

**CURRICULUM**

**GUIDE**

Science – Grade 1

Providence  
Schools

## UNIT A

### Content students have to learn

### Processes students will learn and use

#### Unit A.1 – Using Our Senses to Observe Physical Properties (6 days)

- Understand that objects can be observed and described in terms of physical properties.
- Recognize that observations can be made using the five senses.

- » Observe objects using the five senses.
- » Describe objects based on their properties.
- » Sort objects by like properties.
- » Classify objects into like groups.
- » Determine the mass of objects using balances.
- » Use graphs to display data gathered from sensory investigations of objects.
- » Demonstrate safe practices during classroom investigations.
- » Use scientific thinking processes to conduct investigations and build explanations: observing, citing evidence, communicating, comparing, and analyzing.

#### Unit A.2 – From Seed to Plant: A Life Cycle (7 days)

- Distinguish between living organisms and nonliving objects.
- Identify that plants need water, air, food, and light to grow.
- Observe and describe the external features of plants.
- Identify the specific functions of the physical structures of plants.
- Observe and record the stages in the life cycle of plants.

- » Observe and compare properties of living organisms.
- » Record observations through drawing, labeling, and captioning.
- » Use tools, including the senses, to observe and describe objects and organisms in the environment.
- » Monitor and record changes in organisms over a period of time.
- » Demonstrate safe practices during classroom investigations.
- » Use scientific thinking processes to conduct investigations and build explanations: observing, citing evidence, communicating, comparing, and organizing.

#### Unit A.3 – The Purpose of Seeds (5 days)

- Distinguish between living organisms and nonliving objects.
- Observe and record the structures of living organisms.
- Identify the functions of the physical structures of living organisms.
- Identify that plants need water, air, food, and light to grow.

- » Communicate information about living organisms.
- » Monitor and record changes in organisms over a period of time.
- » Record observations through drawing, labeling, and captioning.
- » Demonstrate safe practices during classroom investigations.
- » Use scientific thinking processes to conduct investigations and build explanations: observing, citing evidence, communicating, comparing, and organizing.

## UNIT A

### Content students have to learn

### Processes students will learn and use

#### Unit A.4 – Parts of a Plant (8 days)

- Distinguish between living organisms and nonliving objects.
- Observe and describe the structures of plants.
- Identify the specific functions of the physical structures of plants.
- Identify that plants need water, air, food, and light to grow.

- » Communicate information about living organisms.
- » Monitor and record changes in organisms over a period of time.
- » Record observations through drawing, labeling, and captioning.
- » Demonstrate safe practices during classroom investigations.
- » Use scientific thinking processes to conduct investigations and build explanations: observing, citing evidence, communicating, comparing, and organizing.

#### Unit A.5 – The Purpose of Roots (6 days)

- Distinguish between living organisms and nonliving objects.
- Observe and describe the structures of plants.
- Identify the specific functions of the physical structures of plants.
- Identify that plants need water, air, food, and light to grow.

- » Communicate information about living organisms.
- » Monitor and record changes in organisms over a period of time.
- » Record observations through drawing, labeling, and captioning.
- » Demonstrate safe practices during classroom investigations.
- » Use scientific thinking processes to conduct investigations and build explanations: observing, citing evidence, communicating, comparing, and organizing.

#### Unit A.6 – Weather Tools (6 days)

- Understand that weather can be described in terms of measurable quantities.
- Understand that different tools measure different weather conditions.
- Recognize that tools can be used to extend the senses and to collect data about weather.

- » Identify and use tools for gathering data about the weather.
- » Observe and record weather data.
- » Collect, analyze, and interpret data during investigations.
- » Demonstrate safe practices during classroom investigations.

#### Unit A.7 – Sun and Moon (4 days)

- Recognize that the sun and moon are objects in the sky.
- Recognize that the sun is a source of light and heat.
- Understand that the sun can be seen during the day.
- Understand that the moon can be seen during the day and night.

- » Observe and classify objects in the sky.
- » Observe and record changes in position and shape of the moon.
- » Record, analyze, and interpret data.
- » Demonstrate safe practices during classroom investigations.
- » Use scientific thinking processes to conduct investigations and build explanations: observing, citing evidence, communicating, comparing, and analyzing.

## UNIT B

### Content students have to learn

### Processes students will learn and use

#### Unit B.1 – Properties of Rocks (6 days)

- Describe, compare, and sort rocks using physical properties.
- Record observations and use attributes to sort and classify rocks.

- » Observe, describe, and sort rocks based on properties.
- » Use tools to sort rocks.
- » Organize and communicate observations through drawing and writing.
- » Demonstrate safe practices during classroom investigations.
- » Use scientific thinking processes to conduct investigations and build explanations: observing, citing evidence, communicating, comparing, and organizing.

#### Unit B.2 – Basic Earth Materials (6 days)

- Investigate properties of many types of rocks and other earth materials.
- Describe, compare, and sort rocks and other earth materials using physical properties.
- Use attributes to describe how rocks and other earth materials are grouped.

- » Observe, describe, and sort rocks and other earth materials based on properties.
- » Use a variety of tools and methods to sort rocks and other earth materials.
- » Organize and communicate observations through drawing and writing.
- » Demonstrate safe practices during classroom investigations.

#### Unit B.3 – Using Natural Resources (7 days)

- Identify and compare earth materials using physical properties.
- Understand that the properties of different earth materials make each suitable for specific uses.
- Determine which earth materials are best for different uses.

- » Explore places where earth materials are naturally found.
- » Observe ways in which earth materials are used.
- » Demonstrate safe practices during classroom and field investigations.
- » Use scientific thinking processes to conduct investigations and build explanations: observing, citing evidence, communicating, comparing, and organizing.

#### Unit B.4 – Properties of Soil (7 days)

- Describe and compare soils using physical properties.
- Record observations about physical properties of soils.
- Sort and classify the components of different soil samples.
- Understand that the properties of different soils make each suitable for specific uses.

- » Observe and describe soils based on properties.
- » Use tools to sort soil samples.
- » Organize and communicate observations through drawing and writing.
- » Explore places where soils are naturally found.
- » Demonstrate safe practices during classroom investigations.

## UNIT B

### Content students have to learn

### Processes students will learn and use

#### **Unit B.5 – Meeting Animals’ Basic Needs (4 days)**

- Recognize that all animals, including humans, have basic needs.
- Understand that if animals are not able to meet their basic needs, they will not survive.
- Understand that all animals must do certain things to meet their basic needs.
- Understand that animals use their senses to help meet their basic needs.
- Understand that all living organisms are interdependent.

- » Identify and describe ways in which animals meet their needs.
- » Identify the body parts that help animals meet their needs.
- » Use scientific thinking processes to conduct investigations and build explanations: observing, citing evidence, communicating, comparing, and analyzing.

#### **Unit B.6 – Animals Grow and Change (6 days)**

- Understand that animals grow and change throughout their life cycles.
- Recognize that some animals change their appearance as they grow.
- Recognize that making and labeling drawings is one way scientists record data.

- » Observe the life cycles of various animals and humans.
- » Draw and label stages of an animal’s life cycle.
- » Sequence the life cycle of an animal.

#### **Unit B.7 – External Features of Animals (6 days)**

- Understand that every animal has different features that allow it to meet its basic needs.
- Understand that an animal’s features serve specific functions.
- Understand that an animal’s features allow it to survive and thrive.
- Understand that animals can be classified into groups according to like features.

- » Identify and describe external features that allow an animal to survive and thrive.
- » Classify animals according to like features.
- » Demonstrate safe practices during classroom investigations.
- » Use scientific thinking processes to conduct investigations and build explanations: observing, citing evidence, communicating, comparing, and analyzing.

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