

GRADE 3 SCIENCE ORDER OF INSTRUCTION			
1 st Nine Weeks	2 nd Nine Weeks	3 rd Nine Weeks	4 th Nine Weeks
<p><u>Body of Knowledge:</u> <u>Life Science</u> (4 benchmarks)</p> <p>Big Idea 14: Organization and Development of Living Organisms</p> <p>Big Idea 15: Diversity and Evolution of Living Organisms</p>	<p><u>Body of Knowledge:</u> <u>Life Science</u> (2 benchmarks)</p> <p>Big Idea 17: Interdependence</p> <p><u>Body of Knowledge:</u> <u>Earth and Space Science</u> (5 benchmarks)</p> <p>Big Idea 5: Earth in Space and Time</p>	<p><u>Body of Knowledge:</u> <u>Earth and Space Science</u> (1 benchmark)</p> <p>Big Idea 6: Earth Structures</p> <p><u>Body of Knowledge:</u> <u>Physical Science</u> (4 benchmarks)</p> <p>Big Idea 8: Properties of Matter</p> <p>Big Idea 9: Changes in Matter</p>	<p><u>Body of Knowledge:</u> <u>Physical Science</u> (6 benchmarks)</p> <p>Big Idea 10: Forms of Energy</p> <p>Big Idea 11: Energy Transfer and Transformations</p>
<p><u>Big Idea 1: The Practice of Science and Big Idea 3: The Role of Theories, Laws, Hypotheses, and Models</u> These Big Ideas should be introduced during the first nine weeks, and then embedded in all science lessons throughout the year as they blend easily with teaching inquiry and are the basis of an activity/lab-based science classroom. Third grade students ask and investigate questions individually and in teams, generate explanations, compare group observations, keep appropriate records, make inferences based on observations, and understand why and how scientists use models. Lab safety and the use of scientific tools should also be introduced at the beginning of the year and re-addressed throughout the year.</p>			

Rationale for Grade 3 Order of Instruction:

1st Nine Weeks

The 1st nine weeks continue to build upon the Life Science concepts students were taught at the end of second grade. They will be able to use their prior knowledge to delve more deeply into the study of the structures and characteristics of plants and animals.

2nd Nine Weeks

Life Science continues during the 2nd nine weeks as students investigate how animals and plants respond to changing seasons and how plants make their own food. Earth and Space Science is also taught during the 2nd nine weeks, and students will make observations of the night skies as seasons change.

3rd Nine Weeks

Earth and Space Science continues during the 3rd nine weeks. Physical Science is also taught during the 3rd nine weeks. Students will focus on challenging and abstract concepts about properties of matter and changes in matter.

4th Nine Weeks

Physical Science continues to be taught during the 4th nine weeks when students will focus on concepts about energy. These concepts require higher level thinking skills.



GRADE 3	
BODY OF KNOWLEDGE: EARTH AND SPACE SCIENCE	
BIG IDEA 6: EARTH STRUCTURES	
Humans continue to explore the composition and structure of the surface of Earth. External sources of energy have continuously altered the features of Earth by means of both constructive and destructive forces. All life, including human civilization, is dependent on Earth's water and natural resources.	
ESSENTIAL QUESTIONS	
How does energy from the Sun heat objects?	
BENCHMARKS and TASK ANALYSES	
SC.3.E.6.1 Demonstrate that radiant energy from the Sun can heat objects and when the Sun is not present, heat may be lost. The student:	
<ul style="list-style-type: none"> • investigates and understands that objects absorb and release heat. • understands that the Sun emits heat. • investigates that objects heated by the Sun can lose heat when the Sun is not present. 	
OCPS ESSENTIAL LABS	
www.science.ocps.net	
Measuring Heat Energy in Various Solids and Liquids	
VOCABULARY	
radiant energy	
The textbook is NOT the curriculum. The Next Generation Sunshine State Standards for Science are the mandated curriculum.	
SUPPORTING RESOURCES	
Scott Foresman	Scott Foresman textbook does not correlate with the Next Generation Sunshine State Standards for Science. Please consider the variety of quality supporting resources to help you teach this standard.
AIMS www.aimsedu.org	<i>Primarily Physics: Heat and Color</i>
Literature	<i>Done in the Sun</i> , Anne Hillerman
Web Links	www.school.eb.com/elementary/article?articleId=433607 An encyclopedia article explaining that solar energy is light, heat and other forms of energy given off by the sun www.school.eb.com/elementary/article?articleId=353824 An encyclopedia article about the sun, it's place in space and how it supplies most of Earth's energy
Field Experiences	Kennedy Space Center – (888) 838 8915 Orlando Science Center Planetarium – (407) 514-2000
Other	



GRADE 3	
BODY OF KNOWLEDGE: PHYSICAL SCIENCE	
BIG IDEA 8: PROPERTIES OF MATTER	
<p>A. All objects and substances in the world are made of matter. Matter has two fundamental properties: matter takes up space and matter has mass.</p> <p>B. Objects and substances can be classified by their physical and chemical properties. Mass is the amount of matter (or "stuff") in an object. Weight, on the other hand, is the measure of force of attraction (gravitational force) between an object and Earth. The concepts of mass and weight are complicated and potentially confusing to elementary students. Hence, the more familiar term of "weight" is recommended for use to stand for both mass and weight in grades K-5. By grades 6-8, students are expected to understand the distinction between mass and weight, and use them appropriately.</p>	
ESSENTIAL QUESTIONS	
<p>How do we measure solids and liquids? How do the physical properties of objects vary?</p>	
BENCHMARKS and TASK ANALYSES	
<p>SC.3.P.8.1 Measure and compare temperatures of various samples of solids and liquids. The student:</p> <ul style="list-style-type: none"> • uses a thermometer to measure and graph the temperatures of various solids (e.g., soil, sand, rice, beans, clay, etc.). • compares and contrasts the temperatures of various solids. • uses a thermometer to measure and graph the temperatures of various liquids (e.g., water, soda, milk, orange juice, hand soap, vinegar). • compares and contrasts the temperatures of various liquids. <p>SC.3.P.8.2 Measure and compare the mass and volume of solids and liquids. The student:</p> <ul style="list-style-type: none"> • uses appropriate science tools to measure the mass and volume of various solids and liquids and records the data. • observes and compares the mass and volume of solids and liquids. <p>SC.3.P.8.3 Compare materials and objects according to properties such as size, shape, color, texture, and hardness.</p>	
OCPS ESSENTIAL LABS	
www.science.ocps.net	
<p>What Are Some Properties of Rocks That Can Be Compared? Mass and Volume of Solids and Liquids Comparing Mass of Grapes and Carrots Comparing Volume of Grapes and Carrots</p>	
VOCABULARY	
mass	
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SUPPORTING RESOURCES	
Scott Foresman	<p>SC.3.E.8.2 Flip Chart Activity: What heats up faster, sand or water? 169E, 284-285, 292-293</p> <p>SC.3.E.8.3 284-289</p> <p>Guided Inquiry: How can you measure some physical properties of matter? 290-291</p>



	Directed Inquiry: How can matter change? 300 Guided Inquiry: Do freshwater ice and saltwater ice melt the same? 378-379
AIMS www.aimsedu.org	SC.3.P.8.1 <i>Primarily Physics: Melt an Ice Cube</i> <i>Weather Sense-Temperature, Air Pressure, and Wind: Tub Temps</i> SC.3.P.8.2 <i>Popping with Power: Polar Burrs</i>
Literature	<i>Cocoa Ice</i> , Diana Applebaum <i>Pancakes, Pancakes</i> , Eric Carle
Web Links	www.school.eb.com/lm/games/GS_4_7/GS_4_7.htm Match a substance with its most common form at room temperature: solid, liquid, or gas. www.school.eb.com/elementary/article?articleId=353112 An encyclopedia article explaining that evaporation and condensation are two processes through which matter changes from one state to another www.school.eb.com/elementary/article?articleId=353444 An encyclopedia article describing the states and properties of matter http://ksnn.larc.nasa.gov/k2/s_statesMatter.html Video and accompanying activity about the three states of matter
Field Experiences	
Other	



GRADE 3	
BODY OF KNOWLEDGE: PHYSICAL SCIENCE	
BIG IDEA 9: CHANGES IN MATTER	
<p>A. Matter can undergo a variety of changes. B. Matter can be changed physically or chemically.</p>	
ESSENTIAL QUESTIONS	
How does water change state?	
BENCHMARKS and TASK ANALYSES	
<p>SC.3.P.9.1 Describe the changes water undergoes when it changes state through heating and cooling by using familiar scientific terms such as melting, freezing, boiling, evaporation, and condensation. The student:</p> <ul style="list-style-type: none"> • observes and describes ice melting. • observes and describes water freezing. • observes and describes water boiling. • observes and describes water evaporating. • observes and describes water vapor condensing. • records these changes in a science notebook, using the words melting, freezing, boiling, evaporation, and condensation. 	
OCPS ESSENTIAL LABS	
www.science.ocps.net	
How Does Heat Affect Water?	
VOCABULARY	
melting, freezing, boiling, evaporation, condensation	
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SUPPORTING RESOURCES	
Scott Foresman	<p>SC.3.E.9.1 156-157, 304-305, 368-369, 380-381 Guided Inquiry: How can you make a model of the water cycle? 162-163 Guided Inquiry: Do freshwater ice and saltwater ice melt the same way? 378-379</p>
AIMS www.aimsedu.org	<p><i>Primarily Physics:</i> Melt an Ice Cube <i>Primarily Earth:</i> Water to Ice to Water</p>
Literature	<i>Where Do Puddles Go?</i> Fay Robinson
Web Links	<p>www.school.eb.com/elementary/article?articleId=353444 An encyclopedia article explaining that anything which takes up space is called matter www.school.eb.com/art-102975 The physical states of water are determined by the structure of its molecules, which in turn is affected by temperature. www.school.eb.com/art-107583 A diagram depicting the water cycle</p>
Field Experiences	
Other	<p>Science Net Links: Water 3: Melting and Freezing Lab www.sciencenetlinks.com/lessons.cfm?</p>

