

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: PHYSICAL SCIENCE	
BIG IDEA 10: FORMS OF ENERGY	
<p>A. Energy is involved in all physical processes and is a unifying concept in many areas of science.</p> <p>B. Energy exists in many forms and has the ability to do work or cause a change.</p>	
ESSENTIAL QUESTIONS	
<p>What is energy? How can energy cause motion or create a change? How does light energy travel?</p>	
BENCHMARKS and TASK ANALYSES	
<p>SC.3.P.10.1 Identify some basic forms of energy such as light, heat, sound, electrical, and mechanical. The student:</p> <ul style="list-style-type: none"> • recognizes that energy comes in many different forms. • identifies forms of energy, such as light, heat, sound, electrical, and mechanical. <p>SC.3.P.10.2 Recognize that energy has the ability to cause motion or create change. SC.3.P.10.3 Demonstrate that light travels in a straight line until it strikes an object or travels from one medium to another. SC.3.P.10.4 Demonstrate that light can be reflected, refracted, and absorbed.</p>	
OCPS ESSENTIAL LABS	
www.science.ocps.net	
<p>Sound Energy How Can our Senses Help Us Observe Energy in Action How Does Light Interact with Objects? How Does Light Travel? Reflection Reflection and Refraction</p>	
VOCABULARY	
<p>reflect, refract, absorb</p>	
<p>The textbook is NOT the curriculum. The Next Generation Sunshine State Standards for Science are the mandated curriculum.</p>	
SUPPORTING RESOURCES	
Scott Foresman	<p>SC.3.E.10.1 358-363, 366-377, 396-397 SC.3.E.10.2 360-365, 490-495 Full Inquiry: How does energy affect the distance a toy car travels? 412-413 SC.3.E.10.3 Flip Chart Activity: How does light travel? 353E, 371-373 SC.3.E.10.4 370-373</p>
AIMS www.aimsedu.org	<p>SC.3.P.10.3 <i>Ray's Reflections</i>: Ray's Around the Corner; Pool Cues & Clues SC.3.P.10.4 <i>Ray's Reflections</i>: Catch a Ray; The Pharaoh's Chambers <i>Primarily Physics</i>: Mirrors Reflect</p>
Literature	
Web Links	<p>www.school.eb.com/elementary/article?articleId=353100 An encyclopedia article discusses energy and its various forms including electricity http://www.eia.doe.gov/kids/energyfacts/science/formsofenergy.html A website with information on energy including, forms of energy, sources of</p>



	energy and energy conservation www.school.eb.com/elementary/article?articleId=353386 An encyclopedia article explaining light as a form of energy
Field Experiences	
Other	



GRADE 3	
BODY OF KNOWLEDGE: PHYSICAL SCIENCE	
BIG IDEA 11: ENERGY TRANSFER AND TRANSFORMATIONS	
<p>A. Waves involve a transfer of energy without a transfer of matter. B. Water and sound waves transfer energy through a material. C. Light waves can travel through a vacuum and through matter.</p>	
ESSENTIAL QUESTIONS	
Do all things that give off light also give off heat?	
BENCHMARKS and TASK ANALYSES	
<p>SC.3.P.11.1 Investigate, observe, and explain that things that give off light often also give off heat. SC.3.P.11.2 Investigate, observe, and explain that heat is produced when one object rubs against another, such as rubbing one's hands together. The student:</p> <ul style="list-style-type: none"> investigates, observes, and explains that heat is produced when one object rubs against another (e.g., rubbing one's hands together, sanding wood). 	
OCPS ESSENTIAL LABS	
www.science.ocps.net	
<p>Can an Object Produce More Than One Type of Energy? How is Heat Produced? Can We Change Heat Production?</p>	
VOCABULARY	
light energy	
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SUPPORTING RESOURCES	
Scott Foresman	<p>SC.3.E.11.1 71, 356, 359 Directed Inquiry: Can electricity produce light and heat? 356</p>
AIMS www.aimsedu.org	SC.3.P.11.2 <i>Primarily Physics:</i> Heat from Friction
Literature	
Web Links	<p>www.school.eb.com/elementary/article?articleId=353386 An encyclopedia article explaining light as a form of energy. www.school.eb.com/elementary/article?articleId=390761 An encyclopedia article about heat being a form of energy that moves from one object to another as a result of a difference in temperature. www.school.eb.com/lm/animations/oheat00001d4/product.html A presentation of heat as energy that is transferred from one object to another as a result of differences in temperature.</p>
Field Experiences	
Other	

