

	<p>Science Benchmarks Grade Six</p>
	The student will:
	<p>Standard 1: NATURE OF SCIENCE Understand that science is ongoing and inventive, and that scientific understandings have changed over time as new evidence is found.</p>
6-1a.	Identify that specific scientific knowledge and conceptual models have changed over time in the sciences.
6-1b.	Identify the people, cultures, and conditions that led to the changes over time in scientific knowledge and concepts.
6-1c.	Identify the general rules in science (i.e., scientific method) that apply to the development and use of evidence in scientific investigations.
6-1d.	Discover evidence that confirms that science is one way of answering questions and exploring the natural world.
6-1e.	Identify and illustrate ways in which scientific knowledge is shared and checked.
6-1f.	Give examples of ways in which scientific knowledge is useful and also limited when applied to social issues.
	<p>Standard 2: SCIENCE INQUIRY Investigate questions using scientific methods and tools, revise their personal understanding to accommodate knowledge, and communicate these understandings to others.</p>
6-2a.	Identify questions that they can investigate using resources and equipment that they have available.
6-2b.	Identify data and locate sources of information to answer the questions being investigated.
6-2c.	Extend investigations by planning and safely conducting new investigations to appropriately answer their questions.
6-2d.	Use prior knowledge to help develop a hypothesis for their investigations, and use observations to verify their prior knowledge.
6-2e.	Use accepted scientific knowledge, models, and theories to explain their results and to raise further questions about their investigations.
6-2f.	State what they have learned from investigations relating their prior knowledge to scientific knowledge and to data that they have collected.
6-2g.	Explain their data and conclusions in ways that allow an audience to understand the questions that they selected for investigation and the answers that they have developed.
6-2h.	Use computer software and other technologies to organize, process, and present their data.
6-2i.	Apply the scientific method to their investigations.
6-2j.	Discuss the importance of their results and implications of their work with peers, teachers, and other adults.

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	Standard 3: PHYSICAL SCIENCE Demonstrate an understanding of the physical and chemical properties of matter, the forms and properties of energy, and the ways in which matter and energy interact.
6-3a.	Illustrate the properties of the electromagnetic spectrum interpreting with material objects.
6-3b.	Identify that energy comes in different forms such as light, heat, chemical, nuclear, solar, mechanical, and electrical.
6-3c.	Understand that the Earth's gravity pulls any object toward it without touching it.
6-3d.	Describe how waves transfer energy.
6-3e.	Recognize an object in motion by identifying the forces acting on an object.
6-3f.	Identify Newton's three laws of motion.
6-3g.	Relate the concepts of speed, velocity, and friction to objects in motion through real life interactions.
6-3h.	Classify matter by using the properties of solid, liquid, and gas.
6-3i.	Identify those properties of matter that can be observed using senses.
6-3j.	Identify that volume, mass, density, and weight can measure properties of matter.
6-3k.	Define chemical and physical properties.
6-3l.	Understand the relationship between electric and magnetic fields.
	Standard 4: EARTH & SPACE SCIENCE Demonstrate an understanding of the structure and systems of the Earth, other bodies in the universe, and their interactions.
6-4a.	Identify the processes of the rock cycle.
6-4b.	Identify renewable and non-renewable resources – past, present, and future.
6-4c.	Explain that rain or snow falls to the surface where it forms rivers and lakes and collects in porous layers of rock.
6-4d.	Apply an understanding of the rock cycle to explanations of weathering, sedimentation, and the formation and reformation of rock.
6-4e.	Relate the use of the Earth's resources, renewable, to changes in efforts for conservation.

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6-4f.	Explain that thousands of layers of sedimentary rock confirm the long history of the Earth and the long history of changing life forms whose remains are found in successive layers of sedimentary rock; the newest layers may not always be found on top because of the folding, breaking, and uplifting of layers.
6-4g.	Know that fossils provide important evidence of how life and environmental conditions have changed on the Earth over time (i.e., changes in atmosphere composition, movement of crustal plates, impact of an asteroid or comet).
6-4h.	Know that earthquakes often occur along the boundaries between colliding plates.
6-4i.	Know that molten rock form below the Earth's surface creates pressure that is released by volcanic eruptions; under the ocean basins, molten rock may swell up between separating plates to create a new ocean floor; and volcanic activity along the ocean floor may form undersea mountains, which may eventually become islands.
	Standard 5: LIFE & ENVIRONMENTAL Demonstrate an understanding of the characteristics and structures of living things, the processes of life, and how living things interact with one another and their environment.
6-5a.	Investigate and compare specialized cells for the purpose of plant classification.
6-5b.	Understand that all organisms are composed of cells, including single and multi-celled organisms.
6-5c.	Identify the basic structure and function of cells, including the nucleus, cell wall, and cell membrane. Know the difference between plant and animal cells.
6-5d.	Identify the basic structure and function of organ systems and whole organisms.
6-5e.	Explain that plants have a great variety of parts and internal structures that contribute to their being able to make or find food, reproduce, and adapt to their environment.
6-5f.	Know that heredity is comprised of the characteristics and traits found in genes within the cell of an organism.
6-5g.	Identify some of the changes on the Earth that are contributing to changes in the balance of life and affecting the survival or population growth of certain species (such as dam building, ozone depletion, etc.).
6-5h.	Identify and give examples of effects of human activities on ecosystems.
6-5i.	Identify predator/prey relationships.
	Standard 6: SCIENCE APPLICATIONS Demonstrate an understanding of the relationship between science and technology and the ways in which that relationship influences human activities.
6-6a.	Identify careers in science and technology.

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6-6b.	Illustrate the positive and negative effects of science and technology on the quality of life.
6-6c.	Identify specific local, state, or regional problems to which there has been a possible scientific or technological solution.
6-6d.	Use current texts, encyclopedias, source books, computers, experts, the popular press, or other relevant sources to identify examples of scientific discoveries.
	Standard 7: SCIENCE IN SOCIAL AND PERSONAL PERSPECTIVES Use scientific information and skills to make decisions about themselves, Wisconsin, and the world in which they live.
6-7a.	Demonstrate appropriate lab safety techniques and skills during laboratory activities.