

Groveport Madison Local School District
Second Grade Science Content Standards
Planning Sheets

Standard: Earth and Space Sciences

1st
9 wks

2nd
9 wks

3rd
9wks

4th
9 wks

A. Observe constant and changing patterns of objects in the day and night sky.				
1. Recognize that there are more stars in the sky than anyone can easily count.	√			
2. Observe and describe how the sun, moon and stars all appear to move slowly across the sky.	√			
3. Observe and describe how the moon appears a little different every day but looks nearly the same again about every four weeks.	√			
B. Explain that living things cause changes on Earth.				
C. Observe, describe and measure changes in the weather, both long term and short term.				
4. Observe and describe that some weather changes occur throughout the day and some changes occur in a repeating seasonal pattern.		√		
5. Describe weather by measurable quantities such as temperature and precipitation.		√		
D. Describe what resources are and recognize some are limited but can be extended through recycling or decreased use.				

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Standard: Life Sciences

1st **2nd** **3rd** **4th**
9 wks **9 wks** **9wks** **9 wks**

A. Discover that there are living things, non-living things and pretend things, and describe the basic needs of living things (organisms).				
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.			√	
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.).			√	
B. Explain how organisms function and interact with their physical environment.				
2. Identify that there are many distinct environments that support different kinds of organisms.				√
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).				√
6. Investigate the different structures of plants and animals that help them live in different environments (e.g., lungs, gills, leaves and roots).				√
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.		√		
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.		√		
9. Compare Ohio plants during the different seasons by describing changes in their appearance.		√		
C. Describe similarities and differences that exist among individuals of the same kind of plants and animals.				
4. Compare similarities and differences among individuals of the same kind of plants and animals, including people.				√

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Standard: Physical Sciences

1st	2nd	3rd	4th
9 wks	9 wks	9wks	9 wks

A. Discover that many objects are made of parts that have different characteristics. Describe these characteristics and recognize ways an object may change.				
B. Recognize that light, sound and objects move in different ways.				
1. Explore how things make sound (e.g. rubber bands, tuning fork and strings).			√	
3. Explore with flashlights and shadows that light travels in a straight line until it strikes an object.			√	
C. Recognize sources of energy and their uses.				
2. Explore and describe sounds (e.g., high, low, soft and loud) produced by vibrating objects.			√	

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Standard: Science and Technology

1st **2nd** **3rd** **4th**
9 wks **9 wks** **9wks** **9 wks**

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.				
1. Explain that developing and using technology involves benefits and risks.				√
2. Investigate why people make new products or invent new ways to meet their individual wants and needs.				√
3. Predict how building or trying something new might affect other people and the environment.				√
B. Explain that to construct something requires planning, communication, problem solving and tools.				
4. Communicate orally, pictorially, or in written form the design process used to make something.				√

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Standard: Scientific Inquiry

1st
9 wks

2nd
9 wks

3rd
9wks

4th
9 wks

A. Ask a testable question.				
1. Ask "how can I/we" questions.	√			
2. Ask "how do you know" questions (not "why" questions) in appropriate situations and attempt to give reasonable answers when others ask questions.	√			
3. Explore and pursue student-generated "how" questions.	√			
B. Design and conduct a simple investigation to explore a question.				
4. Use appropriate safety procedures when completing scientific investigations.	√			
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).		√		
8. Measure properties of objects using tools such as rulers, balances and thermometers.		√		
C. Gather and communicate information from careful observations and simple investigation through a variety of methods.				
5. Use evidence to develop explanations of scientific investigations. (What do you think? How do you know?)	√			
6. Recognize that explanations are generated in response to observations, events and phenomena.			√	
9. Use whole numbers to order, count, identify, measure and describe things and experiences.		√		
10. Share explanations with others to provide opportunities to ask questions, examine evidence and suggest alternative explanations.	√			

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Standard: Scientific Ways of Knowing

1st **2nd** **3rd** **4th**
9 wks **9 wks** **9wks** **9 wks**

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.				
1. Discover that scientific investigations generally work the same way under the same conditions.		√		
B. Recognize the importance of respect for all living things.				
3. Describe ways in which using the solution to a problem might affect other people and the environment.			√	
C. Recognize that diverse groups of people contribute to our understanding of the natural world.				
2. Explain why scientists review and ask questions about the results of other scientists' work.				√
4. Demonstrate that in science it is helpful to work with a team and share findings with others.	√			