

Science Grade 2

Adams County/Ohio Valley
Course of Study

Content Standard: Earth and Space
Benchmark A: Observe constant and changing patterns of objects in the day and night sky.
Content Organizer: The Universe

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
1. Recognize that there are more stars in the sky than anyone can easily count.			

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Content Standard: Earth and Space			
Benchmark A: Observe constant and changing patterns of objects in the day and night sky.			
Content Organizer: The Universe			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
2. Observe and describe how the sun, moon and stars all appear to move slowly across the sky.			

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Content Standard: Earth and Space			
Benchmark A: Observe constant and changing patterns of objects in the day and night sky.			
Content Organizer: The Universe			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
3. Observe and describe how the moon appears a little different every day but looks nearly the same again about every four weeks.			

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Content Standard: Earth and Space
Benchmark C: Observe, describe and measure changes in the weather, both long term and short term.
Content Organizer: Earth Systems

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
4. Observe and describe that some weather changes occur throughout the day and some changes occur in a repeating seasonal pattern.			

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Content Standard: Earth and Space			
Benchmark C: Observe, describe and measure changes in the weather, both long term and short term.			
Content Organizer: : Earth Systems			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
5. Describe weather by measurable quantities such as temperature and precipitation.			

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Content Standard: Life Sciences
Benchmark A: Discover that there are living things, non-living things and pretend things, and describe the basic needs of living things (organisms)
Content Organizer: : Characteristics and Structure of Life

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
1. Explain that animals, including people, need air, water, food, living space and shelter; plants need air, water, nutrients (e.g., minerals), living space and light to survive.			

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Content Standard: Life Sciences			
Benchmark B: Explain how organisms function and interact with their physical environment.			
Content Organizer: : Characteristics and Structure of Life			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
2. Identify that there are many distinct environments that support different kinds of organisms.			

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Content Standard: Life Sciences			
Benchmark B: Explain how organisms function and interact with their physical environment.			
Content Organizer: : Characteristics and Structure of Life			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
3. Explain why organisms can survive only in environments that meet their needs (e.g., organisms that once lived on Earth have disappeared for different reasons such as natural forces or human-caused effects).			

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Content Standard: Life Sciences			
Benchmark C: Describe similarities and differences that exist among individuals of the same kind of plants and animals.			
Content Organizer: : Heredity			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
4. Compare similarities and differences among individuals of the same kind of plants and animals, including people.			

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Content Standard: Life Science
Benchmark A: Discover that there are living things, non-living things and pretend things, and describe the basic needs of living things (organisms)
Content Organizer: : Diversity and Interdependence of Life

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
5. Explain that food is a basic need of plants and animals (e.g., plants need sunlight to make food and to grow, animals eat plants and/or other animals for food, food chain) and is important because it is a source of energy (e.g., energy used to play, ride bicycles, read, etc.).			

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Content Standard: Life Science			
Benchmark B: Explain how organisms function and interact with their physical environment.			
Content Organizer: : Diversity and Interdependence of Life			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
6. Investigate the different structures of plants and animals that help them live in different environments (e.g., lungs, gills, leaves and roots).			

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Content Standard: Life Sciences			
Benchmark B: Explain how organisms function and interact with their physical environment.			
Content Organizer: : Diversity and Interdependence of Life			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
7. Compare the habitats of many different kinds of Ohio plants and animals and some of the ways animals depend on plants and each other.			

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Content Standard: Life Sciences
Benchmark B: Explain how organisms function and interact with their physical environment.
Content Organizer: : Diversity and Interdependence of Life

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
8. Compare the activities of Ohio's common animals (e.g., squirrels, chipmunks, deer, butterflies, bees, ants, bats and frogs) during the different seasons by describing changes in their behaviors and body covering.			

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Content Standard: Life Sciences			
Benchmark B: Explain how organisms function and interact with their physical environment.			
Content Organizer: : Diversity and Interdependence of Life			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
9. Compare Ohio plants during the different seasons by describing changes in their appearance.			

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Content Standard: Physical Sciences			
Benchmark: None			
Content Organizer: : Forces and Motion			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
1. Explore how things make sound (e.g., rubber bands, tuning fork and strings).			

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Content Standard: Physical Sciences			
Benchmark: None			
Content Organizer: : Forces and Motion			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
2. Explore and describe sounds (e.g., high, low, soft and loud) produced by vibrating objects.			

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Content Standard: Physical Science			
Benchmark: None			
Content Organizer: : Forces and Motion			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
3. Explore with flashlights and shadows that light travels in a straight line until it strikes an object.			

Science Grade 2

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Content Standard: Science and Technology
Benchmark A: Explain why people, when building or making something, need to determine what it will be made of, how it will affect other people and the environment.
Content Organizer: : Understanding Technology

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
1. Explain that developing and using technology involves benefits and risks.			

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Adams County/Ohio Valley
Course of Study

Content Standard: Science and Technology
Benchmark A: Explain why people, when building or making something, need to determine what it will be made of, how it will affect other people and the environment.
Content Organizer: : Understanding Technology

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
2. Investigate why people make new products or invent new ways to meet their individual wants and needs.			

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Adams County/Ohio Valley
Course of Study

Content Standard: Science and Technology
Benchmark A: Explain why people, when building or making something, need to determine what it will be made of, how it will affect other people and the environment.
Content Organizer: : Understanding Technology

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
3. Predict how building or trying something new might affect other people and the environment.			

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Adams County/Ohio Valley
Course of Study

Content Standard: Science and Technology
Benchmark B: Explain that to construct something requires planning, communication, problem solving and tools.
Content Organizer: : Abilities To Do Technological Design

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
4. Communicate orally, pictorially, or in written form the design process used to make something.			

Science Grade 2

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Content Standard: Scientific Inquiry
Benchmark A: Ask a testable question.
Content Organizer: : Doing Scientific Inquiry

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
1. Ask "how can I/we" questions.			

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Adams County/Ohio Valley
Course of Study

Content Standard: Scientific Inquiry			
Benchmark A: Ask a testable question.			
Content Organizer: : Doing Scientific Inquiry			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
2. Ask "how do you know" questions (not "why" questions) in appropriate situations and attempt to give reasonable answers when others ask questions.			

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Adams County/Ohio Valley
Course of Study

Content Standard: Scientific Inquiry			
Benchmark A: Ask a testable question.			
Content Organizer: : Doing Scientific Inquiry			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
3. Explore and pursue student-generated "how" questions.			

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Adams County/Ohio Valley
Course of Study

Content Standard: Scientific Inquiry			
Benchmark B: Design and conduct a simple investigation to explore a question.			
Content Organizer: : Doing Scientific Inquiry			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
4. Use appropriate safety procedures when completing scientific investigations.			

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Content Standard: Scientific Inquiry
Benchmark C: Gather and communicate information from careful observations and simple investigation through a variety of methods.
Content Organizer: : Doing Scientific Inquiry

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
5. Use evidence to develop explanations of scientific investigations. (What do you think? How do you know?)			

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Content Standard: Scientific Inquiry
Benchmark C: Gather and communicate information from careful observations and simple investigation through a variety of methods.
Content Organizer: : Doing Scientific Inquiry

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
6. Recognize that explanations are generated in response to observations, events and phenomena.			

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Content Standard: Scientific Inquiry
Benchmark B: Design and conduct a simple investigation to explore a question.
Content Organizer: : Doing Scientific Inquiry

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
7. Use appropriate tools and simple equipment/instruments to safely gather scientific data (e.g., magnifiers, non-breakable thermometers, timers, rulers, balances and calculators and other appropriate tools).			

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Course of Study

Content Standard: Scientific Inquiry
Benchmark B: Design and conduct a simple investigation to explore a question.
Content Organizer: : Doing Scientific Inquiry

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
8. Measure properties of objects using tools such as rulers, balances and thermometers.			

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Content Standard: Scientific Inquiry
Benchmark C: Gather and communicate information from careful observations and simple investigation through a variety of methods.
Content Organizer: : Doing Scientific Inquiry

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
9. Use whole numbers to order, count, identify, measure and describe things and experiences.			

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Content Standard: Scientific Inquiry
Benchmark C: Gather and communicate information from careful observations and simple investigation through a variety of methods.
Content Organizer: : Doing Scientific Inquiry

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
10. Share explanations with others to provide opportunities to ask questions, examine evidence and suggest alternative explanations.			

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Content Standard: Scientific Ways of Knowing
Benchmark A: Recognize that there are different ways to carry out scientific investigations. Realize that investigations can be repeated under the same conditions with similar results and may have different explanations.
Content Organizer: : Nature of Science

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
1. Describe that scientific investigations generally work the same way under the same conditions.			

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Content Standard: Scientific Ways of Knowing			
Benchmark C: Recognize that diverse groups of people contribute to our understanding of the natural world.			
Content Organizer: : Nature of Science			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
2. Explain why scientists review and ask questions about the results of other scientists' work.			

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Content Standard: Scientific Ways of Knowing
Benchmark B: Recognize the importance of respect for all living things.
Content Organizer: : Ethical Practices

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
3. Describe ways in which using the solution to a problem might affect other people and the environment.			

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Content Standard: Scientific Ways of Knowing			
Benchmark C: Recognize that diverse groups of people contribute to our understanding of the natural world.			
Content Organizer: : Science and Society			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
4. Demonstrate that in science it is helpful to work with a team and share findings with others.			