Curriculum Map: 3rd Grade Science

Course: 3 Science Sub-topic: General

Grade(s): 3

Course Description: In third grade science students will experience three science domains; Life Science, Physical Science, and Earth and Space Science. In each domain hands on learning opportunities will be provided.

In Life science students will explore topics related to Organisms and how they live, grow, respond, and reproduce. Also, how animals interact in their environment. How characteristics pass on from one generations to another; heredity. Students will focus on evolution, the unity and diversity of life on Earth.

In Physical Science students will explore topics related to Energy and matter. We will learn to investigate how objects, move how energy transfers, and direction of motion. Also, students will learn about waves transfer energy and information.

In Earth and Space science students will learn how to make predictions, how to collect weather data, and about climate and weather conditions. Third graders will learn about the dynamic set of interconnected systems (geosphere, hydrosphere, atmosphere, biosphere)

Course Textbooks, Workbooks, Materials Citations: Textbook

Teachers Pay Teachers

Science Kit

Unit:

This Curriculum Map Unit has no Topics to display

Unit:

This Curriculum Map Unit has no Topics to display

Unit: Life Science

Timeline: Week 1 to 12

Unit Description: Life Science-

Plant and Animals Structures

Unit Essential Questions:

How do organisms live, grow, respond to their environment, and reproduce?

How and why do organisms interact with their environment and what are the effects of these interactions?

How are the characteristics of one generation passed to the next? How can individuals of the same species and even siblings have different characteristics?

How can there be so many similarities among organisms yet so many different kinds of plants, animals, and microorganisms?

Unit Big Ideas:

All organisms are made of cells and can be characterized by common aspects of their structure and functioning.

Organisms grow, reproduce, and perpetuate their species by obtaining necessary resources through interdependent relationships with other organisms and the physical environment.

Heredity refers to specific mechanisms by which characteristics or are passed from one generation to the next via genes, and explains why offspring resemble, but are not identical to, their parents.

Biological evolution explains both the unity and diversity of species and provides a unifying principle for the history and diversity of life on Earth.

Unit Materials:

Textbook

Teacher Pay Teachers

Science Kit

Unit Assignments:

Lesson	Objectives	Standards	Assessments	Resources
Life Cycles	Use models to explain how reproduction is essential for every kind of organism. (3-LS2-2)	3.1.4.A 3.1.4.B		
Life Cycles	Develop a model to describe the commonalities of life cycles of different organisms. (3-LS2-1)	3.1.4.C 4.1.4.A		

Traits Influenced by the Environment	Use evidence to compare characterisics inherited from parents, characteristics caused by the environment, and those resulting from both. (3-LS3-1) (3-LS3-2)	4.5.4D 4.2.4C
Inherited Traits	Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group similar organisms.	
Traits Influenced by the Environment	(3-LS3-1; 3-LS3-2)	
	Use evidence to support an explanation that the environment can influence traits.	
	3-LS3-2)	
Survival of Groups	Based on observations, construct an argument that some animals form groups that help members survive. (3-LS2-1)	3.1.3.B1
Survival When Environments Change	Construct an argument with evidence that within a specific habitat, some organisms survive well, some not so well, and others cannot survive at all. (3-LS4-3)	3.1.4.A 3.1.4.B 3.1.4.C 3.2.4A 3.2.4B 3.3.4.A 3.3.4.B 3.4.4B 3.4.4D 3.4.4E 4.1.4.E 4.1.4.A 4.4.4A 4.4.4D 4.5.4D 4.2.4C
Fossils	Analyze and interpret data from fossils to provide evidence of the organisms and environments in which they lived	

Fossils as a Record	long ago. (3-LS4-1)
Living Things and Climate Change	Analyze and interpret data from fossils to provide evidence of the organisms and environments in which they lived long ago. (3-LS4-1)
Living Things and Climate Change	Use evidence to argue that when the environment changes in whys that affect a place's physical characteristics, organisms may survive, move to new locations, or die.
Living Things and Climate Change	Use evidence, make a claim about merits of solutions to problems caused when the environment changes and types of animals and plants that live there may change. (3-LS4-4)
Fossils as a Record	Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. (3-LS4-1)
Fossils as a Record	Use evidence to construct an explanation that some rocks and minerals record the remains of organisms. (3-LS4-1)
Fossils as a Record	Obtain and communicate information that some organisms that once lived on earth are no longer found anywhere, although other organisms now may resemble them. (3-LS4-1)
Living Things and Climate Change	Use evidence from fossil records to construct an explanation of the relationship between types of organisms living today and types of organisms that lived in the past. (3-LS4-4)
Living Things and Climate Change	Use evidence to explain how some characteristics that vary among individuals of the same kind of organism can provide advantages to survive, find mates, and reproduce. (3-LS4-2)
	Use evidence to demonstrate how humans, like all other organisms, obtain living and non-living resources from their environment.

Unit Key Terminology & Definitions:

Life cycle

Offspring

Parents

Reproduce

Survival

Basic needs

Consumer

Heterotroph

Representation

Stable

Inheritance Traits

Environment

Evidence

Influence

Characteristics

Environmental factors

Generation

Inherited

Siblings

Traits

Variation

Extinct

Fossils

Adapt

Endangered

Habitats

Populations

Microscopic

Microscopic Organism

Organism

Visible Organism

Explanation

Fossil record

Fossil

Reproduce

Survive

Living

Non-Living

This Curriculum Map Unit has no Topics to display

Unit: Physical Science

Timeline: Week 13 to 37

Unit Description: Energy and Motion

Unit Essential Questions:

How can one explain the structure, properties, and interactions of matter?

How can one explain and predict interactions between objects within systems?

How is energy transferred and conserved?

How are waves used to transfer energy and information?

Unit Big Ideas:

Matter can be understood in terms of the types atoms present and the interactions both between and within atoms.

Interactions between any two objects can cause changes in one or both.

Waves are a repeating pattern of motion that transfers energy from place to place without overall displacement of matter.

Unit Materials:

Textbook

Science Kit

Teacher Pay Teacher

Unit Assignments:

Lesson	Objectives	Standards	Assessments	Resources
Motion and Forces	Investigate the variables that may affect how objects move across a floor, down a ramp, etc.	3.2.3.B1 3.2.3. B2 3.2.4.B1 3.2.4.B2 3.2.3.B6		
	Through the use of objects, design an investigation and demonstrate that forces can cause changes on an object's speed or direction of motion.	3.2.3.B1		
Motion and Forces	Construct an explanation for why an object subjected to multiple pushes and pulls might stay in one place or move.	3.2.4.B1		
Motion and Forces	Take measurements of objects in motion and represent the movement of objects in multiple representations.	3.2.3.B1		
Motion and Forces	Investigate the motion of objects to determine observable and measurable patterns to predict future motions.	3.2.3.B1		
	Provide evidence that a pattern can be used to predict future motion.	3.2.4. B1		
Motion and Forces	Design and implement an investigation to demonstrate that objects in contact exert forces on each other.	3.2.3.B1		

Unit Key Terminology & Definitions:

Acceleration

Force

Speed

Velocity

Systems

Design

Direction

Investigation

Motion

Speed

Net Zero

Pattern

Prediction

Force

Gravity

Net Force

Pattern

Predict

This Curriculum Map Unit has no Topics to display

Unit: Earth and Space Science
Timeline: Week 37 to 48

Unit Description:	Changing Earth
Unit Essential Questions:	What is the universe, and what is Earth's place in it? How and why is Earth constantly changing? How do Earth's processes and human activities affect each other?
Unit Big Ideas:	The universe is composed of a variety of different objects, which are organized into systems each of, which develops according to accepted physical processes and laws. The Earth is a complex and dynamic set of interconnected systems (e.g. geosphere, hydrosphere, atmosphere, biosphere) that interact over a wide range of temporal and spatial scales. The Earth processes affect and are affected by human activities.

Unit Materials:

Textbook

Teacher Pay Teacher

Science Kit

Unit Assignments:

Lesson	Objectives	Standards	Assessments	Resources
Weather	Organize simple weather data sets to record local weather data and identify day-to-day variations, as well as, long-term patterns of weather.	3.3.3.A4 3.3.3.A5		
Weather	Record and communicate information to describe climates in different regions of the world.	3.3.3.A4 3.3.3.A5		
Climate	Display simple data sets in tables and graphs to display previous weather conditions to make predictions for future seasons.	3.3.3.A4 3.3.3.A5		

Unit Key Terminology & Definitions:

Atmosphere

Data

Weather

Climate

Conditions

Weather

This Curriculum Map Unit has no Topics to display