

Course Syllabus

Science, Science Grade 2

Morgan County Curriculum 4.1 Elementary., Final
Morgan County School District

Physical Science: Structure & Transform

- 1.1.1 Supporting
The learner will be able to classify material objects by their properties providing evidence to support their classifications.
Objects are made of one or more materials such as paper, wood, and metal. Objects can be described by the properties of the materials from which they are made. Those properties and measurements of the objects can be used to separate or classify objects or materials.
- 1.1.2 Supporting
The learner will be able to understand that objects have many observable properties such as size, mass, shape, color, temperature, magnetism, and the ability to interact and/or to react with other substances. Some properties can be measured using tools such as metric rulers, balances, and thermometers.
- 1.1.3 Supporting
The learner will be able to describe the properties of water as it occurs as a solid, liquid or gas. Matter (water) can exist in different states--solid, liquid and gas. Properties of those states of matter can be used to describe and classify them.

Physical Science: Motion and Forces

- 1.2.1 Supporting
The learner will be able to describe and make inferences about the interactions of magnets with other magnets and other matter like magnets can make some things move without touching them.

Magnets have observable properties that allow them to attract and repel each other and attract certain kinds of other materials (e.g., iron). Based on the knowledge of the basic properties of magnets, predictions can be made and conclusions drawn about their interactions with other common objects.

- 1.2.2 Supporting
The learner will be able to describe the change in position over time (motion) of an object. An object's motion can be observed, described, compared and graphed by measuring its change in position over time.
- 1.2.3 Supporting
The learner will be able to describe the position and motion of objects and predict changes in position and motion as related to the strength of pushes and pulls. The position and motion of objects can be changed by pushing or pulling, and can be explored in a variety of ways (such as rolling different objects down different ramps). The amount of change in position and motion is related to the strength of the push or pull (force).
- 1.2.4 Supporting
The learner will be able to understand that the position of an object can be described by locating it relative to another object or the background. The position can be described using phrases such as to the right, to the left, 50 cm from the other object.

Earth and Space Science: Earth & univers

- 2.3.1 Supporting
The learner will be able to describe earth materials solid rocks, soils, water and gases of the atmosphere using their properties. Earth materials include solid rocks and soils, water and the gases of the atmosphere. Minerals that make up rocks have properties of color, luster and hardness. Soils have the capacity to retain water and the ability to support plant growth. Water on Earth and in the atmosphere can be a solid, liquid or gas.
- 2.3.2 Supporting
The learner will be able to describe patterns in weather and weather data in order to make simple predictions based on those patterns discovered. Weather changes from day to day and over seasons. Weather can be described using observations and measurable quantities such as temperature, wind direction, wind speed and precipitation. Simple predictions can be made by analyzing collected data for patterns.

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■ 2.3.3 Supporting

The learner will be able to describe the properties, locations and real or apparent movements of objects in the sky (Sun, moon). Objects in the sky have properties, locations and real or apparent movements that can be observed and described. Observational data, patterns, and models should be used to describe real or apparent movements.

■ 2.3.4 Supporting

The learner will be able to describe the movement of the sun in the sky using evidence of interactions of the sun with the earth like shadows, position of sun relative to horizon to identify patterns of movement. Changes in movement of objects in the sky have patterns that can be observed and described. The Sun appears to move across the sky in the same way every day, but the Sun's apparent path changes slowly over seasons. Recognizing relationships between movements of objects and resulting phenomena, such as shadows, provides information that can be used to make predictions and draw conclusions about those movements.

■ 2.3.5 Supporting

The learner will be able to understand that the moon moves across the sky on a daily basis much like the Sun. The observable shape of the moon can be described as it changes from day to day in a cycle that lasts about a month.

Biological Science: Unity & Diversity

■ 3.4.1 Supporting

The learner will be able to explain the basic needs of organisms. Organisms have basic needs. For example, animals need air, water and food; plants need air, water, nutrients and light. Organisms can survive only in environments in which their needs can be met.

■ 3.4.2 Supporting

The learner will be able to understand that things in the environment are classified as living, nonliving and once living. Living things differ from nonliving things.

Organisms are classified into groups by using various characteristics such as body coverings and body structures.

■ 3.4.3 Supporting

The learner will be able to describe the basic structures and related functions of plants and animals that contribute to growth, reproduction and survival. Each plant or animal has observable structures that serve different functions in growth, survival and reproduction. For example, humans have distinct body structures for walking, holding, seeing and talking. These observable structures should be explored to sort, classify, compare and describe organisms.

■ 3.4.4 Supporting

The learner will be able to describe a variety of plant and animal life cycles to understand patterns of the growth, development, reproduction and death of an organism. Plants and animals have life cycles that include the beginning of life, growth and development, reproduction and death. The details of a life cycle are different for different organisms. Observations of different life cycles should be made in order to identify patterns and recognize similarities and differences.

Biological Science: Biological Change

■ 3.5.1 Supporting

The learner will be able to describe fossils as evidence of organisms that lived long ago, some of which may be similar to others that are alive today. Fossils found in Earth materials provide evidence about organisms that lived long ago and the nature of the environment at that time. Representations of fossils provide the basis for describing and drawing conclusions about the organisms and basic environments represented by them.

Unifying Concepts: Energy Transformation

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■ 4.6.1 Supporting

The learner will be able to describe basic relationships of plants and animals in an ecosystem (food chains). Plants make their own food. All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants. Basic relationships and connections between organisms in food chains can be used to discover patterns within ecosystems.

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■ 4.6.2 Supporting

The learner will be able to describe evidence of the sun providing light and heat to the Earth. Simple observations and investigations begin to reveal that the Sun provides the light and heat necessary to maintain the temperature of Earth. Based on those experiences, the conclusion can be drawn that the Sun's light and heat are necessary to sustain life on Earth.

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Unifying Concepts: Interdependence

■ 4.7.1 Supporting

The learner will be able to describe the cause and effect relationships existing between organisms and their environments. The world has many different environments. Organisms require an environment in which their needs can be met. When the environment changes some plants and animals survive and reproduce and others die or move to new locations.

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