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Extra Support for

Vocabulary and Concepts

Grade 4

HOUGHTON MIFFLIN HARCOURT

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To the Teacher

Some students may need extra support in learning new science vocabulary and concepts. The Extra Support for Vocabulary and Concepts pages are designed to fill that need. The pages accompany every content lesson in the *ScienceFusion* Student Edition and provide:

- Phonetic respellings, definitions, and tips for remembering the lesson's vocabulary terms.
- Concept statements, written in simplified language, to reinforce the lesson's main ideas.

These pages also reinforce tested content objectives and the Florida Science Benchmarks.

Ideas for Using These Pages

- Working in small groups, have students read each vocabulary word aloud and repeat it three times. Then have students alternate reading the definitions and tips for remembering the terms. Have students conclude by restating the meaning of each term in their own words.

- Working with a partner, have students take turns reading aloud the Science Ideas statements as if they were lines in a play. Challenge students to practice until they know the statements by heart.

- Suggest students read the pages at home with family members. Encourage them to enlist the help of family members in reviewing and remembering the information.

- Encourage students to use these pages as tools for reviewing unit content prior to unit reviews and tests or state science assessment.

- Have students select three or four Science Ideas statements, write them on drawing paper, and illustrate them.

- Students can cut and paste each vocabulary term and its definition into their science notebooks or onto index cards to make their own set of vocabulary cards. The cards can be used in vocabulary games and activities, such as Twenty Questions and Jeopardy®.

- Working in pairs, have students brainstorm and write a new tip for remembering each vocabulary word.

- Suggest students create a crossword puzzle with the vocabulary terms. Students can use or paraphrase the definitions provided on the page as clues.

- Have students turn each Science Ideas statement into a question. Suggest they write the question on one side or an index card and the answer on the other side. Students can use the index cards to play a question-and-answer game with a classmate.

- Suggest students rewrite each Science Ideas statement in their own words and give an example or detail that further illustrates the meaning of the statement.

- Have students select two or three vocabulary words and write as much as they can about each word, including examples, facts, and connections to other vocabulary words.

Unit 10 Organisms and the Environment

Name _____

Extra Support for Vocabulary and Concepts

Edit File

What Do Scientists Do?

Science Words

Say each word quietly to yourself. Then read the meaning.
Read the tip to help you remember.

science [SY•uhns] the study of the natural world

Science, study, and *search* begin with the same sound. When people do *science*, they study nature and search for answers.

scientist [SY•uhn•tist] a person who asks questions about the natural world

Scientist and *quest* end with the same sounds. A *scientist* is on a quest to find answer to questions.

observation [ahb•zer•VAY•shuhn] information collected by using the five senses

Observation and *information* end the same way. You can gather information through *observation*.

hypothesis [hy•PAHTH•uh•sis] an idea or explanation that can be tested with an investigation

Hypothesis ends with the sound at the beginning of *start*. A *hypothesis* starts an investigation.

investigation [in•ves•tuh•GAY•shuhn] the process scientists use to answer questions. The process may include asking questions, making observations, reading or talking to experts, drawing conclusions, and sharing what was learned.

Investigation and *question* end in *–tion*. An *investigation* can answer a question.

Name _____

What Do Scientists Do?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Science is the study of things in nature.
2. Scientists make observations about the world and ask questions about their observations.
3. A scientist may carry out an investigation to find an answer to a question.
4. Doing an experiment might be part of an investigation.
5. An experiment is a fair test that may show one thing causes something else to happen.
6. In a fair test, only one variable changes.
7. Scientific methods involve making observations, asking a question, forming a hypothesis, experimenting, recording results, drawing conclusions, and communicating.
8. A hypothesis is an idea that can be tested with an investigation.
9. Scientists use evidence to explain how things work.
10. Evidence is data gathered during an investigation.

Name _____

Extra Support for Vocabulary and Concepts

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What Skills Do Scientists Use?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

inference [IN•fer•uhns] a statement that explains an observation

Inference and *evidence* end in the same way. You might use your observations as evidence to make an *inference*.

Suppose you look out a window and observe people wearing coats, hats, and mittens. Based on this observation, you might make an inference. The *inference* might be that the weather is cold. The *inference* explains your observation. The evidence for your *inference* is your observation.

Name _____

What Skills Does Scientists Use?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Observing, or using your senses to get information, is an inquiry skill.
2. Inferring, or thinking about how to explain an observation, is an inquiry skill.
3. Scientists may compare things to find ways they are alike and different.
4. Scientists communicate, or share, the results of their work with other scientists.
5. Scientists use what they know and their observations to predict what will happen.
6. A scientist may change one variable as part of an experiment.
7. A scientist may hypothesize, or think of a testable statement that explains an observation.
8. Scientists plan and carry out an investigation to find an answer to a science question.
9. Scientists use evidence to evaluate a hypothesis and draw conclusions.
10. In their work scientists classify, measure, use numbers, use time relationships, and display data.

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Extra Support for Vocabulary and Concepts

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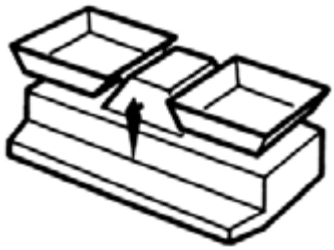
How Do Scientists Collect and Use Data?

Science Words

Say each word quietly to yourself. Then read the meaning.
Read the tip to help you remember.

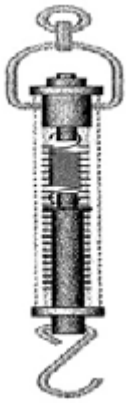
microscope [DAY•tuh] a tool for looking at objects that cannot be seen with the eye alone

Microscope and *telescope* end in *-scope*. Both words name something that makes things look bigger. A telescope makes things that are far away look bigger. A micrscope makes things look bigger.



pan balance [PAN BAL•uhns] a tool used to measure mass with units called grams

Using a *pan balance* may make you think of a seesaw. When a seesaw is balanced, both sides are at the same height. When both sides of a *pan balance* are the same height, the mass of the objects in both pans is the same.



spring scale [SPRING SKAYL] a tool used to measure force in units called newtons

Using a *spring scale* may make you think of hanging a coat from a wire hanger. If the coat is heavy, it may pull on the hanger and cause it to stretch. When an object hangs from a *spring scale*, the force of gravity pulls on the spring, which stretches.

data [DAY•tuh] bits of information you observe

Data and *date* sound almost alike. The date is a particular kind of information—the day of the month and year. *Data* can be any kind of information.

Name _____

How Do Scientists Collect and Use Data?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Scientists do research to find out what other scientists have learned about a topic.
2. A hand lens is a tool that makes things look larger.
3. A microscope lets you see things that you could not see with your eye alone.
4. Most scientists use metric units to measure distance, mass, force, volume, and temperature.
5. A pan balance measures mass in units called grams.
6. A spring scale measures force in units called newtons.
7. Distance is measured in millimeters, centimeters, and meters.
8. Temperature may be measured in degrees Celsius (ºC) or degrees Fahrenheit (ºF).
9. Scientists record and display data in tables and graphs.
10. Scientists draw conclusions from the data, which they communicate to others.

Name _____

Extra Support for Vocabulary and Concepts

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What Kinds of Models Do Scientists Use?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

model [MAHD•uhl] a representation of something real that is too big, too small, or has too many parts to investigate directly

> *Model* ends with the sound at the beginning of *look*. A *model* looks like the real thing it represents.

two-dimensional model [TOO di•MEHN•shuhn•uhl MAHD•uhl] a representation that has length and width; for example, a drawing, a diagram, or a map

> When you think of a *two-dimensional model*, think of things like pen, pencil, marker, paints, or chalk on paper.

three-dimensional model [THREE di•MEHN•shuhn•uhl MAHD•uhl] a representation that has length, width, and height

> When you think of a *three-dimensional model*, think of things made from clay, paper maché, or other materials.

computer model [kuhm•PYOOT•er MAHD•uhl] a computer program that models an event or object, for example, the way an object moves through the solar system

> *Computer* and *complicated* begin with the same sounds. *A computer model* can show things that may be too complicated to show with a two-dimensional or three-dimensional model.

Name _____

What Kinds of Models Do Scientists Use?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. A model stands for something scientists are not able to investigate directly.
2. A two-dimensional model shows length and width.
3. Drawings and diagrams are two-dimensional models.
4. Most weather reporters use maps, which are two-dimensional models.
5. A three-dimensional model shows length, width, and height.
6. A three-dimensional model shows the position of the planets and sun better than a drawing.
7. A scale model tells how much smaller or bigger the model is than the real thing.
8. In a scale model, one inch may stand for 48 inches in the real thing.
9. A computer model is a computer program that models an event or object.
10. A meteorologist may use a computer model to predict a storm.

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Extra Support for Vocabulary and Concepts

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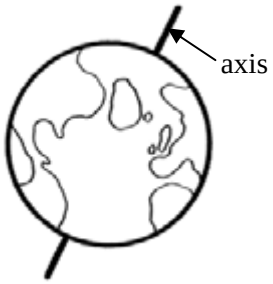
How Does Earth Rotate and Revolve in Space?

Science Words

Say each word quietly to yourself. Then read the meaning. Read the tip to help you remember.

rotate [ROH•tayt] spin

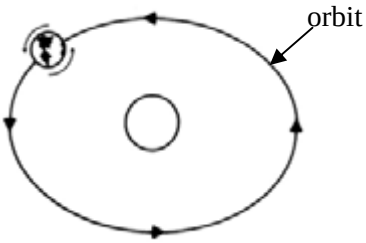
Rotate and *round* begin with the same sound. The Earth spins round and round, like a top, as it *rotates*.



axis [AK•sis] an imaginary pole that runs through Earth's center from the North Pole to the South pole

The second letter in *axis* is *x*. A line of the *x* looks like the *axis* that runs through Earth's center.

orbit [AWR•bit] the path that Earth takes around the sun



Orbit begins with an *o*. You can think of the *o* as Earth's path around the sun.

constellation [khan•stuh•LAY•shuhn] a group of stars that seem to form a pattern

Constellation and *collection* begin with the same sounds. A *constellation* is a collection of stars.

This constellation is called the Big Dipper.

Name _____

How Does Earth Rotate and Revolve in Space?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Earth rotates, or spins, on its axis once every 24 hours.
2. One side of Earth faces the sun, and the other side faces away from the sun.
3. The part of Earth facing the sun has daytime, and the part facing away from the sun has night.
4. Earth's spinning causes day and night.
5. Earth revolves around the sun in a path, or orbit.
6. Earth takes about 365 days to make one orbit around the sun.
7. Earth's orbit plus the tilt of Earth's axis cause the seasons.
8. The part of Earth tilted toward the sun has summer.
9. The part of Earth tilted away from the sun has winter.
10. A constellation is a group of stars that seem to form a pattern.

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What Are Moon Phases?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

moon phases [MOON FAYZ•uhz] changes in the appearance of the moon's shape

Phases and *faces* sound almost alike. You can think of *moon phases* as if they were faces. Seeing a full moon is like looking directly at someone's full face. The first and fourth quarter moon is like looking at someone's profile, or side view.

Name _____

What Are Moon Phases?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Neil Armstrong was the first person to walk on Earth's moon.
2. The moon is a satellite that completes an orbit around Earth in about one month.
3. The moon is small, but it looks large because it is close to Earth.
5. The moon has no air, wind, or liquid water.
5. We can see the moon because it reflects sunlight back to Earth.
6. We see only one side of the moon.
7. As the moon orbits Earth, the side we see may be completely lit or only partly lit.
8. The moon looks full when the side that faces Earth is completely lit.
9. The moon is in a crescent, or C-shape, when the side that faces Earth is only partly lit.
10. A month on our calendar is based more or less on a complete cycle of moon phases.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

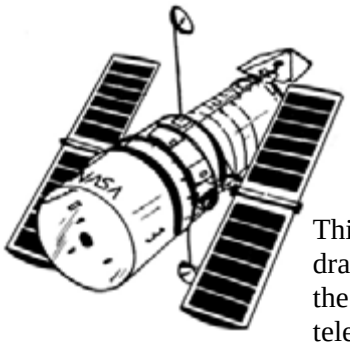
How Does Technology Help Us Learn About Space?

Science Words

Say each word quietly to yourself. Then read the meaning. Read the tip to help you remember.

telescope [TEL•uh•skohp] a tool that uses lenses to make faraway objects appear closer and larger

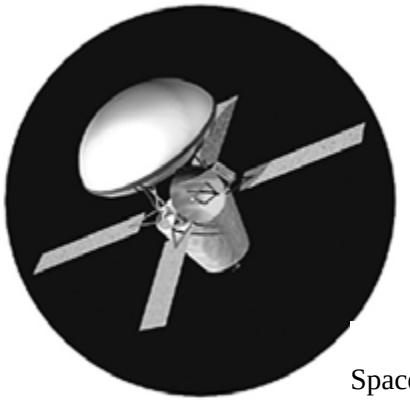
Telescope and *television* begin with *tele-*. Both words name things that make faraway objects appear closer.



This is a drawing of the Hubble telescope

space probe [SPAYS PROHB] vehicles that move through space, but are controlled from Earth

A *probe* is a tool used to explore and investigate. A dentist may use a probe to examine a patient's teeth. Scientists use *space probes* to explore distant places in space.



Space probe

Name _____

How Does Technology Help Us Learn About Space?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Early astronomers believed that Earth was the center of the universe.
2. The telescope, invented in the 1600s, let Galileo and others observe objects in space.
3. By the 1600s astronomers knew that Earth revolved around the sun.
4. In 1969 Neil Armstrong was the first human being to set foot on the moon.
5. Today astronauts live on the International Space Station, a giant space lab orbiting Earth.
6. The Hubble Space Telescope, which orbits Earth, takes pictures of space.
7. In 1976, Viking I was the first space probe to land on Mars.
8. Rockets are built and launched from the Kennedy Space Center in Florida.
9. Florida is a good place for launching rockets because of its fair weather.
10. Cordless power tools and other products we use every day were made for the space program.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

How Do Weathering and Erosion Shape Earth's Surface?

Science Words

Say each word quietly to yourself. Then read the meaning.
Read the tip to help you remember.

weathering [WETH•er•ing] the process of rocks breaking apart

Weathering may be caused by kinds of weather, such as strong winds blowing sand and raindrops that contains chemicals.

Weathering has changed the shape of these rocks.

erosion [uh•ROH•zhuhn] the process of moving weathered rock from one place to another

Erosion and *ocean* have similar sounds. A kind of *erosion* takes place at the ocean when big waves move around the sand on the beach.

deposition [dp•uh•ZISH•uhn] the dropping of weathered rock by wind or moving water

Deposition contains the word *deposit*. A deposit in a bank is money left there for safekeeping. *Deposition* leaves a deposit of weathered rock.

sediment [SED•uh•muhnt] bits of rock carried by slow-moving water

Sediment, sand, silt, and *settle* begin with the same sound. *Sediment* is sand and silt that have not settled out of the water. Sediment moves with the water's flow.

Name _____

How Do Weathering and Erosion Shape Earth's Surface?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Weathering is the process of rock breaking apart.
2. Gravity can cause rocks to fall and break; flowing water can cause rocks to scrape each other.
3. Roots can grow into rocks and break them apart; wind and water can wear away rocks.
4. Wind and rain can cause erosion, the moving of weathered rock from one place to another.
5. Fast-flowing river water pulls rocks along the bottom of the river.
6. Slow-moving water deposits rocks on the river bottom in a process called deposition.
7. Slow-moving water carries along tiny bits of sand and silt, called sediment.
8. Huge sheets of ice called glaciers pick up rocks as they move along like very slow rivers.
9. Gravity can cause a landslide of rocks and sediment down a mountain.
10. Waves crashing on a rocky shore can cut cliffs and cause caves to form.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

What Are Minerals?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

mineral [MIN•er•uhl] any nonliving solid that has a crystal form. All minerals form in nature. No minerals are made by people.

Mineral contains the word *mine*. Many *minerals* are found in mines. People may create a mine or a mine may form naturally as an underground cave.

These are examples of different minerals.

Name _____

What Are Minerals?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. A mineral is a nonliving solid that has a crystal form.
2. Minerals can form under the ground, in caves, and in the air.
3. The particles in a crystal combine to form a shape that is repeated again and again.
4. Each mineral is made of a set of nonliving things called elements.
5. Hardness is a property of minerals; a harder mineral can scratch a softer mineral.
6. Frederick Mohr created a scale to compare how hard different minerals are.
7. A mineral with a higher number on the scale can scratch a mineral with a lower number.
8. Another property of minerals is luster, or how they reflect light.
9. Copper, gold, and silver have a metallic luster.
10. Another property of a mineral is the color of the streak it leaves on a streak plate.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

How Can Rocks Be Classified?

Science Words

Say each word quietly to yourself. Then read the meaning.
Read the tip to help you remember.

rock [RAHK] a solid in nature that is made of one or more minerals

If people say, “She’s my rock,” they mean that the person is steady, that she doesn’t change, that you can count on her. A *rock* in nature also seems steady and unchanging.

igneous rock [IG•nee•uhs RAHK] rock formed when magma, or melted rock, cools and hardens

Igneous tells how rock forms.
Igneous and *ignite* begin in the same way.
Ignite means “make burn.” *Igneous rock* forms when the tremendous heat of an erupting volcano causes rock to ignite and melt.

sedimentary rock [sed•uh•MEN•ter•ee RAHK] rock formed when deposited sediment becomes cemented together

Sedimentary tells how rock forms.
Sedimentary begins with the same sound as *sediment*, *sand*, *silt* and *squeeze*.
Sedimentary rock forms when sediment made of sand and silt gets squeezed and becomes cemented together.

fossil [FAHS•uhl] trace of a dead plant or animal, such as a bone or a shell

The vowel sound in rock is the same as the sound in the first part of *fossil*. Most *fossils* are found in rock.

metamorphic rock [met•uh•MAWR•fik RAHK] rock that is changed by heat and pressure deep in Earth

Metamorphic tells how rock forms.
Metamorphic and *metamorphosis* sound alike.
A frog goes through metamorphosis, a big change. *Metamorphic rocks* also goes through changes.

Name _____

Extra Support for Vocabulary and Concepts

How Can Rocks Be Classified?

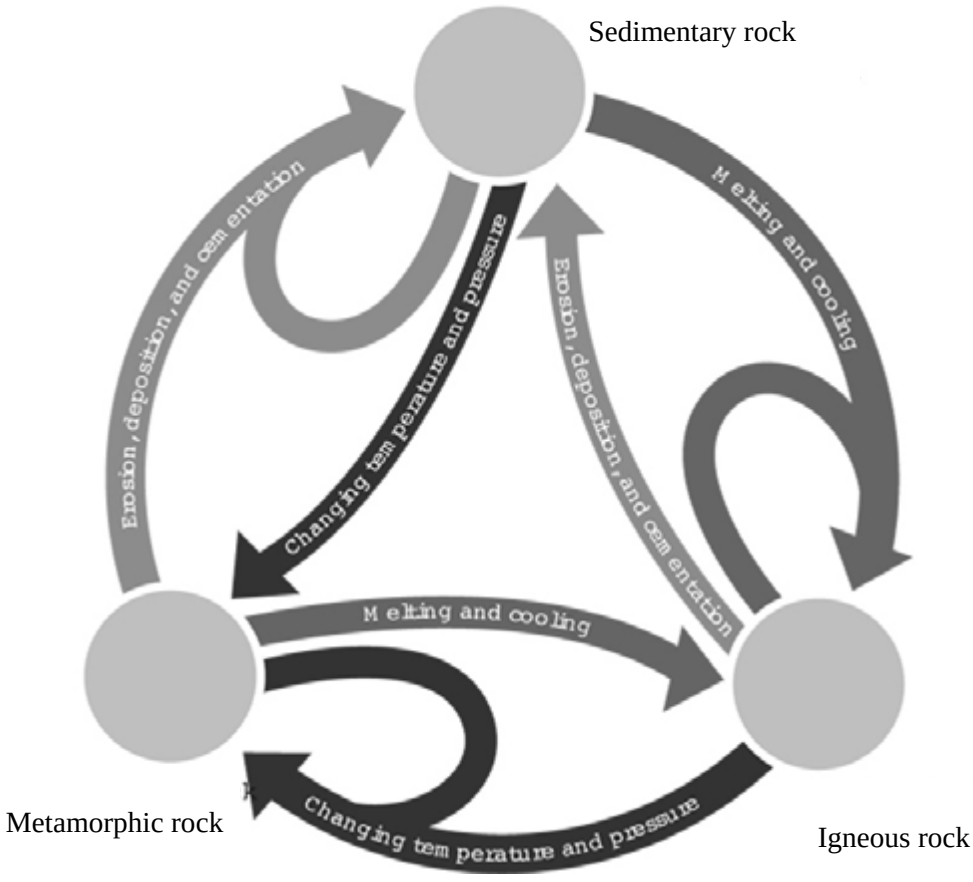
Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

rock cycle [RAHK SY•kuhl] the continuous process in which one type of rock changes into another type

Circle and *cycle* begin with the same sound. The *rock cycle* is a kind of circle in which one kind of rock changes into another kind and another and another.



Name _____

How Can Rocks Be Classified?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. A rock is made of one or more minerals.
2. Rocks are classified or grouped according to how they form.
3. Igneous rock forms when melted rock, called magma, cools and hardens.
4. Igneous rock may form after a volcano erupts.
5. Sedimentary rock forms when sediment gets squeezed and then cemented together.
6. Sedimentary rock may contain fossils of dead plant or animal parts.
7. Metamorphic rock forms deep in Earth, when heat or pressure changes rock.
8. Pressure that causes mountains to form may also cause mountain rock to change.
9. Most of the rocks on Earth's surface are sedimentary rock.
10. Over a long period of time, rock may change from one type to another as part of a cycle.

Name _____

Extra Support for Vocabulary and Concepts

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Which Resources Are Found in Florida?

Science Words

Say each word quietly to yourself. Then read the meaning.
Read the tip to help you remember.

resource [REE•sawrs] material found in nature that is used by living things

Resource contains the word *source*. A *source* is the place where something begins. *Resources* are sources of materials needed for making things, such as soap and paper.

renewable resource [rih•NOO•uh•buhl REE•sawrs] a resource that can be replaced quickly

Renewable has three parts: *re- -new- -able*
Renew and *redo* begin the same way. When you *redo* something, you do it again. A *renewable resource* is a resource that can be made new again.

nonrenewable resource [nahn•rih•NOO•uh•buhl REE•sawrs] a resource that isn't replaced easily

Nonrenewable has four parts: *non- -re- -new- -able*
Nonrenewable and *not* begin the same way. A *nonrenewable resource* is not renewable.

Name _____

Which Resources Are Found in Florida?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Resources, which are materials found in nature, are used by people, plants, and animals.
2. Renewable resources, such as trees, can be replaced easily and fairly quickly.
3. Conservation is the wise use of renewable and nonrenewable resources.
4. Coal, oil, and natural gas are nonrenewable resources known as fossil fuels.
5. It may take millions of years to replace fossil fuels and other nonrenewable resources.
6. Rock, minerals, and soil are considered nonrenewable resources.
7. Soil, limestone, and silica are important resources in our state.
8. Many of our buildings are made from limestone; solar panels are made from silica.
9. Pollution is harmful to resources.
10. Recycling, or reusing things like paper and glass to make new products, conserves resources.

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Extra Support for Vocabulary and Concepts

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What Are Physical Properties of Matter?

Science Words

Say each word quietly to yourself. Then read the meaning.
Read the tip to help you remember.

matter [MAT•er] anything that takes up space and has mass

Matter and *mass* begin with the same sounds. If something has mass, it is *matter*.

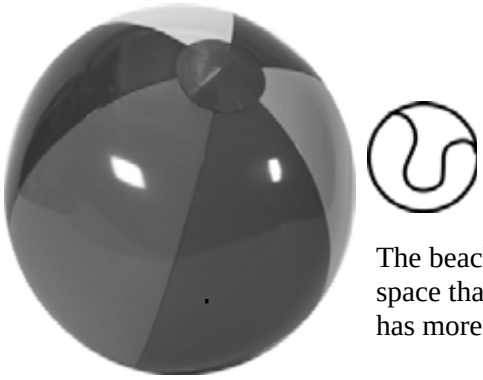
mass [MAS] the amount of matter in an object

Mass, *matter*, and *more* begin with the same sound. The more matter an object has, the more *mass* it has.

volume [VAHL•yoom] how much space an object takes up

When someone asks you to turn up the *volume* on a TV, the person wants more, or louder, sound. In science, something with more *volume* takes up more space.

Volume ends with the sound at the beginning of *millileter*. You measure the *volume* of a liquid in millileters.



The beach ball takes up more space than the tennis ball, so it has more volume.

physical property [FIZ•ih•kuhl PRAHP•er•tee] a characteristic of matter that you can observe or measure directly

Something that is *physical* exists in the world. Unlike an idea, something physical can be observed and measured.
Color, texture, shape, and size are *physical properties* because they can be observed and measured.

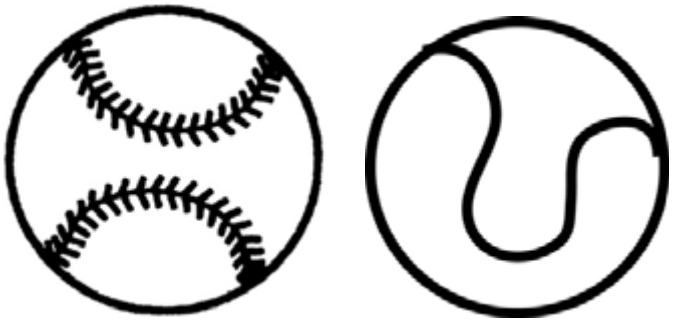
Name _____

What Are Physical Properties of Matter?

density [DEN•suh•tee] the amount of matter present in a certain volume of a substance

Density and *dense* begin the same way. If something is dense, its parts are crowded together, like the trees in a forest. If one forest is more dense than another, it has a greater *density*.

Imagine a baseball and a tennis ball. They are about the same size, but a baseball has more matter, or mass, than a tennis ball. So, a baseball has a greater *density*.



A baseball and a tennis ball are about the same size. But a baseball has more mass, so it has greater density.

Name _____

What Are Physical Properties of Matter?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Anything that takes up space and has mass is matter.

2 A physical property is a feature or quality of matter that you can observe or measure.

3. Hardness, size, color, shape, taste, texture, and odor are physical properties.

4. Mass, volume, and density are physical properties.

5. Mass is the amount of matter in an object measured in grams or kilograms.

6. Volume is how much space an object takes up.

7. Volume is measured in cubic centimeters for solids, and milliliters for liquids.

8. The volume of an irregular shape can be measured by seeing how much liquid it displaces.

9. Density is the amount of matter is present in a certain volume.

10. The density of an object, or substance, is always the same.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

What Are States of Matter?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

states of matter [STAYTS uhv MAT•er] the forms in which matter exists

If someone says, "Your room is in a terrible state!" the person is commenting on the condition of your room. Perhaps it is messy or dirty.
State and *condition* have almost the same meaning. *States of matter* are the different conditions or forms that matter may take (solids, liquids, gases).

solid [SAHL•id] matter that has a definite volume and shape

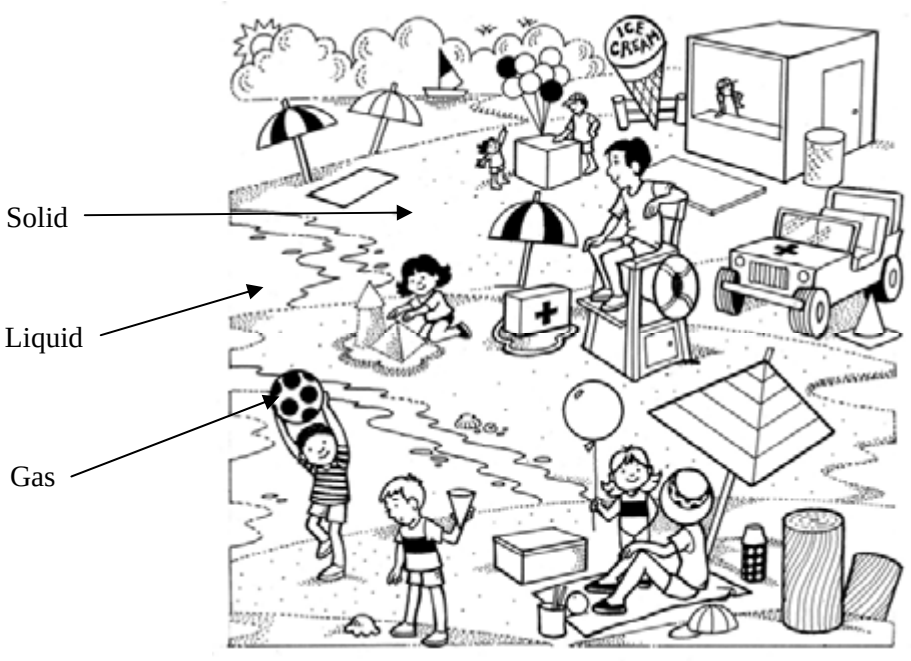
Something definite is fixed or set. *Solid* and *set* begin with the same sound. A *solid* has a set size and shape.

liquid [LIK•wid] matter that has a definite volume but not a definite shape

Liquid and *lack* begin with the same sound. A *liquid* lacks a definite shape. It takes the shape of its container.

gas [GAS] matter that does not have a definite volume or shape

Gas and *fits* end with the same sound. A *gas* fits into the size and shape of the space it has. An amount of *gas* will spread out to fill a big container and contract to fit into a small container.



What other examples of solids, liquids, and gases can you find?

Name _____

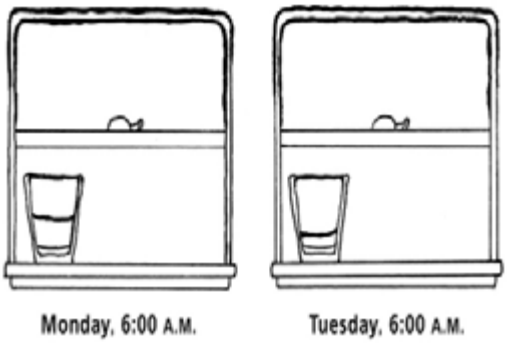
What Are States of Matter?

change of state [CHAYNJ uhv STAYT] when matter changes from one form to another

When something changes, it becomes different. When liquid water becomes solid ice, it goes through a *change of state*. The change is from a liquid to a solid.

evaporation [ee•vap•uh•RAY•shuhn] the process by which a liquid changes into a gas

Evaporation and *every* begin with the same sounds. *Evaporation* takes place from every river, lake, ocean, and puddle on Earth.



The liquid in the cup has changed to a gas. Evaporation has taken place.

condensation [kahn•duhn•SAY•shuhn] the process by which a gas changes into a liquid

Condensation, *create*, and *clouds* begin with the same sound. *Condensation* creates clouds when water vapor touches bits of dust and changes to tiny drops of water.

Water vapor in the air has changed to drops of water on the outside of the pitcher. Condensation has taken place.

Name _____

What Are States of Matter?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Three states of matter are solid, liquid, and gas.
2. A solid, such as a book or pencil, has a fixed or set volume and shape.
3. A liquid, such as water or milk, has a fixed volume, but no fixed shape.
4. A gas, such as oxygen, does not have a fixed volume or a fixed shape.
5. The particles in a solid vibrate, but remain close together at all times.
6. The particles in a liquid, which are not as close together, slide past each other as they move.
7. The particles in a gas are far apart and move quickly in all directions.
8. Taking away heat energy causes particles to slow, and may cause a liquid to become a solid.
9. Adding heat energy causes particles to speed up, and may cause a solid to become a liquid.
10. Evaporation, which is a liquid becoming a gas, is the opposite of condensation.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

What Are Magnets?

Science Words

Say each word quietly to yourself. Then read the meaning.
Read the tip to help you remember.

magnet [MAG•nuht] an object that attracts iron and a few other metals

Magnet, *move*, and *metal* begin with the same sound. A *magnet* causes some metals to move toward it.

magnetic field [mag•NET•ik FEELD] the space around a magnet in which the force of the magnet acts

A field is an open area with a boundary, such as a cornfield or a baseball field. Things outside the boundary are not part of the field. A *magnetic field* has a boundary. A paperclip inside the boundary is attracted to the magnet. A paperclip outside the boundary is not attracted to the magnet.

The lines show the magnetic field of this magnet. A paperclip outside the lines will not be attracted to the magnet.

motor [MOHT•er] a machine that uses electricity to make things move

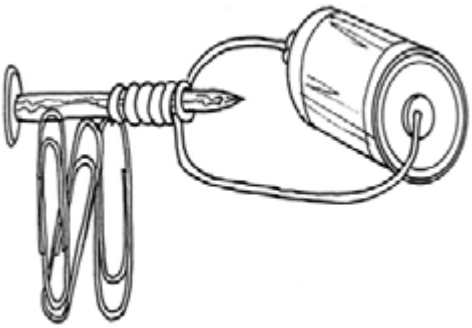
Remember this tongue twister: A *motor* is a machine that makes matter move.

magnetic pole [mag•NET•ik POHL] the part of the magnet where the force is the strongest

A pole names an extreme. The North Pole is the place on Earth that is farthest north. A *magnetic pole* is the part of a magnet with the greatest strength.

electromagnet [ee•lek•troh•MAG•nit] a magnet made by passing electricity through a nail, or other piece of iron that is wrapped in wire

Electromagnet and *electricity* start the same way. An *electromagnet* acts as a magnet when electricity passes through it. When electricity is not passing through an *electromagnet*, it does act as a magnet.



Name _____

What Are Magnets?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. A magnet is an object that attracts iron and a few other metals.
2. A barrier or a distance between a magnet and an iron object makes the magnet's pull weaker.
3. A magnet attracts objects within an area or field, called a magnetic field.
4. A magnet has two poles—the north-seeking or N pole and the south-seeking or S pole.
5. The poles of a magnet are the part with the strongest force.
6. Like poles, such as two S poles, repel or push each other away.
6. Unlike poles, such as an S pole and an N pole, attract or pull toward each other.
7. An electromagnet only acts as a magnet when electricity passes through it.
8. Earth acts as a magnet, with poles and a magnetic field.
10. Computers, trains, and medical technology such as MRIs use magnetic force.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

What Are Physical and Chemical Changes?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

physical change [FIZ•ih•huhl CHAYNJ] a change in which a new substance is not formed

Matter has physical properties, such as color, size, shape, and mass. A *physical change* is a change in a physical property.
Soaking, shredding, and crumpling paper are *physical changes* because they change the physical properties of the paper. They do not change the paper into something new.

chemical change [KEN•ih•kuhl CHAYNJ] a change in which one or more substances are changed into entirely new substances

Chemical and *cause* begin with the same sound. A *chemical change* causes new matter to form. A wood fire is a chemical change because it causes wood to change into smoke and ashes.

Name _____

What Are Physical and Chemical Changes?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. A physical change is a change in which no new matter forms.
2. Changing a physical property of matter, such as its size or color, is a physical change.
3. A chemical change is a change in which entirely new matter forms.
4. Rust on a bike is new substance that shows a chemical change has taken place.
5. The changes that take place when food decays are chemical changes.
6. The changes that take place when food is cooked are chemical changes.
7. Cracking an egg is a physical change, but frying an egg causes chemical changes.
8. A change in color, like toasted bread, is a clue that a chemical change has taken place.
9. The odor of decay is a clue that a chemical change has taken place.
10. Smoke and heat are clues that a chemical change has taken place.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

What Are Some Forms of Energy?

Science Words

Say each word quietly to yourself. Then read the meaning.

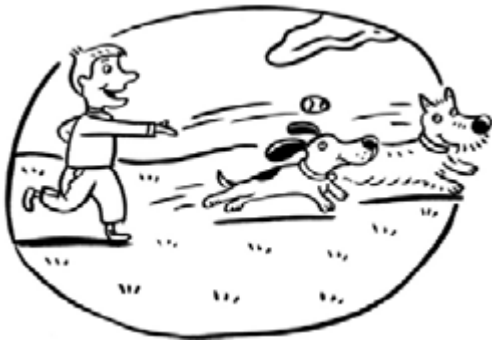
Read the tip to help you remember.

energy [EN•er•jee] the ability to cause change in matter. Everything that moves has energy.

If you had a lump of clay, what would you make with it? Whatever you make, will show that you have *energy*, because you will cause a change in the clay.
Energy and *engine* begin the same way. An engine causes a car to move. Enough *energy* can cause anything to move.

kinetic energy [kih•NET•ik EN•er•jee] the energy of motion

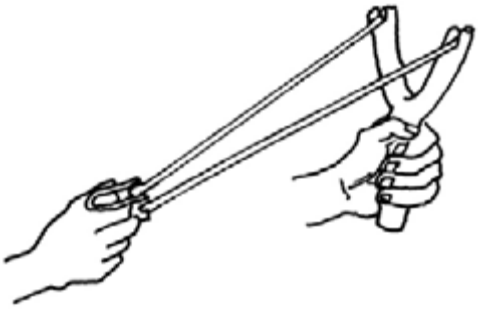
Kinetic and *kick* begin with the same sounds. When you kick something, you use *kinetic* energy because your leg is in motion.



The boy, the ball, and the dogs are using kinetic energy.

potential energy [poh•TEN•shuhl EN•er•jee] the energy something has because of its position or condition. Roller coaster cars at the top of a hill have potential energy.

Potential and *possible* begin with the same sounds. Something that is *potential* is possible. *Potential energy* is possible energy, energy ready to be used at some future time.



The stretched rubber band of this slingshot has potential energy.

Name _____

What Are Some Forms of Energy?

mechanical energy [muh•KAN•ih•kuhl EN•er•jee] the total potential energy and kinetic energy of an object

Mechanical and *math* begin with the same sound. Here is the math of *mechanical energy*: If you add potential energy and kinetic energy, you get *mechanical energy*.
potential energy + kinetic energy = *mechanical energy*

chemical energy [KEM•ih•kuhl EN•er•jee] energy that can be released by a chemical change

Burning a wood log is a chemical change because the wood changes to smoke and ash, new matter. If you stand near a fire, you know that burning also gives off heat. The heat is *chemical energy* because it is given off during a chemical change.

electrical energy [uh•LEK•trik•uhl EN•er•jee] energy that comes from electrical current

Electrical and *electricity* sound almost alike. *Electrical energy* is electricity.

Name _____

What Are Some Forms of Energy?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Energy is the ability to make matter change.
2. Something in motion, such as a rabbit hopping up and down, has kinetic energy.
3. Potential energy is energy that something has because of where it is or what condition it is in.
4. A ball on a shelf has potential energy because of where it is.
5. A spring wound tight has potential energy because of its condition—being wound tight.
6. Mechanical energy is the total of an object's potential and kinetic energy.
7. Sound energy is caused by vibration, a back-and-forth motion.
8. The sun and electricity are both sources of light energy.
9. Chemical energy, which is given off by a chemical change, is the energy we get from food.
10. Electrical energy powers our computers, televisions, and machines.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

How Do We Use Wind and Water for Energy?

Science Words

Say each word quietly to yourself. Then read the meaning.

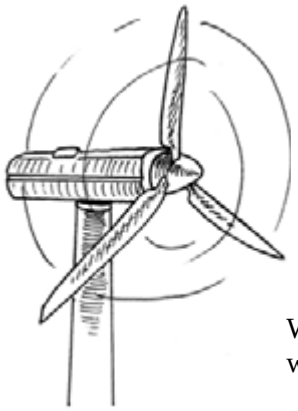
Read the tip to help you remember.

hydroelectric energy [hy•droh•ee•LIK•trik EN•er•jee] electrical energy produced by changing the energy of moving water into electricity

Hydroelectric and *hydrant* begin with the same sounds. A hydrant provides firefighters with the water they need to fight fires. The fast-moving water in dams is used to provide people with *hydroelectric energy* for electricity.

wind energy [WIND EN•er•jee] energy produced by moving air

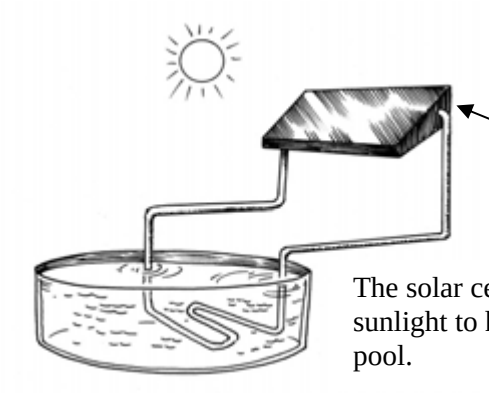
Wind is moving air. The kinetic energy of the wind turns a windmill. The windmill powers a machine called a generator. The generator produces electricity from *wind energy*.



Wind turns the blades of windmills like this one.

solar energy [SOH•ler EN•er•jee] energy from sunlight

Solar and sun begin with the same sound. *Solar energy* is energy from the sun. A solar cell uses *solar energy* to produce electricity.



The solar cell uses energy from sunlight to heat the water in the pool.

Name _____

How Do We Use Wind and Water for Energy?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Water and wind are renewable sources of energy, which means they will not be used up.
2. Sunlight is a renewable source of energy.
3. Hydroelectric energy is produced by changing the energy of moving water to electricity.
4. The waterwheel, used to power mills long ago, used moving water as an energy source.
5. Wind energy is energy produced by wind, which is moving air.
6. Wind turns a windmill, which changes the wind's kinetic energy into electricity.
7. Solar energy, which is energy from sunlight or other light, powers many calculators.
8. Hydrogen is a renewable source of energy used to power some buses and cars.
9. Coal, petroleum, and natural gas are nonrenewable sources of energy; they will be used up.
10. Scientists are working to increase our use of renewable energy sources.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

What Is Heat?

Science Words

Say each word quietly to yourself. Then read the meaning.
Read the tip to help you remember.

heat [HEET] energy that moves between objects of different temperatures

Heat and *hot* begin and end with the same sounds. *Heat* energy moves from something hot to something that is not so hot.

conduction [kuhn•DUK•shuhn] movement of heat between two objects that are touching

Conduction and *contact* begin with the same sounds. Heat *conduction* takes place when objects are in contact.

convection [kuhn•VEK•shuhn] movement of heat within a liquid or a gas

Convection and *carries* begin with the same sound. In *convection*, matter carries heat as it moves.

radiation [ray•dee•AY•shuhn] movement of heat without matter to carry it

Radiation, *radiate*, and *rays* begin the same way. In *radiation*, energy radiates out like rays and travels until it meets something.

Name _____

What Is Heat?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Heat moves from a warmer object to a cooler object.
2. Ice cubes melt because heat from the warmer air transfers, or moves to them.
3. As matter gains heat energy it becomes warmer.
4. Conduction is when heat moves between things that are touching.
5. A spoon in hot soup may soon become warm as heat from the soup moves to the spoon.
6. When your feet touch a cold floor, heat travels from your feet to the floor.
7. Convection is when heat moves within a gas or a liquid, for example water heating on a stove.
8. Radiation is when heat travels without moving through matter.
9. Heat from the sun travels to Earth by radiation.
10. Heat from a fire travels by convection and radiation.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

What Are Conductors and Insulators?

Science Words

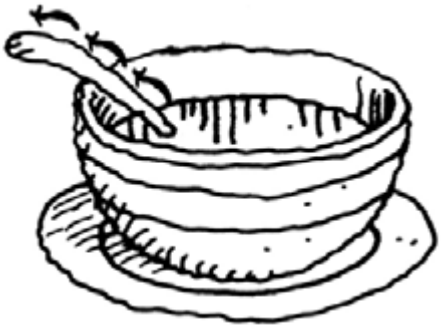
Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

conductor [kuhn·DUHK·ter] a material that allows heat to move through it easily

A tour *conductor* is a person who helps others move through an area easily. A material that is a *conductor* allows heat to move through it easily.

The metal spoon is a conductor. Heat passes from the soup through the spoon, which becomes warm. The arrows show the movement of heat through the spoon.



insulator [IN·suh·layt·er] a material that does not conduct heat well

Insulator contains the word *in*. An *insulator* keeps heat in.
Most winter gloves are lined with *insulation*. The *insulation* traps heat and slows the movement of heat away from the body. Something that is an *insulator* slows the movement of heat.

The material used to make these oven mitts is an insulator. The material does not allow heat from the pan to pass through it.

Name _____

What Are Conductors and Insulators?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. A conductor allows heat to move through it easily.
2. In general, solids are better conductors of heat than liquids or gases.
3. Metal is a good conductor of heat, but glass is not a good conductor.
4. An insulator does not conduct heat well.
5. An oven mitt is made from material that does not conduct heat well.
6. Gases are good insulators.
8. Layers of clothing help keep you warm because air between the layers traps your body heat.
9. Fur helps keep an animal warm because air around the hairs traps the animal's body heat.
10. Insulation in the walls of a house keeps heat from passing through to the attic.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

What Is Motion?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

position [puh•ZISH•uhn] the location of an object in relation to a nearby object or place

Position and *place* begin with the same sound. The *position* of something is its place compared to other objects.

The girl is in front of the boy.
The boy is behind the girl.

The girl's position is described with reference to the boy.
The boy's position is described with reference to the girl.

motion [MOH•shuhn] a change in position

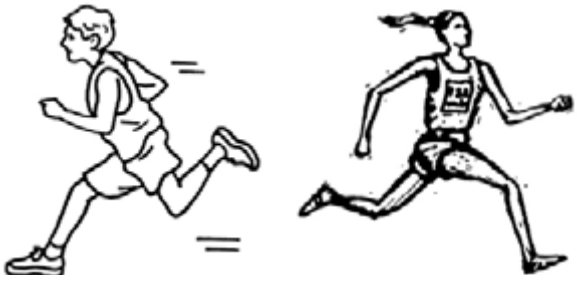
Motion and *move* begin the same way. Something in *motion* moves from one place or position to another.

speed [SPEED] how the position of an object changes during a certain amount of time

Speed and *seconds* begin with the same sound. *Speed* is how many seconds (minutes or hours) it takes to get from one place to another.

velocity [vuh•LAHS•uh•tee] the speed of an object in a particular direction

Velocity ends with the sound at the beginning of *east*. Your *velocity* may be one meter per second east. If you are going in the opposite direction, your *velocity* may be one meter per second west.



These runners may be traveling at the same speed, but not at the same velocity.

Name _____

Extra Support for Vocabulary and Concepts

What Is Motion?

force [FAWRS] a push or a pull. A force can change the speed or direction of an object.

Force and *friction* begin with the same sound. Friction is a *force* that slows things down.

acceleration [ak•sel•er•AY•shuhn] any change in velocity

A car ad may brag about a car's *acceleration*—how fast the car can get from standing still to highway speeds.
In science, *acceleration* is about *any* change in velocity, including how fast a car can stop.

Name _____

What Is Motion?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. An object's position is where the object is compared to something else.
2. The "something else" is called a reference point.
3. A reference point may something in the background, or the whole background or frame of reference.
4. When an object changes position, it is in motion.
5. Speed is a measure of the time it takes for an object to travel a particular distance.
6. Velocity is how fast the object moves and in which direction it moves.
7. "30 km/hr" describes a car's speed; "30 km/hr, south" describes a car's velocity.
8. A force can change the speed or direction of something.
9. Friction, which works against the direction of motion, slows things down.
10. Acceleration is any change in velocity—going faster, slower, or in a different direction.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

How Do Plants Reproduce?

Science Words

Say each word quietly to yourself. Then read the meaning.
Read the tip to help you remember.

germination [jer•mihn•AY•shuhn] the process of a seed sprouting

Germination and *grow* begin with different sounds, but the same letter. *Germination* is when the tiny plant in a seed starts to grow.

maturity [muh•CHER•uh•tee] the point at which a plant grows to its full size

When people say, “Don’t be a baby!” they mean act more mature, or grown-up. When someone or something reaches *maturity,* it is fully grown.

fertilization [fer•tuhl•uh•ZAT•shuhn] the process of a sperm and an egg cell joining together

Fertilization and fertilizer are in the same word family. A fertilizer is something added to soil to help plants grow. When *fertilization* takes places, a new plant may grow within a seed.

pollination [pah•uh•NAY•shuhn] the process of pollen moving from a male plant part to a female plant part

Pollination and pollen are in the same word family. Pollen contains sperm, the male sex cell. *Pollination* is pollen getting to where it needs to go—the female part of a plant. *Pollination* must come before fertilization.

Name _____

How Do Plants Reproduce?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Germination, the process of a seed starting to grow, is part of a plant's life cycle.
2. When a plant grows to its full size, it reaches maturity.
3. Plants that have reached maturity make seeds that can grow into new plants.
4. Most plants make seeds in flowers, but some make seeds in cones.
5. Flowers and cones make sperm, which are male sex cells, and eggs, which are female sex cells.
6. Sperm cells are in grains of pollen; eggs are in the pistil at the base of a flower.
7. Pollination is when pollen moves to the female part of a plant.
8. Wind, water, and animals help make pollination possible.
9. Fertilization is when a sperm and egg join together and grow into a new plant inside a seed.
10. Animals, wind, and water help spread a plant's seeds.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

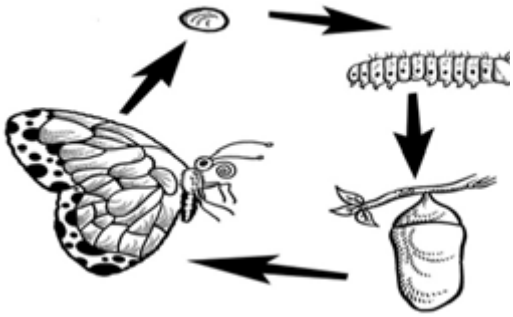
How Do Animals Reproduce?

Science Words

Say each word quietly to yourself. Then read the meaning.

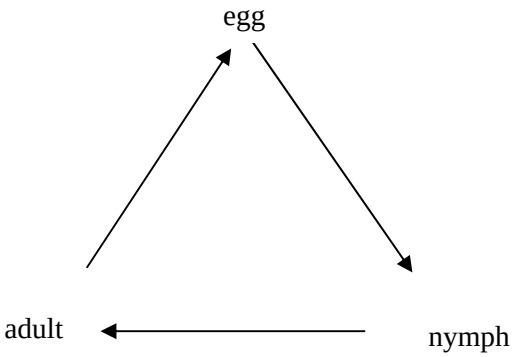
Read the tip to help you remember.

complete metamorphosis [kuhm•PLEET met•uh•MAWR•fuh•sis] a life cycle in which the animal goes through four different stages: egg, larva, pupa, adult (ELPA)



Think of *complete metamorphosis* as a square. Since *complete metamorphosis* has four stages, the square has one stage at each corner.

incomplete metamorphosis [IN•kuhm•PLEET met•uh•MAWR•fuh•sis] a life cycle in which the animal goes through three different stages: egg, nymph, adult (ENA)



Think of *incomplete metamorphosis* as a triangle. Since *incomplete metamorphosis* has three stages, the triangle has one stage at each corner.

nymph [NIMF] a stage in incomplete metamorphosis in which the animal looks like a tiny adult, but does not have wings, which develop later

Nymph ends with the same sound at the beginning of *fly*. A *nymph* cannot fly because it does not have wings.

A *nymph* is between "egg" and "adult" on the triangle of incomplete metamorphosis.

Name _____

How Do Animals Reproduce?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Sexual reproduction is when sperm from a male joins an egg from a female.
2. The fertilized egg can become a new animal.
3. When a young animal becomes mature, it may have young of its own, in a repeating cycle.
4. Birds, fish, and reptiles hatch from eggs; dogs and mice are born live.
5. Some animals, such as penguins and deer, take care of their young; other animals do not.
6. Butterflies and moths go through four stages of complete metamorphosis.
7. The caterpillar is the larva stage in the life cycle of moths and butterflies.
8. During the pupa stage, a moth builds a cocoon where it changes into its adult form.
9. Grasshoppers and other insects go through three stages of incomplete metamorphosis.
10. During the nymph stage, a young grasshopper may molt, or shed its skeleton, many times.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

What Are Hereditary, Instincts, and Learned Behaviors?

Science Words

Say each word quietly to yourself. Then read the meaning. Read the tip to help you remember.

heredity [huh•RED•ih•tee] the passing of traits from parent to offspring

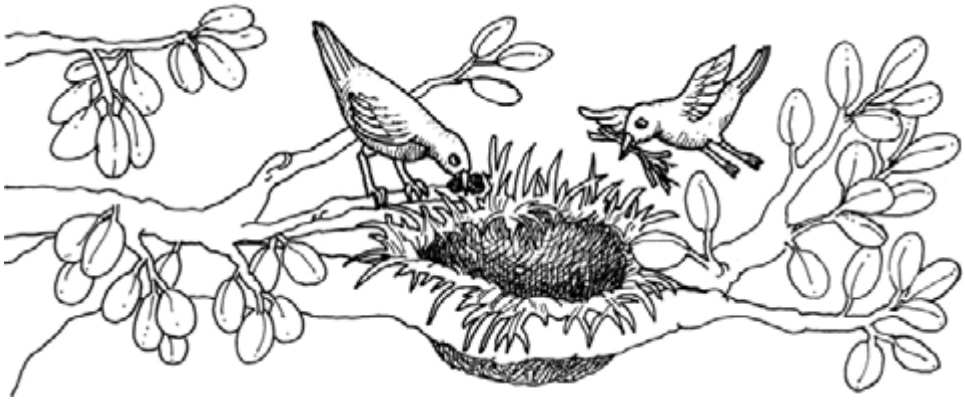
Heredity and *inherit* are in the same word family. When people say, "She has her mother's beautiful black hair," they mean that the person inherited this feature from her mother. You inherit features from your parents as part of your *heredity*.

learned behavior [LERND bee•HAYV•yer] something an animal learns from experience or by watching other animals

You can teach a puppy to sit, come, and roll over on your command. These are *learned behaviors*, because a dog is not born knowing how to do them. The dog must learn.

instinct [IN•stinkt] behaviors that an animal is born knowing how to do

Instinct contains the word *in*. *Instincts* are behaviors that are built in. For example, no one needs to teach a puppy to drink milk from its mother because this behavior is an *instinct*.



Knowing how to build a nest is an instinct.

Name _____

What Are Hereditary, Instincts, and Learned Behaviors?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Heredity is when parents pass on features, or traits, to their young.
2. Heredity affects the color of a plant's flowers; heredity affects the shape of a bird's beak.
3. Genes carry information about traits.
4. A living thing gets half its genes from its female parent and half from its male parent.
5. The environment of a living thing affects its traits.
6. The soil a plant is growing in may affect the color of its flowers.
7. A learned behavior is something that is learned from experience or by watching others.
8. Chimps learn how to make a tool from a branch by watching other chimps do it.
9. An instinct is something a living thing knows how to do without having to learn it.
10. Birds have an instinct to build nests; babies have an instinct to cry when they are hungry.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

How Do Organisms Change with the Seasons?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

dormancy a rest period for plants

> *Dormancy*, *dorm*, and *dormitory* are in the same word family. A dorm or dormitory is a place where students and others rest and sleep. During winter, many plants are in a period of *dormancy*, or rest.

hibernation [hy•ber•NAY•shuhn] in animals, an inactive state during winter—a period of little food and cold temperatures

> *Hibernation* and *heart* begin with the same sound. During *hibernation* the heart barely beats and body temperature drops to just about freezing.

migration [my•GRAY•shuhn] in animals, the process of regularly moving as a group from one region to another and back

> *Migration* and *move* begin with the same sound. During *migration* animals move from the place they live during the summer to their winter home and then back again.

Name _____

How Do Organisms Change with the Seasons?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. During winter, there is less direct sunlight, fewer hours of daylight, and lower temperatures.
2. During summer, there is more direct sunlight, more hours of daylight, and higher temperatures.
3. In winter, plants are dormant; they do not grow or reproduce.
4. In fall, the leaves of many trees change color, and then fall to the ground.
5. Some animals hibernate during the winter.
6. During hibernation, an animal's heart beats very slowly and its body temperature is very low.
7. A hibernating animal doesn't need to eat because it is not using very much energy.
8. A hibernating animal uses the fat stored in its body for energy.
9. Some animals, like the arctic fox, change color with the seasons in order to blend in better.
10. In winter, manatees and other animals migrate south to find food and to have their young.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

How Do Organisms Obtain and Use Food?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

nutrients [NOO•tree•uhntsz] materials used by living things for growth and for other life functions

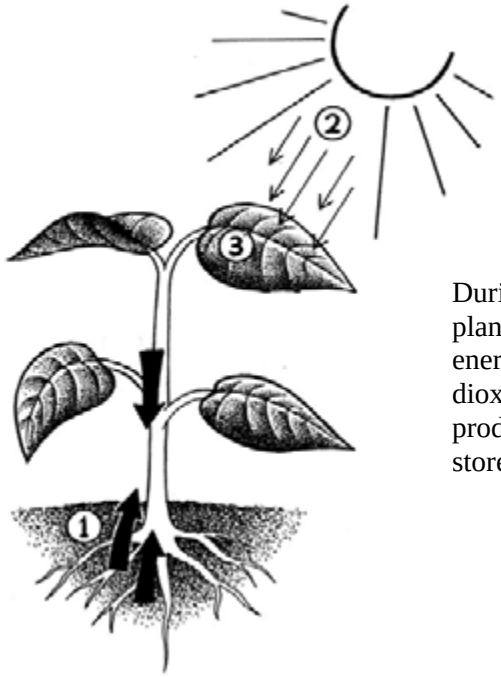
The vowel sound in the word *food* and in the first part of *nutrients* is the same. Animals get the *nutrients* they need from food.

producers [pruh•DOOS•erz] living things that make their own food

Producers, *produce*, and *plant* begin with the same sound. *Produce* means make something. Plants are *producers* because they produce their own food.

photosynthesis [foht•oh•SIN•thuh•sis] the process producers (plants) use to make their own food

Photosynthesis and *photograph* begin the same way. You need light in order to take a photograph. Plants need light in order to do *photosynthesis*.



During photosynthesis, plants use water (1), energy (2), and carbon dioxide from the air to produce sugar, which is stored in the leaves (3).

Name _____

Extra Support for Vocabulary and Concepts

How Do Organisms Obtain and Use Food?

energy [EN•er•jee] the ability to do work

In science, when you do work, you use a force to move an object. So, shooting a basket and peddling a bike are work. *Energy* is being able to do these kinds of things.
People and animals get *energy* from eating food.

decomposers [dee•cuhm•POHZ•er] living things that get energy by breaking down wastes and dead plant and animal matter

Decompose contains the word *compose*. When you compose something—a story or a piece of music—you put things together to make something. *De*composers take things apart by breaking them down.

consumers [kuhn•SOOM•erz] living things that eat other living things

Consumer and *consume* are in the same word family.
You may have heard someone say, "I can't believe how much spaghetti he can consume!"
Consume means eat. *Consumers* consume plants and animals as food.

Name _____

How Do Organisms Obtain and Use Food?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. People, animals, and plants need nutrients for growing and living.
2. Most plants are producers; they make their own food in a process called photosynthesis.
3. Plants use water, carbon dioxide from the air, and energy from sunlight for photosynthesis.
4. During photosynthesis a plant's cells change water, energy, and carbon dioxide to sugars.
5. The sugars, which are a plant's food, may be stored or used for growth and other plant needs.
6. Consumers, like people and animals, do not make their own food; they eat other living things.
7. Some animals eat only plants, but others eat plants and animals.
8. Scavengers, like vultures and worms, eat dead plants and animals.
9. Decomposers, like mushrooms, feed on what the scavengers leave behind.
10. Decomposers get energy by breaking down wastes and dead plant and animal matter.

Name _____

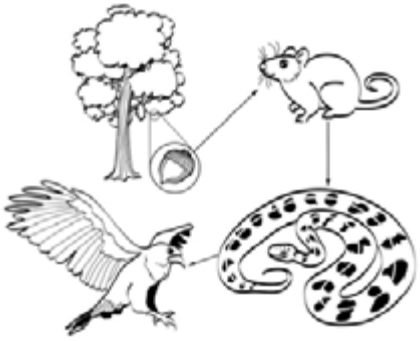
Extra Support for Vocabulary and Concepts

Edit File

What Are Food Chains?

Science Words

Say each word quietly to yourself. Then read the meaning. Read the tip to help you remember.



food chain [FOOD CHAYN] the transfer of energy in a sequence of living things

Think of a keychain or a necklace. Each is made of links that are connected to one another. The links in a *food chain* are plants and animals. The links are connected in an order that shows which animal is eating which.

herbivore [HER•buy•vawr] a consumer that eats only plants

Herbivore contains the word *herb*. You may have eaten food made with herbs like pepper and mustard. Herbs are seasonings that come from plants. An *herbivore* is an animal that eats only plants.

carnivore [KAHR•nuh•vawr] a consumer that eats other animals

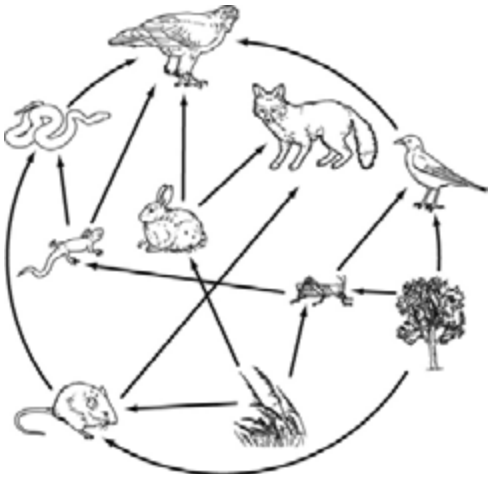
Carnivore and carnival sound almost alike. A carnival is a party or fair, usually with food. A carnival for *carnivores* does <u>not</u> include plants on the menu!

omnivore [AHM•nih•vawr] a consumer that eats both plants and animals

To remember what an omnivore is, think of this math problem:
herbivore + carnivore = *omnivore*
Omnivore and *omniscient* begin the same way. Authors who are omniscient write as if they know everything about every character in a story, including what every character is thinking and feeling. An *omnivore* is like an omniscient eater!

food web [FOOD WEB] a model that shows the relationship among different food chains

Think of the threads holding a spider web together. The arrows showing who eats what in a *food web* make the *food web* look like a spider web.



This is a food web. The arrows that point to an animal represent food chains the animal is part of.

Name _____

What Are Food Chains?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. A food chain is the movement of food energy from plants to living things.
2. Producers are the first link is a food chain because they use energy from the sun to make food.
3. Some consumers, such as zebras and rabbits, are herbivores because they eat only plants.
4. Some consumers, such as raccoons, are carnivores because they eat only other animals.
5. Living things that eat plants and meat are omnivores.
6. Predators are animals that hunt other animals; lions are predators.
7. Prey are animals that are hunted and eaten by other animal; deer are prey.
8. Some animals are predator and prey; for example, frogs eat insects, but are eaten by snakes.
9. A food web is a model that shows how different food chains are connected.
10. A change in a one part of a food web can affect all the other parts of the web.

Name _____

Extra Support for Vocabulary and Concepts

Edit File

How Do Organisms Affect Their Environment?

Science Words

Say each word quietly to yourself. Then read the meaning.

Read the tip to help you remember.

pollution [puh•LOO•shyhn] any substance in an environment that can harm living things

Pollution and *poison* begin with the same sound. *Pollution* poisons the environment by making it harmful to living things.

conservation [kahn•ser•VAY•shuhn] using natural resources wisely

If you were in a desert, you would want to make your water last as long as possible. To do that, you would be careful not to spill it. You would use it wisely. You would conserve it. *Conservation* and *conserve* are in the same word family. *Conservation* is conserving our natural resources so they last as long as possible.

Name _____

How Do Organisms Affect Their Environment?

Science Concepts

Read the Ideas more than once. Do your best to remember them.

1. Plants give off oxygen during photosynthesis; animal and people need oxygen to live.
2. Plants provide shelter for many animals; their roots help hold soil in place.
3. Kudzu is a plant that harms the environment because it grows fast and crowds out other plants.
4. Animal waste helps the environment by adding nutrients to the soil.
5. Bees and other animals spread pollen, which helps plants reproduce.
6. Pollution is a way people can be harmful to the environment.
7. Pollution is any substance in the environment that can harm living things.
8. Factories, power plants, and traffic put pollution into the air and water.
9. Conservation is a way people can be helpful to the environment.
10. People can reduce, reuse, and recycle things to make resources last longer.