



Chardon Local Schools Curriculum

Grade 4 - SCIENCE - **COURSE DESCRIPTION**

Curriculum Description / Overview

The grade 4 science curriculum is an open-ended and sequential process of investigating the biological and physical world. By using the scientific method, students will explore Earth's surface, living things and their environments, matter, forms of energy, and electricity. A guided inquiry program gives students the opportunity to explore topics and concepts through investigations and technology.



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Grade 4 - SCIENCE - CURRICULUM MAP

Strand	EARTH AND SPACE SCIENCE
Power Objective #1	Describe how Earth's surface has specific characteristics and landforms that can be identified.
Supporting Indicators	Identify sources of saltwater and freshwater
	Recognize common landforms and features through the use of various resources
	DIFFERENTIATE BETWEEN COMMON LANDFORMS
	EXPLAIN HOW VARIOUS PROCESSES SHAPE AND RESHAPE EARTH'S SURFACE
Power Objective #2	Explain how the surface of Earth changes due to weathering, erosion, and deposition.
Supporting Indicators	Name characteristics of rocks and soil
	Recognize slow and fast changes to Earth's surface
	Define weathering, erosion, and deposition
	Analyze various weathering processes
	Compare and contrast weathering, erosion, and deposition
Strand	PHYSICAL SCIENCE
Power Objective #1	Investigate how the total amount of matter remains constant when undergoing a change.
Supporting Indicators	Identify three states of matter and changes in states
	Properties may stay the same or change

	DEFINE CONSERVATION OF MATTER
	INVESTIGATE CONSERVATION OF MATTER
Power Objective #2	Demonstrate how energy can be transformed and/or transferred from one location to another.
Supporting Indicators	Identify the various forms of energy (MELTS)
	Demonstrate how energy can be transferred from one location to another
	CREATE A SIMPLE CIRCUIT WITH A SWITCH
	HYPOTHESIZE MATERIALS THAT WILL BE A CONDUCTORS/ INSULATORS
	INVESTIGATE MATERIALS THAT ARE CONDUCTORS/ INSULATORS
	MODEL HOW ENERGY CAN BE TRANSFORMED FROM ONE FORM TO ANOTHER
	COMPARE AND CONTRAST ELECTRICITY AND MAGNETISM
	FORMULATE HOW ELECTRICITY AND MAGNETISM AFFECT OUR EVERYDAY LIVES
Strand	LIFE SCIENCE
Power Objective #1	Investigate how changes in an organism's environment are beneficial and/or harmful.
Supporting Indicators	Describe characteristics of ecosystems
	Analyze photographs to identify biotic and abiotic factors
	RECOGNIZE THAT RAPID AND GRADUAL CHANGES HAVE IMPACTS ON AN ECOSYSTEM
	RELATE CHANGES IN AN ANIMAL'S BEHAVIOR TO ITS ENVIRONMENT
	EXPLAIN WHY SOME ORGANISMS NO LONGER EXIST
	INVESTIGATE HOW CHANGES TO ENVIRONMENTS HAVE AFFECTED ORGANISMS IN SPECIFIC AREAS IN OHIO
Power Objective #2	Compare fossils to one another and to present day organisms according to their similarities and differences.
Supporting Indicators	Name internal and external characteristics

	Classify organisms based upon shared internal and external characteristics
	COMPARE ORGANISMS THAT LIVED LONG AGO TO THOSE EXISTING TODAY
	ANALYZE HOW SOME ORGANISMS HAVE CHANGED
	RELATE FOSSIL TYPES TO THE NATURE OF THE ORGANISM'S ENVIRONMENT, PAST AND PRESENT
Strand	SCIENCE INQUIRY AND APPLICATIONS
Power Objective #1	Inquiry Process establishes the basis for students' learning in science. Students use scientific processes: questioning, planning and conducting investigations, using appropriate tools and techniques to gather data, thinking critically and logically about relationships between evidence and explanations, and communicating results.
Supporting Indicators	Observe and ask questions about the natural environment
	Plan and conduct simple investigations
	EMPLOY SIMPLE EQUIPMENT AND TOOLS TO GATHER DATA AND EXTEND THE SENSES
	USE APPROPRIATE MATHEMATICS WITH DATA TO CONSTRUCT REASONABLE EXPLANATIONS
	Communicate about observations, investigations and explanations.
	Review and ask questions about the observations and explanations of others.