PRIMARY SCIENCE & TECHNOLOGY CURRICULUM

Grade 4 – TERM ONE

UNIT: STRUCTURE AND FUNCTION (GRADE 4)

Topic: Growth and Development in Plants and Animals

Duration: 15 Lessons (30 minutes each)

Objectives

Students should be able to:

1. State the conditions necessary for germination in plants.
2. Observe and describe the stages in the process of growth in plants.
3. Discuss the importance of growth, development and reproduction in plants and animals.
4. State the various ways in which technology is utilized in growth and propagation in plants.
5. Describe the external structure of animals.
6. Relate the features of these structures to their function.

UNIT: ECOSYSTEMS (GRADE 4)

Topic: Ecosystems (Local)

Duration: 4 Lessons

Specific Objectives

Students should be able to:

1. Investigate the characteristics of mangrove swamps, rainforests, ponds, etc.
2. Explain the importance of mangrove swamps, rainforests and ponds.
3. Construct a model of an environment (habitat).

Topic: Local and Regional Ecosystems: Distribution and Location

Duration: 4 Lessons

Specific Objectives

Students should be able to:

1. Explain the links between landform and type of ecosystems.
2. Discuss how ecosystems contribute to social and economic development (-e.g. fish, eco-tourism, etc.
3. Name the different types of ecosystems found in your country and indicate their location on a map.
4. Investigate the characteristics and importance of ecosystems in the OECS/Caribbean region (other than own country).
5. Name the main types of Caribbean ecosystems.
6. Identify the countries in which specific ecosystems are located.
7. Indicate the Distribution/location of some regional ecosystems (hilly/wet/rainforest) on a map of given countries.
8. Explain how ecosystems provide useful resources.

UNIT: MATTER AND MATERIALS (GRADE 4)

DURATION: 4 Lessons

OBJECTIVES

Students should be able to:

1. Measure volume and mass of materials.

DURATION: 3 Lessons

SPECIFIC OBJECTIVES

Students should be able to:

1. List the physical properties of matter.
2. Determine the physical properties of matter by using instruments.
3. Construct an instrument to measure mass or volume.

DURATION: 3 Lessons

OBJECTIVES

Students should be able to:

1. Give examples of physical change.

UNIT: THE EARTH'S WEATHER (GRADE 4)

DURATION: 2 Lessons

OBJECTIVES

Students should be able to:

1. Demonstrate how clouds are formed.
2. Describe how clouds are formed.

DURATION:

OBJECTIVES:

The students should be able to:

1. Record weather using standard symbols.
2. Summarize and represent data from their recordings of the weather by using simple graphs.
3. Distinguish between weather conditions by examining weather charts.

GRADE 4 - TERM TWO

UNIT: THE SOLAR SYSTEM (GRADE 4)

DURATION: 3 Lessons

OBJECTIVES

The students should be able to:

1. Name the planets of the solar system and place them in their relative position to one another.
2. Construct a model of the solar system.
3. Infer that the moon is a natural satellite to planet Earth.

UNIT: ECOSYSTEMS (GRADE 4)

Topic: Environmental Destruction

Duration: 3 Lessons

Specific Objectives

Students should be able to:

1. Identify ways in which humans interact with the environment.
2. Investigate the effect of wave action on the environment (e.g. beach, coral reefs.)

Topic: Conservation Needs (Your country)

Duration: 3 Lessons

Specific Objectives

Students should be able to:

1. Appreciate that the environment needs to be protected.
2. Investigate conservation needs of countries (focus on terrestrial).
3. Identify ways of conserving the environment.

UNIT: FORCES, MOTION AND STRUCTURES (GRADE 4)

DURATION: 6 Lessons

OBJECTIVES

Students should be able to:

1. Observe that the material used in a tower affects its strength.
2. Infer that the strength and stability of a structure depend on its shape.

Topic: The Force of Gravity

DURATION: 2 Lessons

OBJECTIVE:

The students should be able to:

1. Observe the effects of gravity on the motion of objects.

UNIT: ENERGY (GRADE 4)

DURATION: 1 Lesson

DURATION: 1 Lesson

OBJECTIVES

Students should be able to:

1. Explain how a thermometer works.

DURATION: 2 Lessons

OBJECTIVES

Students should be able to:

1. Use a thermometer to measure temperature.
2. Use an appropriate form to display results of experiments.
3. List situations where the use of a thermometer is important.

DURATION: 4 Lessons

OBJECTIVES

Students should be able to:

1. Investigate the effect of light on materials.

DURATION: 2 Lessons

OBJECTIVES

Students should be able to:

1. Investigate the effect of heat on materials.
2. State some effects of heat on materials.
3. Infer that the sun's heat helps to produce wind.

DURATION: 1 Lesson

OBJECTIVES

Students should be able to:

1. List examples of fuels used in the home, for transportation and for industrial production.
2. Discuss some of the consequences of using these fuels.
3. Suggest ways of reducing and controlling undesirable consequences of the use of fuels.

DURATION: I Lesson

OBJECTIVES

Students should be able to:

1. Trace the flow of energy through a food chain.
2. Infer that the sun provides the energy needed by all living organisms.

GRADE FOUR – TERM THREE

UNIT: ENERGY (GRADE 4)

DURATION: 1 Lesson

OBJECTIVES

Students should be able to:

1. List other forms of energy apart from heat and light.
2. Infer that energy can be changed from one form to another.
3. Give simple examples of energy transformation.
4. List devices/appliances that are energy changers.

DURATION: 2 Lessons

OBJECTIVES

Students should be able to:

1. Investigate how specific forms of technology have changed over time.
2. Draw a time line/flow chart to show how a specific form of technology has changed over time.
3. Suggest reasons for the improvements observed.

OBJECTIVES

Students should be able to:

1. Develop a set of questions that can be used to compare devices used to provide heat or light.
2. State at least one advantage and one disadvantage of each of the devices.

UNIT: THE EARTH RESOURCES (GRADE 4)

DURATION: 5 Lessons

OBJECTIVES

Students should be able to:

1. Classify resources as renewable or nonrenewable.
2. Illustrate how rocks and soils are related.
3. Classify soils as sand, clay and loam.
4. Distinguish between various soils on the basis of physical properties (colour, texture, structure, components, etc.).

AIR

DURATION: 4 Lessons

OBJECTIVES

The students should be able to:

1. Observe and describe the force exerted by air.
2. Demonstrate that air has mass.
3. Infer that air exerts pressure.
4. Observe the effects of air on falling objects.
5. Design and construct an object to show how air affects the rate of fall.
6. Compare their designs with the designs of others.

WATER

DURATION: 2 Lessons

OBJECTIVES:
The students should be able to:

1. Classify substances as soluble or insoluble by their ability to dissolve in water.
2. Classify samples of water as hard and soft by their ability to form lather with soap.
3. Identify situations where water is useful because of its solvent properties.

Unit: DIVERSITY AND CLASSIFICATION (grade 4)

Topic: Producing Plants from Different Seeds
Duration: 4 Lessons
Objectives:

Students should be able to:

1. Identify seeds as a means of reproducing different plants.
2. Define sexual reproduction.
3. Link the seed to sexual reproduction in plants.
4. Define germination.
5. List the factors needed for germination to occur.
6. Describe the processes of germination in plants.
7. Compare the rate of germination in a variety of seeds.