row of options is labeled, from left to right: Street map, Land map.

Select the Blue arrow at the top to go on.

Scene:

In this task, you will investigate the strength of an electromagnet. Use the arrows to change the number of coils around the metal rod. Then select “Run.” The electromagnet will pick up paper clips. The diagram is labeled, from top to bottom: Number of Coils, RUN.

Question number four (4):

Record the number of coils and the number of paper clips that are picked up by the electromagnet in the data table.

Drag the numbers into the table.

The table has two columns and four rows. The columns are labeled, from left to right: Number of Coils, Number of Paper Clips.

Select the Blue arrow at the top to go on.

Question number five (5):

Identify which variables were changed, kept the same, and measured in this investigation.

Drag the variables into the diagram.

The top row of the diagram is labeled, from left to right: Number of coils, Type of wire, Voltage of battery. The bottom row of the diagram is labeled, from left to right: Paper clips picked up, Length of metal rod. The answer options are labeled, from left to right: Changed, Kept the same, Measured.

Select the Blue arrow at the top to go on.

Question number six (6):

Run the simulation to determine how the number of paper clips the electromagnet can pick up is related to the number of coils.

Calculate the smallest number of coils needed to pick up eleven (11) paper clips.

You can use the calculator to help you answer this question.

Enter your answer in the box. The box is labeled: coils.

Select the Blue arrow at the top to go on.

Title Page:

Pond History

Select the Blue arrow at the top to go on.

Scene:

A teacher brings her students to observe a small pond. They notice many kinds of animals, including fish, snails, mussels, leeches, and ducks. The male duck is swimming across the pond to the female duck sitting on her nest.

Question number seven (7):

Many organisms in this habitat have a way to protect themselves from predators. Identify two (2) organisms that have coverings that protect them from predators.

Select two (2) organisms you want to choose.

The answer options are labeled, from left to right: Cattails, Mussel, Snail, Leech.

Select the Blue arrow at the top to go on.

Scene:

Five years later, the teacher brings another group of students to the same spot. Many changes have taken place. The area has dried up, and the pond is now gone. The teacher explains that the area has had little rain. The teacher shows this graph to the students.

The graph is titled: Average Rainfall. The horizontal axis is labeled: Year. The vertical axis is labeled: Rainfall (in centimeters (cm)).

Question number eight (8):

A type of snail is extinct in this area. Which statement explains why this may have happened?

The graph is titled: Number of Snails in Pond. The horizontal axis is labeled: Year. The vertical axis is labeled: Number of Snails.

Choose one of the following answers. (Read answers aloud.)

- A. It reproduced too rapidly.**
- B. It could not live near plants.**
- C. It could not adapt to new conditions.**
- D. It was eaten by too many consumers.**

Select the Blue arrow at the top to go on.

Scene:

Twenty years later, grasses are growing where the pond was. The teacher and some students dig up shells.

Question number nine (9):

The shells are sorted by shape. Sort the remaining three (3) shells by shape.

Drag each shell into the correct group.

The boxes are labeled, from left to right: Group one (1), Group two (2). The answer options are titled: Shells.

Select the Blue arrow at the top to go on.

Title Page:

Snow Cave

Select the Blue arrow at the top to go on.

Scene:

The students and their teacher are making a pile of snow and then digging it out to make a snow cave. The cave will be used for some investigations. The students place one (1) box inside the cave and one (1) box outside the cave. Both boxes are placed upside down. A thermometer is placed on each box.

Question number ten (10):

The air temperature is negative two (-2) degrees Celsius (twenty-eight (28) degrees Fahrenheit). Which statement correctly describes what happens to snow at this temperature?

Choose one of the following answers. (Read answers aloud.)

- A. Snow starts to melt.
- B. Snow remains frozen.
- C. Snow changes to steam.
- D. Snow melts and then freezes again.

Select the Blue arrow at the top to go on.

Scene:

One cardboard box is inside the cave and the other is outside the cave. Students place the thermometers and bottles filled with hot water on the cardboard boxes. Later, the students check the air temperatures on their thermometers. The air temperature readings are shown in the table.

The table is titled: Air Temperature. The table has two columns and two rows. The columns are labeled, from left to right: Inside, Outside. The rows are labeled, from top to bottom: Before, After.

Question number eleven (11):

Make a graph of the air temperatures inside and outside of the cave thirty (30) minutes after the hot water bottles are added.

Drag the top of each bar to the correct height.

The table is titled: Air Temperature. The table has two columns and two rows. The columns are labeled, from left to right: Inside, Outside. The rows are labeled, from top to bottom: Before, After.

The bar graph is titled: Air Temperature After Hot Water Bottles Are Added. The horizontal axis is labeled: Location. The horizontal axis reads, from left to right: Inside the cave, Outside the cave. The vertical axis is labeled: Temperature (degrees Celsius ($^{\circ}\text{C}$)).

Select the Blue arrow at the top to go on.

Scene:

Students fill four (4) containers with equal amounts of water and seal them. Two of the containers are placed in mittens. One container with a mitten and one container without a mitten are placed in the snow cave. One container with a mitten and one container without a mitten are left outside the snow cave. One hour later, the container left outside without a mitten is frozen. The other containers still contain liquid water.

Question number twelve (12):

There is ice in the container that was left outside without a mitten. If the air temperature increases to ten (10) degrees Celsius (fifty (50) degrees Fahrenheit), what will happen to the ice?

Choose one of the following answers. (Read answers aloud.)

- A. It will lose mass.**
- B. It will get heavier.**
- C. It will start to boil.**
- D. It will change into a liquid.**

STOP

Stop when the student reaches the end of Segment 1. Refer to the *Directions for Online Administrations* as needed before continuing.

Title Page:

Mining

Select the Blue arrow at the top to go on.

Scene:

Mining is a common practice used to obtain different resources. Many of the resources obtained by mining go through different processes before they are used by people.

Question number one (1):

Iron is found in the mineral hematite. What is done to the mineral hematite to separate out the iron?

Choose one of the following answers. (Read answers aloud.)

- A. Hematite is processed.**
- B. Hematite is kept in one piece.**
- C. Hematite is found in more than one mine.**
- D. Hematite is sold for a large amount of money.**

Select the Blue arrow at the top to go on.

Question number two (2):

People use mined natural resources to supply energy to their homes. Which resource is a source of non-renewable energy?

Choose one of the following answers. (Read answers aloud.)

- A. Coal
- B. Solar
- C. Water
- D. Wind

Select the Blue arrow at the top to go on.

Scene:

A gravel pit is a location where gravel is mined. Different minerals can be found in a gravel pit.

The table has five columns and three rows. The columns are labeled, from left to right: Mineral, Streak Test, Luster, Hardness, Color. The Mineral column is labeled, from top to bottom: Hematite, Bauxite, Gypsum. The Streak Test column is labeled, from top to bottom: Red, Light brown, White. The Luster column is labeled, from top to bottom: Metallic, Non-metallic, Non-metallic. The Color column is labeled, from top to bottom: Silver, Brown, White.

A lower hardness number means a softer mineral.

Question number three (3):

A student tests an unknown mineral. This unknown mineral can be scratched by hematite. What conclusion can the student make about the mineral based on this test?

Choose one of the following answers. (Read answers aloud.)

- A. The mineral is bauxite.**
- B. The mineral is gypsum.**
- C. The mineral is softer than hematite.**
- D. The mineral is harder than hematite.**

Select the Blue arrow at the top to go on.

Scene:

Before this area was mined, the land looked very different.

The top diagram is titled: Before Mining. The bottom diagram is titled: After Mining.

Question number four (4):

Mining in this forested area can have positive and negative effects on the environment. Identify the two (2) possible negative effects.

Select the two (2) effects you want to choose.

The answer options are titled: Possible Effects. The top row is labeled, from left to right: Decreases natural habitat, Discover source of groundwater. The bottom row is labeled, from left to right: Pollution produced by machines, Find needed resources.

Select the Blue arrow at the top to go on.

Scene:

After the mining is finished, the land can be used for recreation.

The diagram is titled: Playground.

Question number five (5):

Students go down the slide. Identify each force that affects the students' motion on the slide.

Select each force you want to choose.

The answer options are titled: Forces. The answer options are labeled, from top to bottom: Electricity, Friction, Gravity, Magnetism.

Select the Blue arrow at the top to go on.

Title Page:

Energy

Select the Blue arrow at the top to go on.

Scene:

A teacher will build an electrical circuit to light a lightbulb.

Question number six (6):

These are parts of electrical circuits. Identify the three (3) parts that will make a complete circuit together.

Select the three (3) parts you want to choose.

The top row of answer options is labeled, from left to right: Light socket, Battery, Wires. The bottom row is labeled, from left to right: Lightbulb and socket, Open switch.

Select the Blue arrow at the top to go on.

Scene:

When a lightbulb is lit, it represents an energy source that produces light and heat. Thermometers are used to measure heat energy. When the lightbulb is lit, the students observe the thermometers and record their observations in their journals.

The table is titled: Time and Temperature. The table has three columns and three rows. The columns are labeled, from left to right: Time (in minutes), Temperature Close to Lightbulb (in degrees Celsius ($^{\circ}\text{C}$)), Temperature Away from Lightbulb (in degrees Celsius ($^{\circ}\text{C}$)).

Question number seven (7):

The data in the table show the temperature away from the lightbulb and the time in minutes. Make a graph of the data.

The table is titled: Time and Temperature. The table has three columns and three rows. The columns are labeled, from left to right: Time (in minutes), Temperature Close to Lightbulb (in degrees Celsius ($^{\circ}\text{C}$)), Temperature Away from Lightbulb (in degrees Celsius ($^{\circ}\text{C}$)).

Select a location on the graph to plot each data point from the table.

The graph is titled: Temperature Away from Lightbulb. The horizontal axis is labeled: Time (in minutes). The vertical axis is labeled: Temperature (in degrees Celsius ($^{\circ}\text{C}$)).

Select the Blue arrow at the top to go on.

Scene:

The Sun also produces light and heat. Students want to know how an energy source like the Sun affects the amount of water that evaporates. They place equal amounts of water in three (3) different locations. They measure the temperature in each location and record the data in their journals.

The table is titled: **Temperature in Three Locations**. The table has two columns and three rows. The columns are labeled, from left to right: **Location, Air Temperature (in degrees Celsius (°C))**. The Location column is labeled, from top to bottom: **Window, Room, Refrigerator**.

Question number eight (8):

What causes the phase change in each of the pictures?

Drag the words into the diagram.

The answer options are labeled, from left to right: **Cooling, Heating**. The diagrams are titled: **Phase Changes**. The top diagram is labeled, from left to right: **Solid, Gas**. The middle diagram is labeled, from left to right: **Liquid, Solid**. The bottom diagram is labeled, from left to right: **Gas, Liquid**.

Select the Blue arrow at the top to go on.

Scene:

At the end of the day, the students measure the amount of water left in each pan. They record the data in their journals.

The table is titled: **Temperature's Effect on Evaporation**. The table has four columns and three rows. The columns are labeled, from left to right: **Location**, **Water at Start (in milliliters (mL))**, **Air Temperature (in degrees Celsius (°C))**, **Water at End (in milliliters (mL))**. The Location column is labeled, from top to bottom: **Window**, **Room**, **Refrigerator**.

Question number nine (9):

What happens when water evaporates?

Choose one of the following answers. (Read answers aloud.)

- A. The water gets hotter.**
- B. The water changes color.**
- C. The water changes into a gas.**
- D. The water changes into a solid.**

STOP

Refer to the *Directions for Online Administrations* for information on collecting test materials from the student.

SCRIPT FOR USE WITH THE LARGE PRINT AND BRAILLE ITEM SAMPLER

After reading the applicable scripted instructions in the *Directions for Paper Administrations*, say the following before you begin reading the questions on page 27.

After I read each question, I will pause for as much time as you need to answer the question. Then I will read the next question. You may ask me to repeat any question as many times as you need.

GRADE 5 SCIENCE ITEM SAMPLER SCRIPT
FOR USE WITH LARGE PRINT AND BRAILLE ITEM SAMPLER
SEGMENT 1

We will now begin Segment One (1).

Title Page:

Pond History

Scene:

A teacher brings her students to observe a small pond. They notice many kinds of small animals, including fish, snails, mussels, leeches, and ducks. The male duck is swimming across the pond to the female duck sitting on her nest.

Question number one (1):

Many organisms in this habitat have a way to protect themselves from predators. Identify two (2) organisms that have coverings that protect them from predators.

On the diagram, circle two (2) organisms you want to select.

The answer options are labeled, from left to right: Cattails, Mussel, Snail, Leech.

Scene:

Five years later, the teacher brings another group of students to the same spot. Many changes have taken place. The area has dried up, and the pond is now gone. The teacher explains that the area has had little rain. The teacher shows this graph to the students.

The graph is titled: Average Rainfall. The horizontal axis is labeled: Year. The vertical axis is labeled: Rainfall (in centimeters (cm)).

Question number two (2):

A type of snail is extinct in this area. Which statement explains why this may have happened?

The graph is titled: Number of Snails in Pond. The horizontal axis is labeled: Year. The vertical axis is labeled: Number of Snails.

Choose one of the following answers. (Read answers aloud.)

- A. It reproduced too rapidly.**
 - B. It could not live near plants.**
 - C. It could not adapt to new conditions.**
 - D. It was eaten by too many consumers.**
-

Scene:

Twenty years later, grasses are growing where the pond was. The teacher and some students dig up shells.

Question number three (3):

The shells are sorted by shape. Sort the remaining three (3) shells by shape.

Each remaining shell is labeled A, B, or C. Write the letter of each shell in the correct group. You may only use each letter one (1) time.

The diagram is labeled, from left to right: Group one (1), Group two (2). The answer options are titled: Shells. The diagrams are labeled, from left to right: A, B, C.

Title Page:

Snow Cave

Scene:

The students and their teacher are making a pile of snow and then digging it out to make a snow cave. The cave will be used for some investigations. The students place one (1) box inside the cave and one (1) box outside the cave. Both boxes are placed upside down. A thermometer is placed on each box.

Question number four (4):

The air temperature is negative two (-2) degrees Celsius (twenty-eight (28) degrees Fahrenheit). Which statement correctly describes what happens to snow at this temperature?

Choose one of the following answers. (Read answers aloud.)

- A. Snow starts to melt.
 - B. Snow remains frozen.
 - C. Snow changes to steam.
 - D. Snow melts and then freezes again.
-

Scene:

One cardboard box is inside the cave and the other is outside the cave. Students place the thermometers and bottles filled with hot water on the cardboard boxes. Later, the students check the air temperatures on their thermometers. The air temperature readings are shown in the table.

The table is titled: **Air Temperature**. The table has two columns and two rows. The columns are labeled, from left to right: **Inside, Outside**. The rows are labeled, from top to bottom: **Before, After**.

Question number five (5):

Make a graph of the air temperatures inside and outside of the cave thirty (30) minutes after the hot water bottles are added.

The table is titled: Air Temperature. The table has two columns and two rows. The columns are labeled, from left to right: Inside, Outside. The rows are labeled, from top to bottom: Before, After.

Write a plus sign (+) above each bar where the top of the bar should be.

The bar graph is titled: Air Temperature After Hot Water Bottles Are Added. The horizontal axis is labeled: Location. The horizontal axis reads, from left to right: Inside the cave, Outside the cave. The vertical axis is labeled: Temperature (degrees Celsius (°C)).

Scene:

Students fill four (4) containers with equal amounts of water and seal them. Two of the containers are placed in mittens. One container with a mitten and one container without a mitten are placed in the snow cave. One container with a mitten and one container without a mitten are left outside the snow cave. One hour later, the container left outside without a mitten is frozen. The other containers still contain liquid water.

Question number six (6):

There is ice in the container that was left outside without a mitten. If the air temperature increases to ten (10) degrees Celsius (fifty (50) degrees Fahrenheit), what will happen to the ice?

Choose one of the following answers. (Read answers aloud.)

- A. It will lose mass.**
 - B. It will get heavier.**
 - C. It will start to boil.**
 - D. It will change into a liquid.**
-

STOP

Stop when the student reaches the end of Segment 1. Refer to the *Directions for Online Administrations* as needed before continuing.

GRADE 5 SCIENCE ITEM SAMPLER SCRIPT
FOR USE WITH LARGE PRINT AND BRAILLE ITEM SAMPLER
SEGMENT 2

We will now begin Segment Two (2).

Title Page:

Mining

Scene:

Mining is a common practice used to obtain different resources. Many of the resources obtained by mining go through different processes before they are used by people.

Question number seven (7):

Iron is found in the mineral hematite. What is done to the mineral hematite to separate out the iron?

Choose one of the following answers. (Read answers aloud.)

- A. Hematite is processed.**
- B. Hematite is kept in one piece.**
- C. Hematite is found in more than one mine.**
- D. Hematite is sold for a large amount of money.**

Question number eight (8):

People use mined natural resources to supply energy to their homes. Which resource is a source of non-renewable energy?

Choose one of the following answers. (Read answers aloud.)

- A. Coal
- B. Solar
- C. Water
- D. Wind

Scene:

A gravel pit is a location where gravel is mined. Different minerals can be found in a gravel pit.

The table has five columns and three rows. The columns are labeled, from left to right: Mineral, Streak Test, Luster, Hardness, Color. The Mineral column is labeled, from top to bottom: Hematite, Bauxite, Gypsum. The Streak Test column is labeled, from top to bottom: Red, Light brown, White. The Luster column is labeled, from top to bottom: Metallic, Non-metallic, Non-metallic. The Color column is labeled, from top to bottom: Silver, Brown, White.

A lower hardness number means a softer mineral.

Question number nine (9):

A student tests an unknown mineral. This unknown mineral can be scratched by hematite. What conclusion can the student make about the mineral based on this test?

Choose one of the following answers. (Read answers aloud.)

- A. The mineral is bauxite.**
 - B. The mineral is gypsum.**
 - C. The mineral is softer than hematite.**
 - D. The mineral is harder than hematite.**
-

Scene:

Before this area was mined, the land looked very different.

The top diagram is titled: Before Mining. The bottom diagram is titled: After Mining.

Question number ten (10):

Mining in this forested area can have positive and negative effects on the environment. Identify the two (2) possible negative effects.

Circle the two (2) effects you want to choose.

The answer options are titled: Possible Effects. The top row is labeled, from left to right: Decreases natural habitat, Discover source of groundwater. The bottom row is labeled, from left to right: Pollution produced by machines, Find needed resources.

Scene:

After the mining is finished, the land can be used for recreation.

The diagram is titled: Playground.

Question number eleven (11):

Students go down the slide. Identify each force that affects the students' motion on the slide.

Circle each force you want to choose.

The answer options are titled: Forces. The answer options are labeled, from top to bottom: Electricity, Friction, Gravity, Magnetism.

Title Page:

Energy

Scene:

A teacher will build an electrical circuit to light a lightbulb.

Question number twelve (12):

These are parts of electrical circuits. Identify the three (3) parts that will make a complete circuit together.

On the diagram, circle the three (3) parts you want to choose.

The top row of answer options is labeled, from left to right: Light socket, Battery, Wires. The bottom row is labeled, from left to right: Lightbulb and socket, Open switch.

Scene:

When a lightbulb is lit, it represents an energy source that produces light and heat. Thermometers are used to measure heat energy. When the lightbulb is lit, the students observe the thermometers and record their observations in their journals.

The table is titled: Time and Temperature. The table has three columns and three rows. The columns are labeled, from left to right: Time (in minutes), Temperature Close to Lightbulb (in degrees Celsius ($^{\circ}\text{C}$)), Temperature Away from Lightbulb (in degrees Celsius ($^{\circ}\text{C}$)).

Question number thirteen (13):

The data in the table show the temperature away from the lightbulb and the time in minutes. Make a graph of the data.

The table is titled: Time and Temperature. The table has three columns and three rows. The columns are labeled, from left to right: Time (in minutes), Temperature Close to Lightbulb (in degrees Celsius ($^{\circ}\text{C}$)), Temperature Away from Lightbulb (in degrees Celsius ($^{\circ}\text{C}$)).

Write a plus sign (+) on the graph to plot each data point from the table.

The graph is titled: Temperature Away from Lightbulb. The horizontal axis is labeled: Time (in minutes). The vertical axis is labeled: Temperature (in degrees Celsius ($^{\circ}\text{C}$)).

Scene:

The Sun also produces light and heat. Students want to know how an energy source like the Sun affects the amount of water that evaporates. They place equal amounts of water in three (3) different locations. They measure the temperature in each location and record the data in their journals.

The table is titled: Temperature in Three Locations. The table has two columns and three rows. The columns are labeled, from left to right: Location, Air Temperature (in degrees Celsius ($^{\circ}\text{C}$)). The Location column is labeled, from top to bottom: Window, Room, Refrigerator.

The top row of diagrams is labeled, from left to right: Window, Room. The bottom diagram is labeled: Refrigerator. In each diagram, the thermometer is labeled: degrees Celsius ($^{\circ}\text{C}$).

Question number fourteen (14):

What causes the phase change in each of the pictures?

Each word is labeled A or B. Write the letter of the correct word in each empty box of the diagram. You may use each letter more than once.

The answer options are labeled, from left to right: A. Cooling, B. Heating. The diagrams are titled: Phase Changes. The top diagram is labeled, from left to right: Solid, Gas. The middle diagram is labeled, from left to right: Liquid, Solid. The bottom diagram is labeled, from left to right: Gas, Liquid.

Scene:

At the end of the day, the students measure the amount of water left in each pan. They record the data in their journals.

The table is titled: Temperature's Effect on Evaporation. The table has four columns and three rows. The columns are labeled, from left to right: Location, Water at Start (in milliliters (mL)), Air Temperature (in degrees Celsius ($^{\circ}\text{C}$)), Water at End (in milliliters (mL)). The Location column is labeled, from top to bottom: Window, Room, Refrigerator.

The diagram is labeled, from left to right: Window, Room, Refrigerator.

Question number fifteen (15):

What happens when water evaporates?

Choose one of the following answers. (Read answers aloud.)

- A. The water gets hotter.
- B. The water changes color.
- C. The water changes into a gas.
- D. The water changes into a solid.

STOP

Refer to the *Directions for Online Administrations* for information on collection and return of test materials.

