



**Grade Level: 2<sup>nd</sup> grade**

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### **SUBJECT INFORMATION**

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#### **Science and Health**

#### **COMMON CORE / STATE CONTENT STANDARDS/VOCABULARY OBJECTIVES**

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Science and Health

- Make observations; record and interpret data.
  - Measure in standard and non-standard units.
  - Apply the concepts of past, present, and future.
  - Identify shape and use of objects.
  - Identify questions to be investigated.
  - Make and communicate observations.
  - Analyze information and evidence.
  - Practice cooperation and interaction skills.
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- Follow multi-step instructions.
  - List properties of an object.
  - Explain how force affects the position and motion of objects.
  - Identify four basic needs of living things.
  - Discuss how animals are suited to live in different habitats.
  - Describe the characteristics of different weather conditions.
  - Compare and contrast man-made and natural environments.
  - Identify tools people have invented for everyday life and for scientific investigations.
  - Describe the concepts of fitness and wellness.
  - Identify the rules and procedures for safe living.
  - Identify personal emotions and appreciate.

### **Vocabulary**

- Adapt-to change
  - Amphibian- group of animals with smooth, wet skin. Young live in water, most adults on land.
  - Aquarium- tank filled with water for animal habitat.
  - Attract- to pull something.
  - Bird- group of animals with feathers, most can fly.
  - Boulder-very large rock.
  - Burning- change of substance into ashes and smoke.
  - Centimeter- unit of measure
  - Condensation- change of water from gas to liquid.
  - Condense- change water vapor into liquid water.
  - Constellation- group of stars that form a pattern.
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- Desert- environment that is dry because of very little rain.
  - Digest- break down of food for energy and nutrients.
  - Dinosaur – animal that lived on earth millions of years ago.
  - Drought- long time without water
  - Earthquake-shaking of earth's surface that causes land to rise and fall.
  - Electricity- form of energy.
  - Endangered-in danger of being alive.
  - Energy-something that can cause matter to move or change.
  - Environment- living and nonliving things in a place.
  - Erosion-a kind of change that happens when wind and water move soil.
  - Evaporation- change of water from a liquid to a gas.
  - Extinct- no longer living.
  - Fish-group of animals that live in water and get oxygen through gills.
  - Flowers- plant parts help make new plants, part of the plant flowers and makes seeds.
  - Food chain- diagram that shows the order in which animals eat to survive.
  - Food group- group of foods that provide many of the same kinds of nutrients.
  - Food guide pyramid- diagram that helps you choose what foods to eat.
  - Food web- diagram that shows how food chains are connected.
  - Force- push or pull that makes something move.
  - Fossil- what is left of an animal or plant that lived long ago that has "turned" into rock.
  - Friction- force that slows down objects when they rub against each other.
  - Gas- only form of matter that always fills all the space of its container.
  - Germinate- to start to grow.
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- Grassland- an open environment covered with grass.
  - Gravity- force that pulls things toward the center of the earth.
  - Habitat-place where a living thing has food, water and shelter it needs to live.
  - Heat- energy that makes things warmer.
  - Inquiry skills-skills people use to find out information.
  - Investigate- plan to do a test.
  - Leaves-parts of a plant that make food for the plant.
  - Life cycle-stages of a plant or animal's life.
  - Light- form of energy that lets you see.
  - Liquid- form of matter that takes the shape of its container.
  - Living-alive
  - Loudness- how loud or soft a sound is.
  - Magnet- object that can push and pull things made of iron or steel.
  - Mammal- group of animals that give birth to young alive, have hair or fur.
  - Mass- amount of matter in an object.
  - Matter- material all things are made up of and are solid, liquid or gas.
  - Milliliter-unit to measure the volume of liquid.
  - Mineral- solid matter found in nature that was never living.
  - Mixture- mix of different kinds of matter.
  - Moon- huge ball of rock that orbits earth.
  - Motion-movement
  - Natural resource- anything in nature people use to meet their needs.
  - Nonliving-not alive.
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- Nutrients- substances that plants and animals need to live.
  - Ocean- large body of salt water
  - Orbit- path planet takes as it moves around the sun.
  - Oxygen- gas in the air and water.
  - Pitch – how high or low a sound is.
  - Planet- large ball of rock or gas that moves around the sun.
  - Pole- end of a magnet.
  - Pollution- waste that harms the air, water or land.
  - Pond- small freshwater environment.
  - Precipitation- water that falls from the sky.
  - Property- part of what something is like. Color, size and shape is an example of a “property”.
  - Rain forest- environment, with many tall trees that gets rain almost every day.
  - Recycle- uses the materials in old things to make new.
  - Reduce- use less of a resource.
  - Reflect- bounce off.
  - Repel-push away.
  - Reptile- group of animals with dry skin covered in scales.
  - Resource- anything people can use to meet their needs.
  - Reuse- to use a resource again.
  - Roots- parts of a plant that take in water and nutrients.
  - Rotate- spin like a top.
  - Science tools- tools people use to find information.
  - Season- time of year with certain kinds of weather.
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- Shelter- safe place to live.
  - Shrub-bush.
  - Soil- bits of rocks mixed with matter that was once living.
  - Solar energy- only form of matter that has its own shape.
  - Sound- energy you can hear.
  - Sound wave- vibrations moving through matter.
  - Speed- how fast something moves.
  - Star- big ball of hot gases that give off light and heat energy.
  - Stems- parts of a plant that carry water and nutrients from the roots to the leaves.
  - Survive- to stay alive.
  - Tadpole- young frog.
  - Temperature- measurement of how hot or cold something is.
  - Terrarium- container in which plants and animals live on soil.
  - Texture – way something feels when touched.
  - Thermometer- tool used to measure temperature.
  - Trunk- Main stem of the tree.
  - Tundra- environment that is cold and snowy.
  - Vibrate- move back and forth quickly.
  - Volcano- place where hot molten rock called lava comes out of the ground.
  - Volume- amount of space something takes up.
  - Water cycle- movement of water from earth's surface , to air, and back to earth again.
  - Water vapor- water in the form of a gas.
  - Weather- what the air outside is like.
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- Weather pattern- change in the weather that repeats.
- Weathering- change that happens when wind and water break down rock into smaller pieces.
- Wind-air that is moving.

### INSTRUCTIONAL MATERIALS

Science is taught using the Harcourt School Publishers series.

### UNITS WITH INSTRUCTIONAL DATES

<b>1<sup>st</sup> quarter</b>	<b>Unit A</b>  <b>Our World of Living Things</b>	<p>Chapter 1- Living and Nonliving Things</p> <ol style="list-style-type: none"> <li>1. What are living and nonliving things?</li> <li>2. What do animals need?</li> <li>3. What do plants need?</li> <li>4. Review and test – reteach.</li> </ol> <p>Chapter 2 - Animals</p> <ol style="list-style-type: none"> <li>1. What are mammals and birds?</li> <li>2. What are reptiles, amphibians, and fish?</li> <li>3. What are some animal life cycles?</li> <li>4. Review and test – reteach.</li> </ol> <p>Chapter 3 – Plants</p> <ol style="list-style-type: none"> <li>1. What are the parts of a plant?</li> <li>2. How do plants differ?</li> </ol>
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		<ol style="list-style-type: none"> <li>3. What are some plant life cycles?</li> <li>4. Review and test – reteach.</li> </ol>
	<p><b>Unit B</b></p> <p><b>Homes for Living Things</b></p>	<p>Chapter 4 Living Things in Their Environments</p> <ol style="list-style-type: none"> <li>1. What is an environment?</li> <li>2. How do living things survive in different places?</li> <li>3. What are food chains and the food web?</li> <li>4. Review and test – reteach.</li> </ol>
<p><b>2<sup>nd</sup> quarter</b></p>	<p><b>Unit C</b></p> <p><b>Our Earth</b></p>	<p>Chapter 5: Exploring Earth’s Surface</p> <ol style="list-style-type: none"> <li>1. What changes earth’s surface?</li> <li>2. What are rocks, sand and soil?</li> <li>3. What can we learn from fossils?</li> <li>4. Review and test – reteach.</li> </ol> <p>Chapter 6: Natural Resources</p> <ol style="list-style-type: none"> <li>1. How can people use natural resources?</li> <li>2. How can people harm natural resources?</li> <li>3. How can people protect natural resources?</li> <li>4. Review and test – reteach.</li> </ol> <p>Chapter 7: Weather and Space</p> <ol style="list-style-type: none"> <li>1. How does weather change?</li> </ol>

		<ol style="list-style-type: none"> <li>2. Why do we measure weather?</li> <li>3. What is the water cycle?</li> <li>4. Review and test – reteach.</li> </ol> <p>Chapter 8: The Solar System</p> <ol style="list-style-type: none"> <li>1. What are stars and planets?</li> <li>2. What causes day and night?</li> <li>3. How does the moon seem to change?</li> <li>4. What causes seasons?</li> <li>5. Review and test – reteach.</li> </ol>
<b>3<sup>rd</sup> quarter</b>	<b>Unit E: Exploring Matter</b>	<p>Chapter 9: Observing and Classifying Matter</p> <ol style="list-style-type: none"> <li>1. What is Matter?</li> <li>2. What are solids?</li> <li>3. What are liquids?</li> <li>4. What are gases?</li> <li>5. Review and test – reteach.</li> </ol> <p>Chapter 10: Changes in Matter.</p> <ol style="list-style-type: none"> <li>1. How can matter change?</li> <li>2. How can water change?</li> <li>3. What are some other changes to matter?</li> <li>4. Review and test – reteach.</li> </ol>
<b>4<sup>th</sup> quarter</b>	<b>Unit F: Energy in Motion</b>	<p>Chapter 11: Light and Heat</p> <ol style="list-style-type: none"> <li>1. What is energy?</li> </ol>

		<ol style="list-style-type: none"><li>2. What is light?</li><li>3. What is heat?</li><li>4. Review and test – reteach.</li></ol> <p>Chapter 12: Sound</p> <ol style="list-style-type: none"><li>1. What causes sound?</li><li>2. How does sound travel?</li><li>3. How do we make different sounds?</li><li>4. Review and test – reteach.</li></ol> <p>Chapter 13: Motion</p> <ol style="list-style-type: none"><li>1. What are ways things move?</li><li>2. What makes things move?</li><li>3. How do magnets move things?</li><li>4. Review and test – reteach.</li></ol>
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### **ASSESSMENTS / TESTS**

Unit tests and End of Year test provided by Harcourt. Progress monitored by group work, participation and discussion.

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### **GRADING PROCEDURES**

Group work and participation along with discussion is one half of the grade. Tests provide the data for the other half of the grade.

## **CLASS RULES**

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Groups practice cooperation in a collaborative environment. Class discussion includes all students.

## **MISCELLANEOUS**

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Syllabus outline is subject to change due to schedule changes and mastery of an area of study.