

McKinley Museum

Program Synopsis

Discover World Tour

Ohio State Science Content Standards

Grade: 3

<i>Standard</i>	<i>Benchmark</i>	<i>Grade Level Indicator</i>
Life Sciences	<p>Differentiate between the life cycles of different plants and animals.</p> <p>Analyze plant and animals structures and functions needed for survival and describe the flow of energy through a system that all organisms use to survive.</p> <p>Compare changes in an organism's ecosystem/habitat that affect its survival.</p>	<p>Compare the life cycles of different plants and animals including birth to adulthood, reproduction and death (e.g., egg-tadpole-frog, egg-caterpillar-chrysalis-butterfly).</p> <p>Relate animal structures to their specific survival functions (e.g., obtaining food, escaping or hiding from enemies).</p> <p>Classify animals according to their characteristics (e.g., body coverings and body structure).</p> <p>Use examples to explain that extinct organisms may resemble organisms that are alive today.</p> <p>Observe and explore how fossils provide evidence about animals that lived long ago and the nature of the environment at that time.</p> <p>Describe how changes in an organism's habitat are sometimes beneficial and sometimes harmful.</p>

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Earth and Space Sciences	<p>Summarize the processes that shape Earth's surface and describe evidence of those processes.</p> <p>Describe Earth's resources including rocks, soil, water, air, animals and plants and the ways in which they can be conserved.</p> <p>Analyze weather and changes that occur over a period of time.</p>	<p>Compare distinct properties of rocks (e.g., color, layering and texturing).</p> <p>Observe and investigate that rocks are often found in layers.</p> <p>Describe that smaller rocks come from the breakdown of larger rocks through the actions of plants and weather.</p> <p>Investigate that soils are often found in layers and can be different from place to place.</p>
Science and Technology	<p>Describe how technology affects human life.</p>	<p>Describe how technology can extend human abilities (e.g., to move things and to extend senses).</p> <p>Describe ways that using technology can have helpful and/or harmful results.</p>

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Physical Sciences	<p>Describe the forces that directly affect objects and their motion.</p> <p>Trace how electrical energy flows through a simple circuit and describe how the electrical energy can produce thermal energy, light, sound and magnetic forces.</p>	<p>Identify contact/non contact forces that affect motion of an object (e.g., gravity, magnetism and collision).</p> <p>Predict the changes when an object experiences a force (e.g., a push or pull, weight and friction).</p>
Scientific Ways of Knowing	<p>Explain the importance of keeping records of observations and investigations that are accurate and understandable.</p>	<p>Identify various careers in science.</p> <p>Discuss how both men and women find science rewarding as a career and in their everyday life.</p>

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Ohio State Science Content Standards

Grade: 4

<i>Standard</i>	<i>Benchmark</i>	<i>Grade Level Indicator</i>
Life Sciences	<p>Differentiate between the life cycles of different plants and animals.</p> <p>Analyze plant and animal structures and functions needed for survival and describe the flow of energy through a system that all organisms use to survive.</p> <p>Compare changes in an organism's ecosystem/habitat that affect its survival.</p>	<p>Describe how organisms interact with one another in various ways (e.g., many plants depend on animals for carrying pollen or dispersing seeds).</p> <p>Relate plant structures to their specific functions (e.g., growth, survival and reproduction).</p> <p>Classify common plants according to their characteristics (e.g., tree leaves, flowers, seeds, roots and stems).</p> <p>Observe and explore that fossils provide evidence about plants that lived long ago and the nature of the environment at that time.</p>
Scientific Ways of Knowing	<p>Distinguish between fact and opinion and explain how ideas and conclusions change as new knowledge is gained.</p> <p>Explain the importance of keeping records of observations and investigations that are accurate and understandable.</p> <p>Explain that men and women of diverse countries and cultures participate in careers in all fields of science.</p>	<p>Differentiate fact from opinion and explain that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed.</p> <p>Explain why keeping records of observations and investigations is important.</p>

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Ohio State Science Content Standards

Grade: 4

<i>Standard</i>	<i>Benchmark</i>	<i>Grade Level Indicator</i>
Earth and Space Sciences	<p>Summarize the processes that shape Earth's surface and describe evidence of those processes.</p> <p>Describe Earth's resources including rocks, soil, water, air, animals and plants and the ways in which they can be conserved.</p>	<p>Describe how wind, water and ice shape and reshape Earth's land surface by eroding rock and soil in some areas and depositing them in other areas producing characteristic landforms (e.g., dunes, deltas and glacial moraines).</p> <p>Identify and describe how freezing, thawing and plant growth reshape the land surface by causing the weathering of rock.</p> <p>Describe evidence of changes on Earth's surface in terms of slow processes (e.g., erosion, weathering, mountain building and deposition) and rapid processes (e.g., volcanic eruptions, earthquakes and landslides).</p>

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Earth and Space Sciences (cont.)	Analyze weather and changes that occur over a period of time.	<p>Explain that air surrounds us, takes up space, moves around us as wind, and may be measured using barometric pressure.</p> <p>Identify how water exists in the air in different forms (e.g., in clouds, fog, rain, snow and hail).</p> <p>Describe weather by measurable quantities such as temperature, wind direction, wind speed, precipitation and barometric pressure.</p> <p>Record local weather information on calendar or map and describe changes over a period of time (e.g., barometric pressure, temperature, precipitation symbols and cloud conditions).</p>
Science and Technology	Describe how technology affects human life.	Investigate how technology and inventions change to meet peoples' needs and wants.