APPORTIONING OF PRIMARY SCHOOLS SCIENCE & TECHNOLOGY CURRICULUM

GRADE 3

CAMDU

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APPORTIONING OF PRIMARY SCIENCE & TECHNOLOGY CURRICULUM for GRADE 3

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GRADE 3 – TERM ONE

UNIT: STRUCTURE AND FUNCTION (GRADE 3)

Topic: Plants: Their Structure and Uses

Duration: 3 Lessons (30 minutes each)

Specific Objectives

Students should be able to:

1. Describe the physical features of the main parts of plants.
2. Relate the features of these external structures of plants to their function.
3. Discuss the uses of plants to human's processes

UNIT: ECOSYSTEMS (Grade 3)

Topic: Food Webs - Balancing Nature

Duration: 3 Lessons

Specific Objectives

Students should be able to:

1. Construct simple food webs to show feeding relationships among animals in a given area (a tree and places close to it; a flower garden; a pond; etc).
2. Interpret simple food webs.
3. Infer that food webs help to keep nature in balance.
4. Identify factors that may disrupt the balance of nature.
5. State the consequences of disrupting the balance of nature.

UNIT: MATTER AND MATERIALS (GRADE 3)

DURATION: 2 Lessons

OBJECTIVES

Students should be able to:

1. Identify properties of materials that make them suitable for specific purposes.
2. Compare objects used for the same purpose but made of different materials and list the advantages and disadvantages of using each type of material.

DURATION: 3 Lessons

OBJECTIVES

Students should be able to:

1. Give examples of soluble and insoluble materials.
2. Compare and contrast the ability of materials to dissolve in water.

DURATION: 4 Lessons

OBJECTIVES

Students should be able to:

1. Give examples of materials that conduct heat and those that do not (insulators).
2. Compare and contrast the ability of materials to conduct heat.
3. Design and make a device to keep a liquid warm or cold.

DURATION: 3 Lessons

OBJECTIVES

Students should be able to:

1. Demonstrate that certain materials reflect, transmit or absorb light.
2. Describe and give examples of transparent, translucent and opaque materials.
3. Identify uses of transparent, translucent and opaque materials.
4. Compare objects used for the same purpose but made of transparent, translucent or opaque materials.

UNIT: THE EARTH'S WEATHER (GRADE 3)

DURATION: 2 Lessons

OBJECTIVES

Students should be able to:

1. Explain what weather is.
2. List elements of weather (air or wind, clouds, water vapour, precipitation, temperature).

UNIT: WIND (ONE ELEMENT OF WEATHER)

DURATION: 4 Lessons

OBJECTIVES

Students should be able to:

1. Discuss the useful and harmful effects of the wind.
2. Use a wind vane to determine wind direction.
3. Design and construct a wind vane, with four cardinal points, to observe wind direction.
4. Design and construct an anemometer to measure wind speed.

UNIT: WATER

DURATION: 4 Lessons

OBJECTIVES

Students should be able to:

1. List the two main sources of water in nature's water cycle (ground water and surface water).
2. Observe the evaporation and condensation of water.
3. Identify the evaporation and condensation of water.
4. Identify the heat source that powers nature's water cycle.

GRADE 3 - TERM 2

UNIT: SOLAR SYSTEM (GRADE 3)

DURATION: 3 Lessons

SPECIFIC OBJECTIVES:

The students should be able to:

1. Define a planet, star and satellite.
2. Identify Earth as a planet in space.
3. Identify the Sun as a star.
4. Identify the moon as a satellite.
5. Operationally define “revolve.”
6. Operationally define “rotate”.
7. Discuss the relationship between Earth, moon and Sun.
8. Name the planets of the solar system, except Pluto.

UNIT: CLASSIFICATION AND DIVERSITY (GRADE 3)

Topic: Classifying Flowering Plants

Duration: 3 Lessons

Specific Objectives:

Student should be able to:

1. Classify plants into flowering and non-flowering; monocotyledons and dicotyledons
2. Describe the differences between monocotyledonous and dicotyledonous plants.

Topic: The Different Ways of growing new Flowering Plants

Duration: 3 Lessons

Specific Objectives

Students should be able to:

1. Define propagation.
2. State two natural methods by which flowering plants can be propagated.
3. Define 'seed'.
4. Describe common methods of vegetative propagation.
5. Demonstrate respect for plants in their environment.
6. Suggest appropriate methods of propagation for (i.) obtaining diversity and (ii.) Keeping the same characteristics in plants.
7. Describe people's use of artificial plant propagation and materials (production technology) to satisfy their needs.

UNIT: ECOSYSTEMS (GRADE 3)

Topic: Conservation

Duration: 4 Lessons

Specific Objectives Students should be able to:

1. Define conservation.
2. Understand the concept of balance in the environment.
3. Describe the role of recycling and conservation in maintaining balance in the environment.
4. Identify local ecosystems (specifically coral reefs, mangrove swamps, rain forests) in need of conservation and the importance of conservation.
5. Identify and explain the importance of other resources that need to be conserved or recycled.
6. Explain environmental conservation actions that can be taken in everyday life.

UNIT: FORCES, MOTION AND STRUCTURES (GRADE 3)

DURATION: 2 Lessons

Topic: What Forces can do?

OBJECTIVES

Students will be able to:

1. Identify forces as pushes or pulls.
2. Describe the effects of forces acting on a variety of every day objects.

Topic: Magnets

DURATION: 4 Lessons

OBJECTIVES

Students will be able to:

1. Demonstrate how a magnet works.
2. Distinguish between magnetic and non-magnetic materials.
3. Identify ways magnets are used in the home.

Topic: Strengthening Structures

DURATION: 3 Lessons

OBJECTIVES:

Students should be able to:

1. Describe ways in which the strength of materials can be altered.
2. Observe and describe how natural and human-made structures are strengthened.

Grade 3 – TERM THREE

UNIT: EARTH RESOURCES (GRADE 3)

DURATION: 6 Lessons

OBJECTIVES:

The students should be able to:-

1. Identify and name some of the Earth's resources (to include air, water, rocks, and oils).
2. Collect and classify rocks.
3. Describe some uses of rocks to the environment (e.g. protecting the coastline, preventing or reducing erosion, etc.).
4. Investigate how people use rocks for different purposes (e.g. extraction of minerals, building, etc.).
5. Design and make ornaments from rocks (e.g. paper weights).

UNIT: AIR

OBJECTIVES

Students should be able to:

1. List the properties of air.
2. List and discuss ways in which air is important to people.
3. Infer the presence of air by the resistance it offers.
4. Infer that air exerts a force which can bring about movement of objects.

UNIT: WATER

DURATION: 3 Lessons

OBJECTIVES

Students should be able to:

1. Describe the water cycle.
2. Identify ways in which water is important to human beings.
3. Compare the rate of evaporation of water under different conditions.

UNIT: CLASSIFICATION AND DIVERSITY (GRADE 3)

Topic: Classifying Different Vertebrates

Duration: 3 Lessons

Specific Objectives:

Students should be able to:

1. Define (i) Vertebrate (ii) Invertebrate.
2. List the five classes of vertebrates.
3. Describe the main features of each class of vertebrate.
4. Compare the main features or characteristics of the classes of vertebrates.
5. Make a model of any vertebrate from 'throw away' items.

UNIT: ENERGY (GRADE: 3)

DURATION: 3 Lessons

OBJECTIVES

Students should be able to:

1. Recognize heat as a form of energy.
2. Identify or list objects that produce heat.
3. State ways in which heat is used in everyday activities.
4. Appreciate the role of human-made devices that provide heat.
5. Infer that heat is sometimes produced as wasted energy.

DURATION: 2 Lesson

OBJECTIVES

Students should be able to:

1. Recognize that light is a form of energy.
2. List objects that emit light.
3. State ways in which light is used in everyday activities.
4. Appreciate the role of human-made devices that provide light in our everyday lives.

DURATION: 2 Lessons

OBJECTIVES

Students should be able to:

1. State ways in which solar energy is used in the home.
2. Appreciate the role of the sun as the main provider of heat and light in the world.