

Science – Kindergarten

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. Observe that the sun can be seen only in the daytime, but the moon can be seen sometimes at night and sometimes during the day.			

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Content Standard: Earth and Space			
Benchmark: B: Explain that living things cause changes on Earth.			
Content Organizer: Processes That Shape Earth			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
2. Explore that animals and plants cause changes to their surroundings.			

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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: Processes That Shape Earth

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
3. Explore that sometimes change is too fast to see and sometimes change is too slow to see.			

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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: Processes That Shape Earth			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
4. Observe and describe day-to-day weather changes (e.g., today is hot, yesterday we had rain).			

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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: Processes That Shape Earth

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
5. Observe and describe seasonal changes in weather.			

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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. Explore differences between living and non-living things (e.g., plant-rock).			

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Content Organizer: Characteristics and Structure of Life

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
2. Discover that stories (e.g., cartoons, movies, comics) sometimes give plants and animals characteristics they really do not have (e.g., talking flowers).			

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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
3. Describe how plants and animals usually resemble their parents.			

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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: Characteristics and Structure of Life			
Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
4. Investigate variations that exist among individuals of the same kind of plant or animal.			

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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
5. Investigate observable features of plants and animals that help them live in different kinds of places.			

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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
6. Investigate the habitats of many different kinds of local plants and animals and some of the ways in which animals depend on plants and each other in our community.			

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Content Standard: Physical Sciences
Benchmark: A: Discover that many objects are made of parts that have different characteristics. Describe these characteristics and recognize ways an object may change.
Content Organizer: Nature of Matter

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
1. Demonstrate that objects are made of parts (e.g., toys, chairs).			

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Content Standard: Physical Sciences
Benchmark: A: Discover that many objects are made of parts that have different characteristics. Describe these characteristics and recognize ways an object may change.
Content Organizer: Nature of Matter

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
2. Examine and describe objects according to the materials that make up the object (e.g., wood, metal, plastic and cloth).			

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Content Standard: Physical Sciences
Benchmark: A: Discover that many objects are made of parts that have different characteristics. Describe these characteristics and recognize ways an object may change.
Content Organizer: Nature of Matter

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
3. Describe and sort objects by one or more properties (e.g., size, color and shape).			

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Content Standard: Physical Sciences
Benchmark: B: Recognize that light, sound and objects move in different ways.
Content Organizer: Forces and Motion

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
4. Explore that things can be made to move in many different ways such as straight, zigzag, up and down, round and round, back and forth, or fast and slow.			

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Course of Study

Content Standard: Physical Sciences
Benchmark: B: Recognize that light, sound and objects move in different ways.
Content Organizer: Forces and Motion

Grade-level Indicator	Instructional Activities/Strategies	Resources	Assessment
5. Investigate ways to change how something is moving (e.g., push, pull).			

Science – Kindergarten

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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. Explore that objects can be sorted as "natural" or "man-made".			

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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
2. Explore that some materials can be used over and over again (e.g., plastic or glass containers, cardboard boxes and tubes).			

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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
3. Explore that each kind of tool has an intended use, which can be helpful or harmful (e.g., scissors can be used to cut paper but they can also hurt you).			

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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 "what if" questions.			

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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
2. Explore and pursue student-generated "what if" questions.			

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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
3. Use appropriate safety procedures when completing scientific investigations.			

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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
4. Use the five senses to make observations about the natural world.			

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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. Draw pictures that correctly portray features of the item being described.			

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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 numbers can be used to count a collection of things.			

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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 and other appropriate tools).			

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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
8. Measure the lengths of objects using non-standard methods of measurement (e.g., teddy bear counters and pennies).			

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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. Make pictographs and use them to describe observations and draw conclusions.			

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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
10. Make new observations when people give different descriptions for the same thing.			

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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. Recognize that scientific investigations involve asking open-ended questions. (How? What if?)			

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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
2. Recognize that people are more likely to accept your ideas if you can give good reasons for them.			

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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. Interact with living things and the environment in ways that promote respect.			

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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 ways science is practiced by people everyday (children and adults).			