

Grade 1 Science

70-80% of the school year should be spent on core units, and the remainder of the time should be spent on optional units or on further development of the core units. No less than 3 weeks (7.5 hours) and not more than 8 weeks (20 hours) should be spent on any core unit

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|--|---------------------------------|----------------------------|
| 1 Core Unit: Animals | 2 Core Unit: Earth | 3 Core Unit: Motion |
| 4 Core Unit: Plants | 5 Core Unit: Senses | |
| 6 Optional Unit: Classifying Matter | 7 Optional Unit: The Sky | |

1 Core Unit: Animals (pp. 104-107 in Science: A Curriculum Guide for the Elementary Level)

1. Observe and describe many types of animals:

- 1.1 Recognize characteristics which can be used to identify and describe animals.
- 1.2 Identify, by sight or by sound, a wide variety of animals.
- 1.3 Classify animals on the basis of their size, their body coverings, the foods they eat, and their relationships to humans.
- 1.4 Recognize that there are several ways in which the same set of animals may be classified.

2. Describe the basic needs of animals:

- 2.1 Identify some animals which make good pets.
- 2.2 Identify a pet's basic needs.
- 2.3 Compare the needs of other animals with pets.

3. Explain how animals are adapted to their environments:

- 3.1 Describe the habitats of some animals.
- 3.2 Explore the ways that animals adapt to their environments.
- 3.3 Explain how animals depend on their habitats for their basic needs.
- 3.4 Observe, describe, or imitate how animals behave in their natural environments.

4. Describe the development of animals from birth or hatching to maturity:

- 4.1 Describe the physical changes of several animals from the newly hatched or born to the mature adult.
- 4.2 Compare the amount of care needed by the young of several species.

2 Core Unit: Earth (pp. 108-110 in Science: A Curriculum Guide for the Elementary Level)

1. Describe the features of the Earth's surface:

- 1.1 Identify the Earth as a sphere in space.
- 1.2 Recognize the globe as a model of the Earth.
- 1.3 Compare landforms such as mountains, plains, and deserts.

2. Describe rocks and soil:

- 2.1 Observe different types of rocks.
- 2.2 Compare and classify rocks.
- 2.3 Observe different types of soil.
- 2.4 Describe soil by texture and colour.

3. The characteristics and uses of air and water:

- 3.1 Infer that air takes up space.

- 3.2 Infer that air moves by observing things affected by it.
- 3.3 Understand that air and water are essential for plants and animals.
- 3.4 Discuss the effects of wind and water on our environment.
- 3.5 Explain how the wind and water can be useful.
- 3.6 Observe and describe the effects of air or water pollution.

3 Core Unit: Motion (pp. 111-113 in Science: A Curriculum Guide for the Elementary Level)

1. Recognize that motion is one type of change:

- 1.1 Compare descriptions or pictures of an environment at different times to discover evidence of change.
- 1.2 Identify whether an observed change involved motion.

2. Describe some different aspects of motion:

- 2.1 Observe and describe motion.
- 2.2 Observe that objects can move at different speeds.
- 2.3 Discuss how motion can be measured.
- 2.4 Observe the relationship between friction and motion.

3. Explain the relationship between force and motion:

- 3.1 Observe the effects of forces in nature.
- 3.2 Appreciate that motion is caused by a force.
- 3.3 Identify some ways that machines move things.

4 Core Unit: Plants (pp. 114-117 in Science: A Curriculum Guide for the Elementary Level)

1. Compare various plants, plant parts, and plant products:

- 1.1 Identify similarities and differences among plants.
- 1.2 Identify the roots, stems, leaves, and flowers of plants.
- 1.3 Compare and classify plants using characteristics of their leaves.
- 1.4 Compare the root systems, the flowers, and the stems of several plants.
- 1.5 Describe some seasonal changes in plants.
- 1.6 Identify foods which come from plants.
- 1.7 Recognize some products other than foods which come from plants.

2. Describe the functions of the various parts of the plants:

- 2.1 Identify basic plant needs.
- 2.2 Match each need of a plant with the part(s) which supply that need.
- 2.3 Observe and describe some plant habitats.
- 2.4 Discuss how the varying needs of plants suit them to different habitats.
- 2.5 Compare the types of care needed by several types of indoor plants.

5 Core Unit: Senses (pp. 118-121 in Science: A Curriculum Guide for the Elementary Level)

1. Discuss the safe use of the sense organs:

- 1.1 Identify the parts of the sense organs which receive the input.
- 1.2 Recognize how to protect the sense organs from damage.

2. Appreciate the diverse uses of the senses:

- 2.1 Match each sense with the organ through which its sensory input is gathered.

- 2.2 Identify common sources of sound.
- 2.3 Identify objects by their odour, texture, taste, colour, sound, or other characteristics.
- 2.4 Determine the source of a sound or an odour.
- 2.5 Determine the colour produced when different colour pigments are mixed.
- 2.6 Appreciate the diversity and value of the information which we receive through our senses.

3. Exhibit ability to compare and classify:

- 3.1 Classify objects by using the senses.
- 3.2 Classify sound by pitch and by loudness.
- 3.3 Recognize that the same group of things may be classified in a number of ways.

6 Optional Unit: Classifying Matter (p. 122 in Science: A Curriculum Guide for the Elementary Level)

1. Distinguish attributes of matter which can be used to help describe it:

- 1.1 Describe an object as completely as possible.
- 1.2 Compare the properties of two objects.
- 1.3 Realize that one object can have many properties.
- 1.4 Use as many of the senses as possible in identifying properties.

2. Classify objects by a common property:

- 2.1 Sort objects into two groups according to one characteristic.
- 2.2 Compare two objects within a defined group to see how they are similar and how they are different.
- 2.3 Recognize that the same set of objects may be classified in more than one way.

7 Optional Unit: The Sky (p. 123 in Science: A Curriculum Guide for the Elementary Level)

1. Describe the major objects which can be seen in the sky:

- 1.1 Realize that the sun is a star.
- 1.2 Identify the sun as a source of light and heat.
- 1.3 Realize that stars other than the sun are very far away.
- 1.4 Observe some of the patterns which stars make in the sky.
- 1.5 Identify Venus, Mars, and Jupiter in the sky.
- 1.6 Observe the changes in the apparent shape of the moon.
- 1.7 Observe the changes in the time of day when the moon appears in the sky.