

Dawood Public School
Course Outline 2017-18
Science
Class III

Book: International Primary Science 3 by HO Peck Leng and Workbook

Monthly Syllabus

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Contents	Learning Objectives
<p>Food and Nutrition Food provides nutrients that give us energy. Different types of nutrients are,</p> <ul style="list-style-type: none"> • Carbohydrates • Proteins • Fats • Vitamin • Minerals 	<ul style="list-style-type: none"> • State the importance of food for living things. • Name the five main nutrients • Describe the importance of each nutrient present in foods..
<p>Balanced diet</p> <ul style="list-style-type: none"> • Food that we eat is called diet. • A balanced diet has a variety of food in the right amounts to keep us strong and healthy. 	<ul style="list-style-type: none"> • Differentiate between diet and balanced diet
<p>Types of food</p> <ul style="list-style-type: none"> • Healthy food • Junk food 	<ul style="list-style-type: none"> • Sort out healthy and junk food.
<p>Food and storage method Food is stored for later use by various methods. If food is not stored properly, it may rot or spoil.</p>	<ul style="list-style-type: none"> • Explain that how different food items start turning bad. • List the methods of food storage for different types of food.
<p>Human teeth Humans have specific number of teeth at different ages of their lives. These are of the following types:</p> <ul style="list-style-type: none"> • Incisors • Canines • Premolars • Molars. <p>Each set of human teeth have specific functions.</p> <p>Human teeth must be taken care of to stay healthy and without decay.</p>	<ul style="list-style-type: none"> • Identify and label different types of human teeth. • Explain the function of different types of teeth. • List the numbers of different types of teeth in a complete set of an adult human being. • Discuss the importance of brushing the teeth regularly. • Describe how teeth should be brushed • Define plaque • State the reasons of cavities formation.
<p>Animal teeth Animals can be classified according to their feeding habits as;</p> <ul style="list-style-type: none"> • herbivores • carnivores • omnivores 	<ul style="list-style-type: none"> • Define the following: <ul style="list-style-type: none"> ➤ herbivore ➤ carnivore ➤ omnivore • Identify and explain herbivore, carnivore and omnivore by observing their skulls. • Sort different animals into herbivores, carnivores and omnivores.
<p>Exercise and sports Different types of exercises and sports keep us active and healthy.</p>	<ul style="list-style-type: none"> • List the exercises and sports that help to make our muscles and heart stronger. • List the exercises and sports that help to build our muscles. • List the exercises and sports that help to improve the movement of our joints
<p>Ways to live healthy Healthy living is a lifestyle choice. This makes our life easier and better.</p>	<ul style="list-style-type: none"> • List the ways of healthy living

Key Words:

nutrients, fats, carbohydrates, protein, vitamins, minerals, fibre, diseases, germs, diet, deficiency, obesity, balanced diet, , canning,spoiled,air tight containers, softening, moisture, incisors, canines,premolar, molar, herbivores, carnivores, omnivores, plaque, cavity, rotten, muscles, joints, brisk walk

Types of Questions

- Multiple Choice Questions
- True or False
- Structured questions
- Detailed questions
- Reasoning questions
- Fill in the blanks
- Labeling of diagrams

Work book Activities

- Activity 1.1, 1.2, 1.3, 1.4,1.5, 1.6, 1.7,1.8

Activities/ Experiments

- Students will be asked to discuss the contents of their lunch boxes to show the variety of foods. They will be helped to identify different types of nutrients in their food items.
- Students will find pictures of food and stick appropriate images to depict a plate of balanced diet. Emphasis will be made on the correct amount of each nutrient required to be present in our meals.
- Students will observe different stored food items (meat, milk, tomato, cooked rice, cookies) and discuss the benefits of each. They will observe the condition of food after a day by smelling and touching to comprehend importance of proper storage.
- Students will chew a piece of bread for a few minutes and feel the changes that take place.
- Students will observe how a hardboiled egg left in sugar solution for a day may be brushed and cleaned to remove plaque.
- Students will be asked to observe their friends' teeth to inspect for cavities.
- Students will be encouraged to do different exercises and benefits will be discussed. For example: skipping with a rope, lifting 1 kg weight, playing football.

Surf I.T:

- www.school.discovery.com/lessonplans/programs/frictioninourlives/index.html
- <http://www.sciencekids.co.nz/gamesactivities/gases.html>

SEPTEMBER**Chapter: Light**

Pages no: 129-144

Contents	Learning Objectives
Sources of Light Light is a form of energy which is primarily received from the Sun. It is an importance aspect for any life to survive.	<ul style="list-style-type: none"> • Define light • State that light is a form of energy that enables us to see. • Describe how the Sun is the main source of light on Earth. • Explain how light is important for the survival of organisms (plants and animals)
Luminous and Non-luminous Objects <ul style="list-style-type: none"> • The objects that give out light are called luminous objects. • The objects that do not give out light are called non-luminous objects. 	<ul style="list-style-type: none"> • Identify luminous and non-luminous objects. • Differentiate between luminous and non-luminous objects.

<p>Natural and Man-made light sources</p> <ul style="list-style-type: none"> • Light sources made by man are called man-made light source. • Light sources that are made naturally are called natural light source. 	<ul style="list-style-type: none"> • Identify natural sources and man-made sources of light. • Differentiate between natural and man-made sources of light.
<p>Light and Materials Materials can be differentiated into the following types:</p> <ul style="list-style-type: none"> • Transparent • Translucent • Opaque 	<ul style="list-style-type: none"> • Define the following: <ul style="list-style-type: none"> ➤ transparent ➤ translucent ➤ opaque • Identify and sort transparent, translucent and opaque materials • Suggest the materials used for making different objects like windscreen, copy cover, room window, doors, walls etc. • Observe and identify the materials through which light can pass. • Explain why each object uses different materials.
<p>Shadows A shadow is an area of darkness formed when light is completely or partially blocked by an object.</p>	<ul style="list-style-type: none"> • State that shadows are formed when light travelling from a source is blocked. • Observe the formation of different types of shadows.
<p>Key Words: source, luminous, non-luminous, transparent, translucent, opaque, shadow, horizon, overhead, blur, sharper</p> <p>Types of Questions</p> <ul style="list-style-type: none"> • Multiple Choice Questions • True or False • Structured Questions • Detailed Questions • Reasoning Questions • Fill in the blanks • Labeling of diagrams <p>Work book Activities</p> <ul style="list-style-type: none"> • Activity 6.1, 6.2, 6.3, 6.4, 6.5 <p>Activities/ Experiments</p> <ul style="list-style-type: none"> • Students will be taken to the ground at different times to observe their shadows. <p>Surf I.T:</p> <ul style="list-style-type: none"> • www.school.discovery.com/lessonplans/programs/frictioninourlives/index.html • http://www.sciencekids.co.nz/gamesactivities/gases.html 	

Contents	Learning Objectives
<p>Push and pull in action</p> <ul style="list-style-type: none"> • A force is any action made on an object; a push or pull. • Forces can have many effects in daily life • Activities like kicking the ball or opening and closing the zip of a pouch etc are examples of force on objects. 	<ul style="list-style-type: none"> • Define force • Describe the effects of any force. • Differentiate between the force of push and pull. • Identify, from given pictures, the different forces of push and pull.
<p>Forces around us</p> <ul style="list-style-type: none"> • Force can be exerted by machines and muscles. • Forces can be found in nature too. <ul style="list-style-type: none"> ➤ Typhoon ➤ Earthquake ➤ Tornado ➤ Hurricane 	<ul style="list-style-type: none"> • Identify different types of force. • Differentiate forces used by machines, muscles and in nature.
<p>Different types of forces</p> <ul style="list-style-type: none"> • Magnetic • Electric • Gravitational • Friction 	<ul style="list-style-type: none"> • Define: <ul style="list-style-type: none"> ➤ magnetic force. ➤ electric force ➤ gravitational force ➤ friction • Identify and sort magnetic and non-magnetic material. • State some uses of magnets in our daily life. • Identify the force of attraction or repulsion by looking at the pictures of magnets, facing same or different poles • State the ways we can charge a balloon or comb to attract pieces of paper, hair or thin stream water from a tap. • Identify and name the surface which produces more friction and less friction.
<p>Contact and non-contact force</p>	<ul style="list-style-type: none"> • Classify the different type of forces as a contact and non-contact force
<p>Key Words: stretch, exert, muscles, typhoon, earthquake, attraction, gravity, friction, force meters, Newton meter, Newtons, spring balance</p> <p>Types of Questions</p> <ul style="list-style-type: none"> • Multiple Choice Questions • True or False • Structural questions • Detailed questions • Reasoning questions • Fill in the blanks • Labeling of diagrams <p>Work book Activities</p> <ul style="list-style-type: none"> • Activity 3.1, 3.2, 3.6 <p>Activities/ Experiments</p> <ul style="list-style-type: none"> • Students will predict the weight of different objects in the classroom. They will estimate the force required to move them. • Students will observe the force of attraction between different magnets. 	

- Students will observe gravitational force by throwing ball into the air.
- Students will observe static electricity by rubbing and charging a balloon or comb and sticking it with wall paper or pieces of paper.
- Students will roll a toy car on different surfaces (carpet, wood, glass and tiles) and observe which surface it travels the furthest on - a mat, a glass table top, a desk top.

Surf I.T:

- www.school.discovery.com/lessonplans/programs/frictioninourlives/index.html
- <http://www.sciencekids.co.nz/gamesactivities/gases.html>

NOVEMBER

REVISION FOR MID TERM EXAMINATION 2017

DECEMBER:

MID TERM EXAMINATION 2017

JANUARY

Chapter: Fish and Frog

Pages no: 37-58

Contents	Learning Objectives
<p>Vertebrates</p> <ul style="list-style-type: none"> • Animals with backbones are called vertebrates • Animals without backbones are called invertebrates • Fish and frogs are examples of vertebrates. 	<ul style="list-style-type: none"> • Define vertebrates and invertebrates. • Identify and classify animals as a vertebrate or an invertebrate.
<p>Habitat of fish and frog</p> <ul style="list-style-type: none"> • Habitat is a place where organism lives and can find food, shelter and protection • Fish live in water • Frogs live on both land and water 	<ul style="list-style-type: none"> • Define habitat. • Describe the habitat of fish. • State that frogs are amphibians; they can live on water and on land.
<p>Comparing a fish and a frog</p> <ul style="list-style-type: none"> • Fish have fins tail and a streamlined body. • Frogs have moist skin and webbed feet 	<ul style="list-style-type: none"> • Describe the general body features of a fish and a frog. • Explain how the body structure of a fish and a frog helps them to survive in their habitats.
<p>Comparing a fish and a sea horse</p> <ul style="list-style-type: none"> • Fish move horizontally • Sea horses move vertically 	<ul style="list-style-type: none"> • Explain how a sea horse is different to a fish. • Explain how a sea horse is similar to a fish.
<p>Food sources of a fish and frog</p> <ul style="list-style-type: none"> • Fish eat plankton, small fish, shrimps, crabs etc. • Frog eats insects and small animals 	<ul style="list-style-type: none"> • Identify the types of food eaten by different fish and frogs.
<p>Lifecycle of a fish and frog. The life cycle of fish consists of three stages: egg; fry; fish The life cycle of frog consists of four stages: egg; tadpole; froglet; adult frog</p>	<ul style="list-style-type: none"> • Differentiate between the life cycle of a fish and a frog. • Identify different stages of growth of a frog and a fish.
<p>Camouflage</p> <ul style="list-style-type: none"> • Blending in with their surroundings is called camouflage. • Most animals camouflage to hide from their enemies. 	<ul style="list-style-type: none"> • Describe a camouflage for an animal. • Describe how camouflage may be helpful to animals.

Key Words:

vertebrate, invertebrate, amphibians, streamlined body, plankton, carnivores, camouflage, blending, webbed feet, moist skin, forelegs, hind legs, skeleton, aquatic, terrestrial, limbs, camouflage, prey, predators, species, algae, glide, frog let, tadpole

Types of Questions

- Multiple Choice Questions
- True or False
- Structural questions
- Detailed questions
- Reasoning questions
- Fill in the blanks
- Labeling of diagrams

Work book Activities

- Activity 2.2, 2.3, 2.5, 2.6, 2.8

Activities/ Experiments

- Students will arrange the pictures of different stages in the growth of a frog.
- Students will be asked to search on internet about
 - Marsupial frog
 - Gastric brooding frog
 - Darwin's frog
 - Wallace flying frog
 - Poison dart frog

Surf I.T:

- <https://www.studyladder.com/games/activity/animal-camouflage-28644>
- <https://www.youtube.com/watch?v=qS-lq6XxE20>

FEBRUARY**Chapter: Materials and their properties**

Pages no:77-105

Contents	Learning Objectives
Different types of material Materials can be classified into different types: <ul style="list-style-type: none"> • Metals or non-metals • Natural or manmade • Flexible or hard 	<ul style="list-style-type: none"> • Classify materials into different groups: <ul style="list-style-type: none"> ➤ Metals or non-metals ➤ Natural or manmade ➤ Flexible or hard
Properties of materials and their uses Different materials are used for different purposes. The properties of materials can be on the basis of: <ul style="list-style-type: none"> • Flexibility • Absorbency • Hardness • Strength 	<ul style="list-style-type: none"> • List the properties of materials. • Describe how materials have various properties that make them suitable for different uses. • Identify the uses of different materials for different purposes.
Importance of diversity of materials <ul style="list-style-type: none"> • A diversity of materials gives a wide range of materials to choose from for different uses. 	<ul style="list-style-type: none"> • Explain why a variety of materials are important.

Key Words:

flexibility, strength, absorbency, hardness, diversity, scratches, soaks, perspire, brittle, polyester, nylon, canvas, fiberglass, canoe, plywood, reinforced, concrete

Types of Questions

- Multiple Choice Questions

- True or False
- Structural questions
- Detailed questions
- Reasoning questions
- Fill in the blanks
- Labeling of diagrams

Work book Activities

- Activity 4.1, 4.2, 4.5, 4.6, 4.7, 4.8, 4.9, 4.10

Activities/ Experiments

- Students will list the clothes they would take with them to the beach; to show that they understand the material they have chosen.

Surf I.T:

- <https://www.youtube.com/watch?v=xOKr462HLc0>

MARCH

Chapter: Electricity

Pages no: 145-169

Contents	Learning Objectives
<p>Electric circuits Components of circuit:</p> <ul style="list-style-type: none"> • battery • bulb • wires • switch 	<ul style="list-style-type: none"> • Describe an electric circuit. • List the components required to form an electrical system.
<p>Open and closed circuit There are different types of circuits which can be used to supply energy for electricity:</p> <ul style="list-style-type: none"> • A circuit with a gap is called an open circuit. • A circuit without any gap is called a closed circuit. 	<ul style="list-style-type: none"> • Identify and differentiate between an open and a closed circuit.
<p>A short circuit A short circuit occurs when a wire is connected directly to the two ends of a battery.</p>	<ul style="list-style-type: none"> • Describe a short circuit.
<p>Electrical conductors and insulators A conductor allows electricity to travel through. An insulator does not allow electricity to pass.</p>	<ul style="list-style-type: none"> • Define <ul style="list-style-type: none"> ➤ Conductor ➤ Insulator • Identify and sort electrical conductors and insulators • Give examples for conductors and insulators.
<p>Using electricity safely Safety is very important when using electricity.</p>	<ul style="list-style-type: none"> • Explain why safety is very important. • List some safety measures of using electricity.
<p>Switches, motors and buzzers</p>	<ul style="list-style-type: none"> • Identify a switch, motor and buzzer in a circuit. • Describe the use of switch, motor and buzzer in a circuit.
<p>Key Words: electrostatic charge, positive, negative, insulator, attraction, repulsion, circuit diagram, buzzer, motor, short circuit, components, conductor, electric current</p>	

Types of Questions:

- Multiple Choice Questions
- True or False
- Structural questions
- Detailed questions
- Reasoning questions
- Fill in the blanks
- Labeling of diagrams

Work book Activities 7.2, 7.3, 7.4, 7.5,7.6

Activities/ Experiments

- Students will make a closed circuit using the basic components (wires, battery, bulb and switch).
- Students will design ply cards for awareness regarding precautions of using electricity.

Surf I.T:

- http://www.bbc.co.uk/schools/scienceclips/ages/8_9/circuits_conductors_fs.shtml

APRIL:

REVISION FOR FINAL EXAMINATION

MAY:

FINAL EXAMINATION