4th Grade Science
Curriculum Map
Sheryl Muckey

<table>
<tr><td colspan="2">Unit: Plant and Animal Structures</td><td>Time: September-November</td></tr>
<tr><td colspan="3">Standards Taught</td></tr>
<tr><td colspan="3">4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
4-LS1-2 Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.
4-PS4-2 Develop a model to describe how light reflection from objects and entering the eye allows objects to be seen.</td></tr>
<tr><td>Differentiation/Assessment:</td><td>Classroom Management and Environment:</td><td>What will the students be doing?</td></tr>
<tr><td>Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.</td><td>Each student has their own individual desk but table are available for group work and projects. There is frequent movement to encourage class participation and involvement. Expectations and procedures are clearly stated and easy to understand. The students use the science lab for experiments and explorations.</td><td>Writing in science journals
Reading text, internet sites, and books
Setting up explorations/experiments
Responding to research
Observing
Seed activity/Recording
Creating an animal adaptation project
Creating an eye model and explanation</td></tr>
<tr><td>Relevance</td><td>Vocabulary</td><td>Assessments</td></tr>
<tr><td>Students will study the structures that plants and animals have that allow them to grow and survive. They will study about senses and how they help an animal collect information and send that information through their bodies. The students</td><td>Adaptation
Physical adaptation
Behavioral adaptation
Instinct
Vascular plants
Nonvascular plants
Photosynthesis
Chlorophyll
Germination</td><td>Science notebook entries and drawings
Lab reports and processes
Reading/Discussion questions
Worksheets and lesson assessments
Animal report
Eye model and presentation</td></tr>
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will research and model how light is used by see.	*Fertilization* *Pollination* *Life cycles* *Metamorphosis* *Environment* *Populations* *Habitat* *Niches* *Consumer* *Producer* *Decomposer* *Senses*	
Essential Questions: • *What are some plant structures?* • *What are the functions of plant structures?* • *How do plants reproduce?* • *How do animals reproduce?* • *How are living things adapted to their environments?* • *How does the eye process light so animals can see?*		

Unit: Physical Science	**Time:** *December-February*	
Standards Taught		
• *4-PS3-1 Use evidence to construct an explanation relating the speed of an abject to the energy of that object.* • *4-PS3-2 Make observations to provide evidence for how energy can be transferred from place to place by sound, light, hear, and electric currents.* • *4-PS3-3 Ask questions and predict outcomes about the changes in energy that occur when objects collide.* • *4-PS3-4 Design, test, and refine a device that converts energy from one form to another.* • *4-PS4-1 Develop a model of waves to describe patterns in terms of amplitude and wavelength and to provide evidence that waves can cause objects to move.* • *4-PS4-3 Create and compare multiple solutions that use patterns to transfer information.*		
Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and	*Each student has their own individual desk but table are available for*	• *Writing in science journals*

aides. If appropriate, they will complete worksheets and test in an alternate setting.	*group work and projects. There is frequent movement to encourage class participation and involvement. Expectations and procedures are clearly stated and easy to understand. The students use the science lab for experiments and explorations.*	• *Reading text, internet sites, and books* • *Setting up explorations/experiments* • *Responding to research* • *Observing* • *Work with circuit models* • *Designing a solar oven* • *Creating communication codes* • *Creating wave models* • *Creating a collision activity*
Relevance	**Vocabulary**	**Assessments**
Students will explore the different forms of energy. They will also explore how energy can change from one form to another. Energy travels in waves and this can be modeled to demonstrate how waves move objects. They will work with electrical circuits to demonstrate that electrical energy can be converted into light, sound, and heat energy. They will also work with speed of objects in motion and what happens to energy when objects collide.	*Energy* *Kinetic energy* *Potential energy* *Mechanical energy* *Chemical energy* *Electrical energy* *Conduction* *Convection* *Radiation* *Conductor* *Insulator* *Circuit* *Parallel circuit* *Series circuit* *Vibrations* *Wave length* *Amplitude*	*Science notebook entries and drawings* *Lab reports and processes* *Reading/Discussion questions* *Worksheets and lesson assessments* *Models and activities* *Codes/patterns*
Essential Questions: • *What are some forms of energy?* • *What does energy come from?* • *What are conductors and insulator?* • *How is energy transferred?* • *How does energy change from one form to another?* • *How do waves transfer energy?* • *What is electricity?* • *What is an electric circuit?* • *How does electrical energy change into light, sound, or heat energy?*		

• *What is speed and how does it transfer and change?*

Unit: The Land/Erosion/Natural Resources and Earth Processes	**Time:** *March-May*	
Standards Taught		
• *4-ESS1-1 Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.* • *4-ESS2-1 Make observations and /or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.* • *4-ESS2-2 Analyze and interpret data from maps to describe patterns of Earth's features.* • *4-ESS3-1 Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect he environment.* • *4-ESS3-2 Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.*		
Differentiation/Assessment:	**Classroom Management and Environment:**	**What will the students be doing?**
Students who needed the extra help received guidance from our title teacher and aides. If appropriate, they will complete worksheets and test in an alternate setting.	*Each student has their own individual desk but table are available for group work and projects. There is frequent movement to encourage class participation and involvement. Expectations and procedures are clearly stated and easy to understand. The students use the science lab for experiments and explorations.*	• *Reading text, internet sites, and books* • *Setting up explorations/experiments* • *Responding to research* • *Observing* • *Reading maps of landform features* • *Creating an erosion model* • *Creating/Researching earthquake buildings*
Relevance	**Vocabulary**	**Assessments**
Students will study patterns found in Earth's features. They will also study about Earth's natural resources and how to protect them. In particular, they will study the	*Natural resources* *Renewable resources* *Nonrenewable resources* *Fossil fuels* *Pollution* *Recycling*	*Science notebook entries and drawings* *Lab reports and processes* *Reading/Discussion questions* *Worksheets and lesson assessments*

fuels from natural resources and how they affect the environment. Students will also study rock formations and how they are affected by weathering and erosion. They will use this information to determine how people are affected by natural Earth processes.	*Conservation* *Rock formation* *Fossils* *Erosion* *Weathering* *Earthquake* *Seismographs* *Volcanoes*	*Erosion model and writings* *Earthquake building project and writing*
Essential Questions: • *What are natural resources?* • *What patterns do you find in land features?* • *How do people affect their environment?* • *How do we reduce impact of natural earth processes on humans?* • *What do we learn from rock formations and fossil layers?* • *How can we measure the effects of erosion?* • *How do fuels from natural resources affect the environment?*		