

Course Description: This curriculum has been written to align with the revised MO Learning Standards for Science (approved by the state board of education in April of 2016). Reading Units and Mystery Science support our curriculum. This curriculum has been written as a guide for utilizing this resource to teach the revised MO Learning Standards for Science.

Second Grade Science Scope and Sequence

	Unit	Timeframe
1	Work of Water	4 weeks
2	Ecosystems/Habitats (Reading Cross-Curricular Unit)	3 weeks
3	Material Magic	3 weeks
4	Plant Adventures	3 weeks

Unit 1 Work of Water		
Standards addressed: 2.ESS1.C Use information from several sources to provide evidence that Earth events can occur quickly or slowly. 2.ESS2.A Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. 2.ESS2.B Develop a model to represent the shapes and kinds of land and bodies of water in an area. 2.ETS1.B Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.		
Essential Questions: How can water change the earth's surface? What can be done to slow the process of erosion?		
Learning Targets: Students will understand how water can change the earth's surface. Students will describe erosion and list ways to slow the process.		
Content Vocabulary: erosion, water cycle, landforms		
Resources Mystery Science		
Standard(s)	Topic	Number of Days
2.ESS1.C 2.ESS2.B	Flow of Water	2 days
2.ESS1.C	Wave Action	2 days

2.ESS1.C 2.ESS2.B	Power of Water	2 days
2.ESS2.A 2.ETS1.B	Prevention of Erosion	2 days

Unit 2 Habitats (Cross-Curricular)

Standards addressed:

- 2.R.1.B.c: Using context to determine the meaning of a new word or multiple word in text.
- 2.R.3.A.a: Identify the main idea of sections of text and distinguish them from the topic.
- 2.R.3.A.c: Use text features to locate specific information.
- 2.R.3.C.a: Explain main idea and supporting details.

Supporting Standards:

- 2.R.1.B.e: Locating words in a dictionary or glossary to determine or clarify the meaning of words or phrases.
- 2.R.1.C.a: Text to text (text ideas including similarities and differences regarding information and relationships in fiction and nonfiction.)
- 2.R.1.C.b: Text to world (text ideas regarding experiences in the world)
- 2.R.1.D.b: Producing evidence of reading.
- 2.R.3.A.d: Explain common graphic features to assist in the interpretation of text.

Essential Questions:

- How is the weather different in each habitat?
- What plants or trees grow in different habitats?
- What animals survive in different habitats?

Learning Targets:

- Students will identify different weather in each habitat.
- Students will identify plants and trees that grow in each habitat.
- Students will identify the animals that live in each habitat.

Content Vocabulary: habitat, biome, ecosystem, precipitation, characteristics

Resources

Desert Homes, Life in the Grassland, Safari, Life in the Tundra, Life in the Forest, Coral Reef Homes, Places and Science Spin, Places in the World, Woods of Wonder, Habitats reading passages

Standard(s)	Topic	Number of Days
2.R.3.A.a 2.R.3.C.a	<i>Places/Science Spin: Life in the Leaves</i>	1 week
2.R.3.A.a 2.R.3.C.a	<i>Places in the World/Woods of Wonder</i>	1 week
2.R.3.A.a 2.R.3.C.a	<i>Arctic Tundra/Desert/Wetland, Ocean</i>	1 week

Unit 3 Material Magic/States of Matter (Reading Unit)

Standards addressed:

- 2.PS1.A.1 Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
- 2.PS1.A.2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
- 2.ETS1.C Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

Essential Questions:

- What are the three states of matter?
- What properties make objects useful in different situations?
- What material would be best to wear in different weather conditions?
- How does matter change in different conditions?

Learning Targets:

- Students will identify the three states of matter.
- Students will explain what properties make objects useful in different situations.
- Students will understand which material is favorable to wear in different weather conditions.
- Students will explain how matter changes in different conditions.

Content Vocabulary: matter, solids, liquids, gases, properties

Resources

Mystery Science, All About Solids, All About Liquids, All About Gases, Changing States of Matter, Matter by Arlene Black, Properties of Matter, Observing Matter, Matter by Kim Fields

Standard(s)	Topic	Number of Days
2.PS1.A.1 2.PS1.A.2 2.ETS1.C	Materials, Properties, and Engineering	1 week
2.PS1.A.1 2.PS1.A.2 2.ETS1.C	Classifying Materials, Insulators, Properties	1 week
2.PS1.A.1 2.PS1.A.2 2.ETS1.C	Heating, Cooling, & Phases of Matter	1 week

Unit 4 Plant Adventures

Standards addressed:

- 2.LS2.A.1 Plan and conduct investigations on the growth of plants when growing conditions are altered
- 2.LS2.A.2 Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

Essential Questions:

How do seeds travel long distances?

Can seeds grow if they do not get water, light, or soil?

Learning Targets:

Students will explain how seeds travel long distances.

Students will describe how different growing conditions affect a seed/plant growth.

Content Vocabulary: seed, plant, soil, growth

Resources

Mystery Science

Standard(s)	Topic	Number of Days
2.LS2.A.1	Seed Dispersal	1-2 days
2.LS2.A.1	Water, Sunlight, & Plant Growth	1-3 days
2.LS2.A.2	Light, Leaves, & Competition	1 day
2.LS2.A.1 2.LS2.A.2	Adaptations & Habitat	1 day