



APPORTIONING OF PRIMARY SCHOOLS SCIENCE & TECHNOLOGY CURRICULUM

GRADE 5



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APPORTIONING OF PRIMARY SCIENCE & TECHNOLOGY CURRICULUM for GRADE 5

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GRADE 5 - TERM ONE

UNIT: STRUCTURE AND FUNCTION (GRADE 5)

Topic: How Plants and Animals Co-ordinate Internal Functions

Duration: 15 Lessons (30 minutes each)

Specific Objectives:

Students should be able to:

1. State the major systems in animals (Digestive, Circulatory/Transport, Reproductive, Excretory, Respiratory, Skeletal, Nervous and Endocrine, Muscular).
2. Identify the functions of each major system in animals.
3. List the main parts of each system in animals.
4. Describe the function of each part of the i. Digestive
5. ii. Circulatory/Transport iii. Reproductive iv. Skeletal systems in humans.
6. State that the Transport system is the major system in plants.
7. Name the main parts of the Transport system in plants.
8. Describe the function of the main parts of the Transport system in plants.

UNIT: ECOSYSTEMS (GRADE 5)

Topic: Food Webs

Duration: 4 Lessons

Specific Objectives

Students should be able to:

1. Construct simple food chains and food webs.
2. Identify species in a food web as herbivores, carnivores and also as producers and consumers.
3. Identify animals competing for food in a food web.
4. Explain that living things compete for food and space in the environment.

Topic: Population

Duration: 4 Lessons

Specific Objectives

Students should be able to:

1. Define (i.) Species (ii.) population (iii.) overpopulation (iv.) birth rate (v.) death rate.
2. List some factors that can affect population growth.
3. Identify the impact of under-population or overpopulation of organisms on their habitat.
4. Collect data on the number of specific organisms within a habitat.
5. Estimate the population of a given organism in a small area or habitat

UNIT: MATTER AND MATERIALS (GRADE 5)

DURATION: 1 Lesson

OBJECTIVES

Students should be able to:

1. Identify and describe different ways in which materials can be changed.

DURATION: 2 Lessons

OBJECTIVES

Students should be able to:

1. Identify melting and freezing as changes of state.
2. Infer that change of state can be reversed
3. Infer that the mass of water remains the same when water changes from solid to liquid.

DURATION: 2 Lessons

OBJECTIVES

Students should be able to:

1. Identify condensation and evaporation as changes of state.
2. Infer that condensation and evaporation are changes that can be reversed.

DURATION: 4 Lessons

OBJECTIVES

Students should be able to:

1. Identify burning, rusting and decay as changes that are irreversible.
2. Identify examples of reversible and irreversible changes in everyday life.
3. Realise that people change materials all the time for different purposes.

UNIT: EARTH'S WEATHER (GRADE 5)

Topic: Weather and Climate

Duration: 1 Lesson

Specific Objectives:

1. State the differences between weather and climate

UNIT: EARTH'S RESOURCES

Topic: Soil Erosion

DURATION: 2 Lessons

OBJECTIVES:

Students should be able to:

1. identify evidence of soil erosion and suggest the agents of erosion
2. describe what can be done to conserve soil;
3. describe ways of preventing soil erosion
4. design and construct a model to represent soil erosion by flowing water.

GRADE 5 - TERM TWO

UNIT: SOLAR SYSTEM (GRADE 5)

Topic: Life on the Solar System

Duration: 4 Lessons

Specific Objectives:

Students should be able to:

1. State the conditions needed on planets for the existence of life
2. Infer why life exists only on earth
3. Identify instruments used to observe the solar system

UNIT: ECOSYSTEMS (GRADE 5)

Topic: Natural Water Resources

Duration: 4 Lessons

Specific Objectives

Students should be able to:

1. Identify natural water sources.
2. Define surface tension.
3. State how surface tension can be broken.
4. Identify and describe the effect of soap on the movement of water through cloth and paper.

Topic: Using and Conserving Resources

Duration: 4 Lessons

Specific Objectives

Students should be able to:

1. Identify marine pollutants.
2. Suggest ways of preventing or reducing marine pollution.
3. Investigate the impact humans have on ecosystems.
4. Recognize the role that humans play in protecting or destroying ecosystems.
5. Demonstrate involvement in environmental protection.

Topic: Volcanoes

Duration: 2 Lessons

Specific Objectives

Students should be able to:

1. Identify volcanic activity as a natural process in the environment.
2. Explain how volcanoes are formed.
3. Discuss the impact of volcanic eruptions on the ecosystem.
4. List useful and harmful effects of the presence of a volcano in an environment.

UNIT: FORCES, MOTION AND STRUCTURES (GRADE 5)

Topic: Measuring Forces on Objects

Duration: 4 Lessons

Specific Objectives:

Students should be able to:

1. Name the instrument used to measure force and name the unit of force
2. Measure the force acting on an object using a spring balance
3. Design a simple instrument or device that can be used to measure force

Topic: Levers

Duration: 1 Lesson

Specific Objective:

Students should be able to:

1. Predict the position of forces in balancing a non-uniform object

Topic: Levers as Simple Machines

Duration: 4 Lessons

Specific Objectives:

Students should be able to:

1. Identify a number of common levers and describe how they work
2. Appreciate that levers make work easier
3. Name the different points of a lever

Topic: Balancing Masses

Duration: 2 Lessons

Specific Objectives:

Students should be able to:

1. Measure the mass of an object using a simple lever
2. Predict the forces that will balance a lever with an off-centre fulcrum

UNIT: EARTH'S RESOURCES

Topic: Air Pollution

DURATION: 6 Lessons

OBJECTIVES:

Students should be able to:

1. State that air is needed for burning or combustion
2. Discuss how burning/combustion cause air pollution
3. Compare devices that burn different fuels in terms of the air pollution they cause
4. Compare the amount of air pollution found in different areas
5. Hypothesize as to the reasons for the differences between pollution in the two areas
6. Design and construct a device to detect air pollution

GRADE 5 –TERM THREE

UNIT: FORCES, MOTION AND STRUCTURES (GRADE 5)

Topic: Wheels and Axles

Duration: 3 Lessons

Specific Objectives:

Students should be able to:

1. Identify the parts of a wheel and axle
2. List examples of wheel and axles
3. Explain the function of the wheels and axles listed in the examples
4. Appreciate the fact that the machine makes work easier

UNIT: DIVERSITY AND CLASSIFICATION (GRADE 5)

Topic: Reproduction in Animals

DURATION: 6 Lessons

OBJECTIVES

The students should be able to:

1. Name different animals and state the method by which they reproduce.
2. Explain the need for reproduction.
3. Explain what the life cycle of an animal is.
4. Describe the life cycle of an animal where the young and adult are alike (cockroach).
5. Describe the life cycle of an animal where the young and adult are not alike (butterfly).
6. Classify insects according to their type of life cycle.
7. Describe the role of the butterfly in nature.
8. Compare the human life cycle to that of another animal.

UNIT: ENERGY (GRADE 5)

DURATION: 2 Lessons

OBJECTIVES

Students should be able to:

1. Set up simple electrical circuits.
2. Name the parts of a simple electrical circuit.
3. Explain the functions of each of the components in the circuit.

DURATION: 3 Lessons

OBJECTIVES Students should be able to:

1. Describe the energy transformations that take place in specific electrical circuits.
2. Name appliances in the home that transform electrical energy to other forms of energy, and explain these transformations or changes.
3. Design and make a device that demonstrates energy transformations.

DURATION: 2 Lessons

OBJECTIVES Students should be able to:

1. Distinguish between conductors of electricity and insulators.
2. Explain how insulators can be useful.

DURATION: 1 Lesson

OBJECTIVES: Students should be able to:

1. State the dangers posed by electricity.
2. Explain safety measures that should be observed in order to prevent these dangers.

UNIT: EARTH'S RESOURCES

Topic: Water

DURATION: 6 Lessons

OBJECTIVES:

Students should be able to:

1. Identify natural sources of water
2. List ways in which people's activities may affect the water supply
3. Discuss the effects of water shortage on the environment and human activity
4. State ways in which water sources may be polluted
5. Discuss how human's activities may result in water pollution
6. Discuss ways of reducing water pollution
7. Plan and design an experiment to make polluted water clean