

Science Centers



Grade 5

Revised, 2003

Science Strand A

Volume

Benchmark SC. A. 1.2.1 The student determines that the properties of materials (e.g., density and volume) can be compared and measured (e.g., using rulers, balances, and thermometers).

Task: Practice measuring volume.

Materials:

One large measuring cup
One single hole paper punch
One small stapler
One pen



Two different size rocks
One set of keys
One pencil
water



Procedure:

1. Copy the chart below to record your data.
2. List the objects on your data chart.
3. Record the level of water.
4. Gently place the rock in the container of water.
5. Record the level of the water after the rock was placed in the water. This method is known as the displacement method.
6. Subtract the water level with the object from the original water level. This is the volume of the rock.
7. Follow the same procedure for the other objects. Be sure to record the water level each time.
8. Analyze the data. Which object displaced more water? Which object displaced the least amount of water? Which objects displaced the same amount of water? Which objects displaced water but the amount was so small it was difficult to record the displacement?

Volume Assessment

Benchmark—SC.A. 1.2.1

Circle the correct answer.

1. The science center contained a variety of irregularly shaped objects. The class was instructed to find the volume of these objects. Which of the following is a method for finding the volume of these objects?
 - A. replacement
 - B. weighing the object
 - C. measuring the object
 - D. displacement

2. The difference between the weight of the object and how much water it displaces is called?
 - F. density
 - G. volume
 - H. buoyancy
 - I. gravity

Write an explanation of how to find the volume of an irregular solid in your science journal.

Science Strand A

Chemical Change

Benchmark SC.A. 1.2.5 The student knows that materials made by chemically combining two or more substances may have properties that differ from the original materials

Task: Learn how fireworks are examples of a chemical change.

Materials:

Paper and pencil



Procedure:

1. Read the following passage about fireworks.

Fireworks are made of gunpowder and other ingredients that explode with loud noises. When they burn colorful sparks and flames can be seen. Gunpowder is tightly packed in hollow paper tubes. Coarse gunpowder tightly packed is used to propel rockets into air. Another type of gunpowder that is finer and more loosely packed explodes to break up the rocket once it is in the air. Chemicals are added to the gunpowder to create colors. Fireworks are examples of chemical changes.

Fireworks have other uses. A device called a fusee burns with a bright red flame and is used as a danger signal on highways. A pistol that shoots a flare into the air can be used to signal that help is needed. Parachute flares are used to light up landing areas.

Since fireworks are made with gunpowder and can explode they can be very dangerous. Children should not play with fireworks.

Chemical Change Assessment

Benchmark—SC.A. 1.2.5

Circle the correct answer.

1. What are two indicators that a chemical change occurs when fireworks are lit?

- A. bright flames and colors
- B. flying paper and debris
- C. loud noises and pops
- D. loud noises and designs



2. When you mix yeast with warm water bubbles can be observed. The bubbles indicate that a change has occurred. Which of the following describes this change?

- F. physical
- G. chemical
- H. mechanical
- I. electrical

Create a cartoon character named Chemical Reactor. Draw a cartoon using your character to teach a friend about chemical reactions.

Science Strand A

Sum of its Parts

Benchmark SC. A. 1.2.3 The student knows that the weight of an object always equals the sum of its parts.

Task: Determine if the weight of an object always equals the sum of its parts.

Materials:

One triple beam balance scale

Five rocks placed in a paper bag



One marker

One box of crayons

Procedure:

Create a chart with four columns. Label the first column ITEM, the second column WHOLE, Third Column PIECES, and the fourth column TOTAL OF PIECES

1. Make a list of each of the items in the box.
2. Weigh the marker first. Record its weight on your list.
3. Weigh the entire box of crayons. Record its weight on your list.
4. Weigh the bag of rocks. Record the weight on your list.
5. Take the cap off the marker and weigh it. Record its weight.
6. Weigh the marker without the cap. Record its weight.
7. Add the two weights together. Record your answer.
8. Remove the crayons from the box. Weigh each crayon. Record the weight of each.
9. Weigh the box. Record its weight.
10. Add the weights together. Record your answer.
11. Remove the rocks from the bag. Weigh each rock. Record the weight of each.
12. Weigh the paper bag. Record its weight.
13. Add the weights together. Record your answer.
14. Analyze the weights you recorded.
15. Based on the data you collected write a conclusion in your science journal.

Sum of its Parts Assessment Benchmark—SC.A. 1.2.3

Circle the correct answer.

1. John had a Lego Set. He took several Lego pieces and weighed them. He made an airplane with all the Lego pieces he weighed. What would the weight of the airplane be? Write the answer in your science journal.

- A. less than the parts
- B. more than the parts
- C. equal to the parts
- D. can't be calculated



2. Which of the following tools would be best to use to measure an object's mass?

- F. a balance scale
- G. a digital scale
- H. a measuring tape
- I. a ruler

Science Strand A

Physical Change

Benchmark SC.A. 1.2.4 The student knows that different materials are made by physically combining substances and that different objects can be made by combining different materials.

Task: What are the similarities and differences between a solution and a mixture?

Materials:

Paper

Pencil

Science Resource Books, Internet access

Procedure:

1. Research mixtures and solutions using books, Internet or encyclopedias.
2. Create a Venn Diagram to show the differences and similarities between solutions and mixtures.

Physical Change Assessment Benchmark—SC.A. 1.2.4

Circle the correct answer.

1. Which of the following describes a bowl of raisin bran?



- A. Made of substances that are combined that can easily be separated.
- B. Made of substances that are combined that can only be separated when milk is added.
- C. Made of substances that are combined that cannot easily be separated.
- D. Made of substances that are combined that can only be separated when heated.

2. Which of the following is an example of a solution?

- F. salt water
- G. water
- H. cereal
- I. peanut butter

Define and explain the difference between a mixture and a solution. Write the answer in your science journal.

Science Strand A

Magnification

Benchmark SC.A. 2.2.1 The student knows that materials may be made of parts too small to be seen without magnification.

Task: Determine the components of different fabrics.

Materials:

One microscope

Several pieces of different kinds of fabrics



Procedure:

1. Select a fabric to place under the microscope. Observe it first with just your eyes. Draw a picture of what you see in your science journal. Label your picture.
2. Predict what the fabric will look like when placed under the microscope. Write your prediction in your science journal.
3. Place the fabric under the microscope. Draw a picture of what you see. Label your picture.
4. Compare and contrast your observations. What did you see under the microscope that you did not see with just your eyes?
5. Follow the same procedure for the other pieces of fabric.

Magnification Assessment Benchmark—SC.A. 2.2.1

Circle the correct answer.

1. What happens to objects when placed under a microscope?

- A. Some small objects look bigger.
- B. Some small objects look smaller.
- C. Things that you could not see with your eyes are visible.
- D. Things that you could not see with your eyes are invisible.



2. What objects listed below will require a microscope to see their parts?

- F. the color of a penny
- G. the holes in a big button
- H. an insect's compound eyes
- I. a marble

Write a description in your science journal of what one piece of fabric looked like when you viewed it under a microscope.

Answer Key

5th Grade Science Centers

Strand A- Nature of Matter

Volume (SC.A. 1.2.1)

1. D
2. G

Chemical Change (SC.A. 1.2.5)

1. A
2. G

Sum of its Parts (SC.A. 1.2.3)

1. C
2. F

Physical Changes (SC.A. 1.2.4)

1. A
2. F

Magnification (SC.A. 2.2.1)

1. C
2. H

Science Strand B

Light & Heat

Benchmark SC.B. 1.2.3 The student knows that most things that emit light also emit heat.

Task: Determine if a flashlight also emits heat

Materials:

- One flashlight
- One thermometer



Procedure:

1. Predict if the flashlight will raise the temperature of the thermometer. Write your prediction in your science journal.
2. Look at the thermometer. Record the temperature.
3. Turn on the flashlight and place it close to the bulb of the thermometer.
4. Check the temperature after 3 minutes.
5. Record the temperature.
6. Write a conclusion in your science journal.



Light & Heat Assessment

Benchmark—SC.B. 1.2.3

Circle the correct answer.

1. Scott filled two glasses with the same amount of cold water. He placed the same amount of ice in each glass. He placed one glass under his desk lamp and the other one on a shelf away from the lamp. The phone rang and Scott talked to his friend for about half an hour. When he reached for the glass of water that was under the lamp, he noticed that the ice had melted. The glass on the shelf still had ice in it. Which of the following had the most effect on why the ice melted in one glass and not the other.

- A. The temperature in the room.
- B. The temperature of the ice cubes.
- C. The heat emitted by light.
- D. The heat emitted by water.



2. Jerry's little sister was playing outside on a hot sunny day. She asked Jerry to bring her a popsicle. Jerry told her that she should eat her popsicle inside the house. She wanted to know why. What explanation did Jerry give his sister?

- F. The popsicle would not melt inside the house.
- G. The bright sun would cause the popsicle to melt faster.
- H. By the time he brought the popsicle outside it would be melted.
- I. He didn't know which flavor popsicle she wanted.

Write about an object that gives light. Explain how heat is also emitted from this object.

Science Strand B

Transformation of Energy

Benchmark SC.B. 1.2.4 The student knows the many ways in which energy can be transformed from one type to another.

Task: Create an electric circuit

Materials:

- One 6V dry cell
- Two 40cm pieces of bell wire
- One socket
- One bulb



Procedure:

1. Connect the wires to the battery and the socket.
2. If the light bulb lights up the circuit is complete.
3. If the light bulb does not light up try again or ask a classmate for help.
4. Write the directions for making a light bulb light up in your science journal.

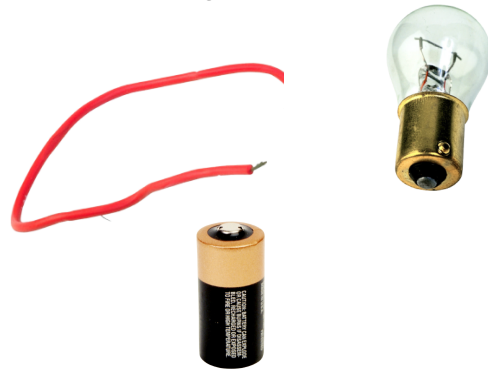
Transformation of Energy Assessment

Benchmark—SC.B. 1.2.4

Circle the correct answer.

1. Carolyn took wires and batteries to make an electric circuit to light up a bulb. Which of the following best describes the energy transformation that took place?

- A. chemical to electric to light
- B. mechanical to chemical to light
- C. chemical to light to mechanical
- D. light to electric to chemical



2. What type of energy transformation takes place when food is eaten?

- F. radiant to mechanical
- G. mechanical to chemical
- H. electric to chemical
- I. chemical to electric

Science Strand B

Measuring Energy

Benchmark SC.B. 1.2.5 The student knows that various forms of energy (e.g., mechanical, chemical, electrical, magnetic, nuclear, and radiant) can be measured in ways that make it possible to determine the amount of energy that is transformed.

Task: Determine how electric companies calculate the electricity a family uses in a month.

Materials:

Dictionary
Encyclopedia
Internet

Procedure:

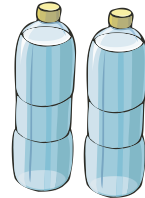
1. Define watt, watt-hour.
2. Use an encyclopedia or the Internet to research how electricity is measured.
3. Write a report.

Measuring Energy Assessment

Benchmark—SC.B. 1.2.5

Circle the correct answer.

1. Frank filled two 1 liter bottles with water. He placed one bottle of water in the sun and the other bottle in a shaded area. What does he need to do next in order to determine the exact temperature in each bottle?



- A. Return in an hour and feel the bottles.
 - B. Return in an hour and predict which is warmer.
 - C. Place one thermometer first in one bottle and then the next and record the temperatures.
 - D. Place a thermometer in each bottle and record the temperatures after one hour.
2. John made two electromagnets. One electromagnet he coiled the wire 10 times. The second electromagnet he coiled the wire 20 times. What does John need to do next to determine which electromagnet is stronger?



- F. Test the electromagnets.
- G. Determine how he will test each electromagnet.
- H. Predict which magnet will be the strongest.
- I. Write a conclusion.

What are some ways in which a family can reduce their electric bill?

Science Strand B

Moving Heat

Benchmark SC.B. 1.2.6 The student knows ways that heat can move from one object to another.

Task: Determine which of the above objects conduct electricity.

Materials:

- One 6V dry cell
- One socket
- One light bulb
- One cork
- One nail or other metal object
- One plastic ruler
- One 5x5 square piece of aluminum foil
- One paper clip
- Three 40cm pieces of bell wire with 3cm of insulation removed from the ends of the wires



Procedure:

1. Place the light bulb in the socket. Attach the socket with light bulb to one terminal of the battery with one piece of wire. Attach the other wires to the second terminal of the battery and the other terminal of the socket with the light bulb, leaving the two free ends to use for experimentation. Experiment with the cork first. Place one free wire on one end of the cork. Place the other free wire on the other end of the cork. Did the bulb light up?
2. Test each of the materials.
3. Record the results by writing conductor or insulator next to each of the above materials.

Moving Heat Assessment Benchmark—SC.B. 1.2.6

Circle the correct answer.

1. Materials that allow an electric current to flow through them easily is known as which of the following:

- A. radiators
- B. convectors
- C. conductors
- D. insulators

2. Which material makes the best conductor?

- F. plastic
- G. glass
- H. wood
- I. metal

3. Lightning occurs very often in Florida. How does your knowledge of conductors help you explain why lightning rods are important?

Answer Key

Science Centers

Strand B – Energy

Light and Heat (SC.B. 1.2.3)

1. C
2. G

Transformation of Energy (SC.B. 1.2.4)

1. A
2. G

Measuring Energy (SC.B. 1.2.5)

1. D
2. G

Moving Heat (SC.B. 1.2.6)

1. C
2. I
3. Metals are good conductors of electricity. A lightning rod is metal. The rod will conduct electricity from the lightning. The lightning will hit the rod and protect the building.

Science Strand C

The Ramp

Benchmark SC.C.1.2.1 The student understands that the motion of an object can be described and measured

Task: Does the height of the ramp determine how far an object will roll and how long it will take for the object to stop?

Materials:

Books
One 12"x24" board
several rolling objects (toy cars, marbles, small balls)
One stopwatch
One meter stick or tape

Procedure:

1. Stack two books.
2. Measure the height of the two books and record the measurement.
3. Place the board on the books to form a ramp.
4. Select an object that rolls.
5. Place the object on the top of the ramp.
6. Have the timekeeper get ready to start the stopwatch as soon as the object begins to roll.
7. Without using a force, place the object at the top of the ramp so that it will roll on its own.
8. Stop the watch when the object stops. Record the time.
9. Measure the distance the car traveled. Record the distance.
10. Stack three books. Follow the same procedure.
11. Stack four books. Follow the same procedure.
12. Stack five books. Follow the same procedure.
13. Analyze the data you collected.
14. Write a conclusion in your science journal.

The Ramp Assessment

Benchmark—SC.C. 1.2.1

Circle the correct answer.

1. Maria and Fabian designed an experiment using a ramp and a car. They placed the car at the top of the ramp and watched it travel down the ramp. Which of the following can be measured from doing this experiment?
 - A. time and distance
 - B. friction and gravity
 - C. pressure and speed
 - D. force and motion

2. Maria and Fabian added a strip of sandpaper to one half of the ramp. The other half they left smooth. They placed a car on top of each of the surfaces of the ramp. They watched the two cars travel down the ramp. What effect will the sandpaper have on the speed of the car?
 - F. The car will travel faster down the sandpaper side of the ramp.
 - G. The car will travel slower down the sandpaper side of the ramp.
 - H. The sandpaper will have no effect on the speed of the car.
 - I. The sandpaper will not allow the car to travel down the ramp.

Science Strand C

Effect of all Forces

Benchmark SC.C.2.2.4 The student knows that the motion of an object is determined by the overall effects of all of the forces acting on an object.

Task: Experiment with centripetal force.

Materials:

- One pieces of string about 1 meter long
- One 6x6 piece of cardboard
- One plastic cup
- Water

Procedure:

1. Punch a hole in each corner of the cardboard
2. Thread one length of string in one hole and diagonally across in the other hole.
3. Do the same for the other string. You should have an X on the bottom side of the cardboard.
4. Bring all four strings together so they are of equal length and tie them.
5. Place an empty cup on the tray and swing it gently. Speed is important.
6. When you stop the cup do it slowly, not abruptly.
7. Add water to the cup and swing it around. Remember- speed is important.

Effect of all Forces Assessment Benchmark—SC.C. 2.2.4

Circle the correct answer.

1. Speed and centripetal force helped to overcome which of the following?

- A. energy
- B. gravity
- C. motion
- D. force

2. Explain how friction affects motion.

3. Write in your journal two things you learned from doing this experiment

Answer Key

Science Centers

Strand C – Force & Motion

The Ramp (SC.C. 1.2.1)

1. A.
2. G

Effects of All Forces (SC.C. 2.2.4)

1. B
2. Friction slows down objects. An object will travel slower when there is friction. A smooth surface has less friction than a rough surface.

Science Strand D

Which Soil is Best?

Benchmark SC.D. 1.2.1 The student knows that larger rocks can be broken down into smaller rocks, which in turn can be broken down to combine with organic material to form soil.

Task: Observe a variety of soils and tell how they are alike and different.

Materials:

- One cup of sand
- One cup of soil from the schoolyard
- One cup of potting soil
- radish seeds (optional)

Procedure:

1. Look at sand. Draw a picture of what it looks like. Label your picture.
2. Look at sand under a microscope. Draw a picture of what it looks like. Label your picture,
3. Look at soil from the schoolyard. Draw a picture of what it looks like. Label your picture.
4. Look at soil from the schoolyard under a microscope. Draw a picture of what it looks like. Label your picture,
5. Look at potting soil. Draw a picture of what it looks like. Label your picture.
6. Look at potting soil under a microscope. Draw a picture of what it looks like. Label your picture.
7. Create a Venn Diagram of how these soils are alike and different.

Which Soil is Best?

Benchmark—SC.D. 1.2.1

Circle the correct answer.

1. Paul and Anton planted radishes. Paul planted his radish seeds in sand. Anton planted his seeds in rich potting soil. Which hypothesis best describes what might occur in this experiment?

- A. Paul's plants will grow better because any type of plant will grow in sand.
- B. Anton's plants will grow better because rich soil is best for most plants.
- C. Both plants will grow the same as long as they are watered.
- D. Both plants will grow the same because soil makes no difference.



Short Response: What are the components of soil?

Extended Response: Design an experiment to test which soil is best for radishes to grow.

Science Strand D

Water Cycle

Benchmark SC.D. 1.2.3 The student knows that the water cycle is influenced by temperature, pressure, and the topography of the land.

Task: Make a model of the water cycle.

Materials:

One paper plate per student
assorted colors of construction paper
scissors
markers
paste or glue stick

Procedure:

1. Use construction paper to make mountains, trees, sun, ocean, islands, and clouds.
2. Paste them on the paper plate.
3. Print the following words on small pieces of paper: evaporation, condensation, precipitation.
4. Use these words to label the parts of the water cycle.

Water Cycle Assessment Benchmark—SC.D. 1.2.3

Circle the correct answer.

1. What takes place when liquid water is changed to a gas?

- A. precipitation
- B. condensation
- C. evaporation
- D. accumulation

2. Which of the following is an example of condensation?

- F. water changing to a gas
- G. water changing to a solid
- H. water changing from a solid back to a liquid
- I. water changing from water vapor back to a liquid

3. Explain what changes the water goes through when moving through the water cycle?

Science Strand D

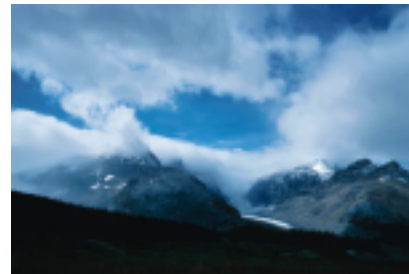
Processes that Shape the Earth

Benchmark SC.D. 1.2.4 The student knows that the surface of the Earth is in a continuous state of change as waves, weather, and shifts of the land constantly change and produce many new features.

Task: Research how the following land formations are formed.

Materials:

Books
Encyclopedias
Internet



Procedure:

1. Research one of the following land formations and write an explanation of how it was formed. Include where the land formation is located. Create an illustration of the land formation you selected.

1. Mountains
2. Volcanoes
3. Glaciers
4. Canyons
5. Rivers



Process that Shape the Earth Assessment

Benchmark—SC.D. 1.2.4

Circle the correct answer.

1. Volcanoes seem to occur in certain areas of the world. What best describes why volcanoes occur only in these places?

- A. Movement of lava
- B. Movement of glaciers
- C. Earth's rotation on its axis
- D. Theory of Plate Tectonics



2. Short Response: Think about the beaches in South Florida. What causes the erosion of a beach?

3. Extended Response: Describe ways in which beach erosion can be prevented?

Answer Key

Science Centers

Strand D – Processes that Shape the Earth

Which Soil is Best (SC.D. 1.2.1)

1. B
2. The components of soil are rocks, pebbles, and the remains of dead plants and animals.
3. Place the same amount of 3 different soils in the same cups. Plant 3 seeds in each. Place in sunny area. Water regularly. Measure and record growth. At the end of a month compare the plants.

Water Cycle (SC.D. 1.2.3)

1. C
2. I
3. Water evaporates and changes from a liquid to a gas. It condenses from a gas to a liquid.

Processes that Shape the Earth (SC.D. 1.2.4)

1. D
2. Wind and waves
3. Plant grass or other plants to prevent the beaches from washing away.

Night & Day Assessment Benchmark—SC.E. 1.2.1

Circle the correct answer.

1. Short Response: What is the difference between rotation and revolution?

2. What causes night and day?

- F. the Earth rotating on its axis
- G. the Earth revolving on its axis
- H. the sun rotating on its axis
- I. the sun revolving on its axis



3. How do we know that the Earth rotates on its axis every 24 hours?

- A. There are changes in seasons.
- B. There are four phases of the moon.
- C. There is night and day.
- D. The sun only gives light during the day.

Science Strand E

Moon Phases

Benchmark SC.E. 1.2.2 The student knows that the combination of the Earth's movement and the moon's own orbit around the Earth results in the appearance of cyclical phases of the moon.

Task: Students will identify the phases of the moon.

Materials:

Books
Encyclopedias
Internet – Key Words – Moon phases
Construction paper
Markers



Procedure:

1. Research phases of the moon.
2. Design a model, poster, poem, mnemonic or cartoon character to explain the phases.
3. Share you product with the rest of the class.



Moon Phases Assessment

Benchmark—SC.E. 1.2.2

Circle the correct answer.

1. Each day for 28 days Jesse noticed that the moon changed a little each night. What could explain the change in the appearance of the moon?
 - A. The Earth orbits around the moon.
 - B. The moon orbits around the sun.
 - C. The moon only shines at night.
 - D. The moon orbits around the Earth.

2. Which of the following best explains why we only see one side of the moon?
 - F. The moon turns once on its axis but does not orbit Earth.
 - G. The moon turns once on its axis the same time it orbits the sun.
 - H. The moon turns once on its axis as it orbits Earth, and gravity keeps the same side turned to Earth.
 - I. The moon turns once on its axis as it orbits Earth, and friction keeps the same side turned to Earth.



Answer Key

Science Centers

Strand E -Earth and Space

Night and Day (SC.E. 1.2.1)

1. Rotation of the Earth on its axis causes night and day.
Revolution of the Earth around the sun causes seasons.
2. F
3. C

Moon Phases (SC.E. 1.2.2)

1. D
2. G

Science Strand F

Body Systems

Benchmark SC.F. 1.2.1 The student knows that the human body is made up of systems with structures and functions that are related.

Task: Draw a diagram of how food travels through the digestive system.

Materials:

Books
Encyclopedias
Internet

Procedure:

1. Look at the diagram of the Digestive System in your science book page A19.
2. Read how food travels through the Digestive System to give your cells the energy they need.
3. Draw a diagram of food traveling through your Digestive System.

Body Systems Assessment

Benchmark—SC.F.1.2.1

Circle the correct answer.

1. Saliva moistens food. What other function does saliva have?
 - A. produces bile
 - B. transports blood to the cells
 - C. breaks down food into simple substances
 - D. produces gastric juices

2. What is the function of the small intestine?
 - F. produces saliva
 - G. transports blood to the cells
 - H. breaks down proteins
 - I. produces chemicals for digestion

Science Strand F

The Cell

Benchmark SC.F. 1.2.3 The student knows that living things are different but share similar structures.

Task: Make a model of an animal or plant cell.

Materials:

Construction paper
Scissors
Markers
Glue



Procedure:

1. Look in your science textbook for a picture of a plant and animal cell.
2. Compare the two cells.
3. What does a plant cell have that an animal cell does not have?
4. Make a model of an animal or plant cell.
5. Label its parts.

The Cell Assessment Benchmark—SC.F.1.2.3

Circle the correct answer.

Short Response: What is the biggest difference between a plant and animal cell?

Answer Key

Science Centers

Strand F – Processes of Life

Body Systems (SC.F. 1.2.1)

1. C
2. H

The Cell (SC. F. 1.2.3)

Short Response

The difference between a plant and animal cell is that a plant cell has a cell wall and a chloroplast and an animal cell does not.

Science Strand G

Photo What?

Benchmark SC.G. 1.2.3 The student knows that green plants use carbon dioxide, water, and sunlight energy to turn minerals and nutrients into food for growth, maintenance, and reproduction.

Task: Create a model to explain photosynthesis.

Materials:

Assorted colors of construction paper

Procedure:

1. Research photosynthesis.
2. Use construction paper to create the Sun, soil, water and green plants.
3. Create labels for oxygen, carbon dioxide, sugar and starches.
4. Use your model to explain the process of photosynthesis to someone in your class or at home.

Photo What? Assessment Benchmark—SC.G.1.2.3

Circle the correct answer.

Short Response: “I need to feed my plants,” said Roberto. Explain why Roberto’s statement is not true.

1. Which of the following best explains why trees are important.
 - A. They provide food and oxygen for animals.
 - B. They provide shelter.
 - C. They provide shade.
 - D. They provide nutrients and minerals.

Science Strand G Competition

Benchmark SC.G. 2.2.1 The student knows that all living things must compete for Earth's limited resources; organisms best adapted to compete for available resources will be successful and pass their adaptations (traits) to their offspring

Task: What causes animals to become endangered and/or extinct?

Materials:

Internet

Encyclopedia

Books

Internet Web-site – endangered.fws.gov/kids/risky.htm



Procedure:

1. Select one of the following animals to research: Leatherback turtle, loggerhead turtle, manatee, Florida panther.

2. Research the following:

Animal's habitat

Animal's source of energy

Causes of endangerment

Ways to protect the animal

3. Plan a way to communicate what you learned with your class. You may want to design a poster, commercial, cartoon, or slogan.



Competition Assessment

Benchmark—SC.G.2.2.1

Circle the correct answer.

1. Takisha had a small pond in her garden. The pond was always filled with water. One day Takisha noticed that there were many mosquitoes flying around near the pond. Her father found some frogs and placed them near the pond. What will probably happen to the mosquito population?
- A. It will increase
 - B. It will decrease
 - C. It will remain the same
 - D. The frogs will get fat



Short Response: People are moving into South Florida at a very fast rate. What are some of the problems to the environment caused by an increase in population?

Answer Key

Science Centers

Strand G – How Living Things Interact with Their Environment

Photo What? (SC.G. 1.2.3)

Short Response

Plants make their own food.

1. A

Competition (SC.G. 2.2.1)

1. B
2. Answers may vary but may include:
Too many people--> more water used.
Increase in people --> more cars --> more air pollution.

Science Strand H

Explore the Natural World

Benchmark SC.H. 1.2.2 The student knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results

Task: Observe the kinds of plants that grow in the schoolyard?

Materials:

A variety of leaves from the school yard
Crayons
Paper

Procedure:

1. Observe the leaves with only your eyes.
2. Observe the leaves using a hand lens.
3. Observe the leaves using a microscope.
4. Place one leaf under a sheet of paper.
5. Select a crayon of your choice.
6. Rub the part of the paper that is covering the leaf.
7. Do the same for the other leaves.
8. Observe the rubbings.
9. Analyze how the leaves are the same and different.
10. Report your findings to the class.



Explore the Natural World Assessment Benchmark—SC.H.1.2.2

Circle the correct answer.

Short Response: What were you able to observe about leaves with the microscope that you could not observe with your eyes only?

Extended Response: How are leaves alike and different?

3. Which of the following is essential after doing experiments?
- A. Create a bar graph
 - B. Communicate findings
 - C. Research information
 - D. Write an hypothesis

Science Strand H

What a Great Invention!

Benchmark SC.H. 3.2.1 The student understands that people, alone or in groups, invent new tools to solve problems and do work that affects aspects of life outside of science.

Task: Select an invention and tell how it impacts your life today.

Materials:

Books
Internet
Encyclopedias



Procedure:

1. Select an invention (television, computers, video games, automobiles, airplanes, space shuttle)
2. Tell who was responsible for the invention and when it was invented.
3. Tell how it affects your life today.

What a Great Invention! Assessment Benchmark—SC.H.3.2.1

Circle the correct answer.

Short Response: What impact does the Internet have on your life?

Answer Key

Science Centers

Strand H – The Nature of Sciences

Explore the Natural World (SC.H.1.2.2)

Short Response

Answers may vary but may include:

I was able to see the veins of the leaves.

Extended Response

Answers may vary but may include:

All leaves have veins. Leaves are different in size, shape and color

What a Great Invention (SCH. 3.2.1)

Answers may vary but may include:

spend a lot of time using the Internet to get information
able to do many things quicker
can chat with friends