

Content Standard

5.1**Fifth Grade**Conceptual Theme: **Energy Transfer and Transformations****Sound and light are forms of energy.**Guiding Question: **What is the role of energy in our world?**

Concepts	Focus Questions	Expected Content Performance	Expected Inquiry Performance	Instructional Resources and Technology	Assessment
Sound is a form of energy that is produced by the vibration of objects and is transmitted by the vibration of air and objects.	What is sound? How is sound produced? What factors affect the pitch of sound? What factors affect the loudness of sound?	B 17. Describe the factors that affect the pitch and loudness of sound produced by vibrating objects.	B INQ.1 B INQ.2 B INQ.3 B INQ.4 B INQ.5 B INQ.6 B INQ.7 B INQ.9 B INQ.10	ARIES - Exploring Waves (Exp. 2, 14-18) ETA -- Power of Light and Sound Science Interactions: Course 1 Ch 3.2	
Sound is transmitted, reflected and/or absorbed by different materials.	How is sound transmitted, reflected, and/or absorbed by different materials?	B 18. Describe how sound is transmitted, reflected and/or absorbed by different materials.	B INQ.1 B INQ.2 B INQ.3 B INQ.4 B INQ.5 B INQ.6 B INQ.7 B INQ.8 B INQ.9 B INQ.10	ARIES - Exploring Waves (Exp. 2, 9-13) ETA -- Power of Light and Sound Science Interactions: Course 1 Ch 3.1	
Light is a form of energy that travels in a straight line and can be reflected by a mirror, refracted by a lens, or absorbed by objects.	What is light? How does light travel? How is light absorbed and/or reflected by different surfaces? What is reflection? What is refraction?	B 19. Describe how light is absorbed and/or reflected by different surfaces.	B INQ.1 B INQ.2 B INQ.3 B INQ.4 B INQ.5 B INQ.6 B INQ.7 B INQ.8 B INQ.9 B INQ.10	ARIES - Exploring Light and Color (Exp. 1-2, 6-9,17) Science Interactions: Course 1 Ch 2.1 & 2.2	

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5.2

Perceiving and responding to information about the environment is critical to the survival of organisms.

Fifth Grade

Conceptual Theme: **Structure and Function**

Guiding Question: **How are organisms structured to ensure efficiency and survival?**

Concepts	Focus Questions	Expected Content Performance	Expected Inquiry Performance	Instructional Resources and Technology	Assessment
Light absorption and reflection allow one to see the shapes and colors of objects	What does light absorption have to do with the color of an object? How does light absorption and reflection determine what we see?	B 20. Describe how light absorption and reflection allow one to see the shapes and colors of objects.	B INQ.1 B INQ.2 B INQ.3 B INQ.4 B INQ.5 B INQ.6 B INQ.7	ARIES - Exploring Light and Color (Exp. 2-5) Science Interactions: Course 1 Ch 2.3	
The sense organs perceive stimuli from the environment and send signals to the brain through the nervous system.	What are senses? Why are senses important? What sense organs do humans have? What is the structure and function of human sense organs?	B 21. Describe the structure and function of the human senses and the signals they perceive.	B INQ.1 B INQ.2 B INQ.3 B INQ.4 B INQ.5 B INQ.6 B INQ.7 B INQ.8 B INQ.9 B INQ.10	Science Interactions: Course 1 Ch. 2.3 pp. 75-77; Ch. 3.1 pp. 92-93; Ch. 9.1 p. 281 Curriculum Embedded Performance Task: Catch It! Internet Resources Smart Board Lessons	

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Fifth Grade

Conceptual Theme: Earth in the Solar System

Most objects in the solar system are in a regular and predictable motion.

Guiding Question: How does the position of Earth in the solar system affect conditions on our planet?

Concepts	Focus Questions	Expected Content Performance	Expected Inquiry Performance	Instructional Resources and Technology	Assessment
The positions of the Earth and moon relative to the sun explain the cycles of <u>day and night</u> , and the monthly moon phases.	How does the rotation of Earth cause day and night?	B 22. Explain the cause of day and night based on the rotation of Earth on its axis.	B INQ.1 B INQ.2 B INQ.3 B INQ.4 B INQ.5 B INQ.6 B INQ.7	ARIES - Exploring the Earth in Motion (Exp. 6-8) ARIES - Exploring the Moon and Stars (Exp. 3) Science Interactions: Course 1 Ch. 19.1 p. 604	
The positions of the Earth and moon relative to the sun explain the cycles of day and night, and the <u>monthly moon phases</u> .	How do the relative positions of Earth, moon, and sun affect appearance of the moon?	B 23. Describe the monthly changes in the appearance of the moon, based on the moon's orbit around the Earth.	B INQ.1 B INQ.2 B INQ.3 B INQ.4 B INQ.5 B INQ.6 B INQ.7 B INQ.8 B INQ.9 B INQ.10	ARIES - Exploring the Moon and Stars (Exp. 8-12) Science Interactions: Course 1 Ch. 19.2 pp. 610-613	

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5.4

Fifth Grade

Conceptual Theme: Science and Technology in Society

Humans have the capacity to build and use tools to advance the quality of their lives.

Guiding Question: How do science and technology affect the quality of our lives?

Concepts	Focus Questions	Expected Content Performance	Expected Inquiry Performance	Instructional Resources and Technology	Assessment
<p>Advances in technology allow individuals to acquire new information about the world.</p>	<p>How is the human eye like a camera? How is the human eye different from a camera?</p>	<p>B 24. Compare and contrast the structures of the human eye with those of the camera.</p>	<p>B INQ.1 B INQ.2 B INQ.3 B INQ.4 B INQ.5 B INQ.6 B INQ.7 B INQ.8</p>	<p>Internet Resources Smart Board Lessons</p>	
<p>Advances in technology allow individuals to acquire new information about the world.</p>	<p>How do advances in technology allow us to acquire new information about our world? What are the tools that humans have built to advance and enhance the quality of their lives? How are different instruments used to enhance our vision?</p>	<p>B 25. Describe the uses of different instruments, such as eyeglasses, magnifiers, periscopes and telescopes, to enhance our vision.</p>	<p>B INQ.1 B INQ.2 B INQ.3 B INQ.4 B INQ.5 B INQ.6 B INQ.7 B INQ.8</p>	<p>ARIES - Exploring the Earth in Motion (Exp. 12-13)</p>	