REPUBLIC OF TRINIDAD AND TOBAGO
MINISTRY OF EDUCATION

GORTT/IBRD BASIC EDUCATION PROJECT

Primary School Syllabus

Infants - Standard One

SCIENCE

February 2003

STRANDS

INFANT 1 - LIVING THINGS

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
The human body is made up of several parts.	Pupils will be able to: 1. indicate the location of and name at least 10 external parts of the human body .	Observe the human body Communicate orally with the class.	Ask pupils to name external parts of their bodies eg: eyes, ears, nose, mouth, hand, leg, foot, arm, knee, ankle. Class plays "Simon says" with emphasis on naming external parts of the body. Ask pupils to arrange a set of cut-outs of parts of the body on an outline of the human body.	Teacher asks pupils to name orally, external parts of the body, and locate the same by pointing on self or others.
Living things of the same kind vary from individual to individual.	1. identify that an individual is similar to or different from others . 2. state characteristics about themselves. 3. describe which changes occurred in themselves since birth. 4. predict ways in which they might change as they grow older.	Observe self and others. Communicate orally and graphically. Observe self. Observe by looking at themselves Communicate orally. Predict changes.	Get pupils to talk and compare themselves with other children re: How am I similar to others? How am I different from others? Compare feet, head, hand size and height by matching, printing and pressing into plasticine, using strips of paper, string etc. From a collection of photographs/pictures of babies, pupils make comparisons to suggest changes which have taken place since birth e.g.: height, size and abilities. Teacher asks questions and makes suggestions about growing older, e.g. How tall will you grow? What will you be able to do?	Have pupils state ways in which one is similar or different from others. Have pupils compare drawings of two children- identify similarities and differences. Pupils are given pictures of people in different stages of growth and asked to put them in a sequence and describe changes.

INFANT 1 - LIVING THINGS

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
Movement takes place in a particular direction.	Pupils will be able to: 1. demonstrate the following relative positions and motions: up/down, backwards/ forwards, left/right.	Use space/time relationships.	Use a pupil as reference subject. Let other pupils state their positions. Design an obstacle course. Have the pupils direct blindfolded partner using verbal directions only.	With musical accompaniment, let pupils move their bodies to demonstrate the following relative positions: up/down, left/right/backward/ forward.
Our senses inform us of our surroundings.	1. identify the five senses.	Observe by using five senses.	Blind-fold pupils and have them describe objects according to properties, e.g.: hardness, sounds made when dropped or tapped, texture, flexibility.	Have pupils describe/identify objects using one or more of the five human senses.
	2. distinguish between objects that have an odour and those that do not.	Classify specimens.	Distribute specimens e.g. onion, stone, perfume, cheese, etc and let pupils identify those with odour and those without.	Ask pupils to classify orally, objects according to odour/odourless.
	3. identify tastes that are sweet, sour, salt, bitter.	Observe specimens.	Discuss with pupils, food they enjoy and why. Tastes like sweet, sour, salt and bitter may be mentioned. Have pupils taste foods e.g. corn curls – salt, sugar – sweet, tamarind – sour, aloes, mauby, caraille – bitter. Pupils to report observations.	Pupils will use other specimens of food and identify the tastes.

INFANT 1 - LIVING THINGS

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
Good personal hygiene affects our health.	Pupils will be able to: 1. give reasons for keeping the body clean.	Communicate orally.	Invite health personnel, use video clips, charts, posters to inform pupils about the need for a healthy body.	Oral questioning. Pupils demonstrate clean hands, hair and nails as an ongoing habit.
	2. state ways of keeping the body clean.	Communicate orally.	Pupils discuss reasons for keeping the body clean and regular habits of personal hygiene e.g.: bathing, bushing teeth and hair.	Make posters showing the need to keep our bodies clean.
	3. demonstrate how to brush teeth properly.	Communicate orally.	Invite dental personnel to demonstrate effective dental hygiene using a model of a set of human teeth and materials used to maintain effective hygiene. Use dramatisation or video clips to model appropriate practices.	Pupils demonstrate the correct method of brushing teeth.

INFANT 1 - ECOSYSTEMS

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
Different organisms live in different habitats.	Pupils will be able to: 1. identify places where animals live as aquatic or terrestrial.	Observe habitats.	Teacher provides pictures of habitats for pupils to identify as terrestrial or aquatic, e.g. Sea, pond, river, swamp, wall, garden, house. Identify the organisms which live in particular habitats, e.g. in a cupboard: spiders, ants, mice, silverfish, lizards.	Pupils identify aquatic and terrestrial habitats in their environment. Pupils identify organisms which live in these habitats.
Litter must be properly disposed of.	1. identify items of litter. 2. identify places for the disposal of litter.	Classify litter according to given criteria. Communicate disposal methods.	Field trip around the school or appropriate location to identify the types of litter. Classify according to the type, colour and size. Discuss the need to dispose of the litter in internal or external bins according to the size and type. Elicit from pupils the process of disposal of pieces of paper and plastic bottles from the school to other disposal sites.	Sort litter from the classroom into labelled bins according to a given criterion, e.g. colour, type, size. Pupils are asked to suggest places for adequate disposal of litter.

INFANT 1 – MATTER AND MATERIALS

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
Materials have different properties.	Pupils will be able to: 1. state that materials have different properties: colour, texture ,flexibility and hardness.	Observe properties of materials.	Pupils are provided with different materials – wood, cloth, glass, paper, plastic, soil, metals, water, and asked to observe and describe their properties in terms of colour, texture, flexibility and hardness.	Given a new set of materials, pupils will be asked to describe their properties.
The use of materials depends on their properties.	1. identify the property of a material used to make an object.	Observe properties of materials.	Teacher uses objects from home and the environment to help pupils identify the properties of materials they are made from. Relate the properties identified to the function of the object e.g.: rubber band, plastic wrap, paper weight, book bag.	Pupils are given a set of materials and asked to identify the possible uses of the materials.

INFANT 1 - STRUCTURES AND MECHANISMS

Concepts	Objectives	Enquiry Skills	Suggested Teaching / Learning Strategies	Suggested Assessment Strategies
Structures have functions.	Pupils will be able to: 1. explain the functions of everyday structures.	Observe common structures. Communicate orally, functions of structures.	Teacher and pupils discuss the functions of common structures e.g.: a house, car, chair, school bag, umbrella and boat. Pupils identify specific parts of the structure which carry out the particular function e.g.: the roof of a house provides shelter from the elements, the legs of a chair to support the weight of the occupant.	Provide pupils with a set of pictures of different structures and ask them to explain their functions.

INFANT 1 - ENERGY

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
All living things need energy.	Pupils will be able to: 1. State that food gives us energy.	Communicate orally.	Question pupils to elicit their ideas about energy and where they get their energy from.	Given a selection of pictures, pupils will be asked to identify food by circling.
Common household devices use energy.	1. Identify sources of energy that cause movement.	Observe devices that move.	Pupils describe devices with moving parts e.g.: fans, toys, appliances. Pupils will identify energy inputs that cause the movement in these devices.	Pupils will identify other devices and what causes their movement.
Energy should not be wasted.	1. Discuss reasons for conserving energy.	Communicate orally.	Teacher and pupils discuss the implications of having an electrical toy/appliance kept running when not needed.e.g.:bunny, torchlight, fan.	Pupils will orally present strategies that they can use to reduce energy wastage.

INFANT 1 - EARTH AND SPACE

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
The earth, sun and moon affect each other in cycles.	Pupils will be able to: 1. recall, daily cycles in nature – night, day.	Observe the environment during night and day.	Encourage pupils to talk about what activities they engage in during the day and night.	Collect pictures of daytime and night time activities for a portfolio.
	2. describe characteristics of day and night.	Communicate characteristics orally.	Pupils will describe the things they associate with night and day, e.g.: moon and sun and those that are common to both, e.g.: clouds.	Identify and describe orally, the characteristics of day and night.
	3. observe the phases of the moon.	Communicate by drawing.	Encourage pupils to observe the moon at night and draw the shape observed over a period of time.	From pictures, ask pupils to identify and put in order, the different phases of the moon.

INFANT 2 – LIVING THINGS

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
Seeds undergo changes as they germinate.	Pupils will be able to: 1. draw the internal structure of a seed. 2. identify the changes that take place in a seed as it grows over a 7-day period.	Observe using appropriate instruments. Observe a germinating seed. Communicate making a simple bar graph. Measure using non-standard units.	Pupils draw the internal structure of the seed. Identify the parts that grow into a new plant. Pupils soak red beans or other dicotyledonous seeds overnight. Let pupils open their beans and discuss their findings (use magnifiers). Prepare a clear plastic container with tissue paper, set for 2 or 3 seeds to germinate. Observe and discuss growth as it occurs. Record the growth pictorially. Cut strips to record growth. Glue strips on bristol-board each day so as to construct a bar graph with strips of paper which match the height of seedlings on a particular day.	Given another example of a dicotyledonous seed, pupils are asked to make a drawing of the internal structure. Pupils are asked to arrange a series of pictures of germinating seeds in the correct order.
Animals can be grouped according to common characteristics.	1. identify major physical observable characteristics of animals. 2. group animals according to common external features . 3. identify animals which are mammals.	Observe external features of animals. Classify according to common characteristics. Observe mammals.	Pupils name animals with which they are familiar. Pupils identify common characteristics e.g.: number of legs, hair. Present models or pictures of animals Question pupils leading them to use their observations to classify animals on the basis of common traits, e.g. legs, hair. Visit to the zoo. Present a video clip. Describe common pets to identify mammals.	Given another group of animals, pupils are asked to identify the major physical observable characteristics. Presented with a new set of animals, pupils will group according to old and new bases. Given a mixed group of pictures of animals, pupils are asked to identify the mammals and give reasons for doing same.

INFANTS 2 – LIVING THINGS

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
The human body consists of major organs.	Pupils will be able to: 1. locate the position of the heart in the body.	Observe by seeing, listening and touching. Communicate orally.	Using touch (or a simple listening device) pupils are asked to locate the heart.	Draw a red spot on an outline drawing of a boy/girl identifying the location of the heart.
	2. explain what happens to the heart rate before and after exercise.	Observe changes in heart rate.	Locate position of heart on self or other person before and after 2 minutes of running on the spot, by pressing a hand against the chest. Pupils state that the heartbeat after exercise is faster than before.	Repeat activity at home using volunteers and report to the class.
Our diet should be made up of different types of food.	1. state that we eat a variety of foods to be healthy.	Communicate orally.	Ask pupils to identify foods they eat. Build on pupils' responses to develop food groupings – Food that make you go, glow, and grow.	Plan a meal incorporating food from the three groups.

INFANTS 2 – ECOSYSTEMS

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
A habitat consists of living and non-living components.	Pupils will be able to: 1. distinguish between living and non-living things.	Observe characteristics of living and non-living things.	Discussion on characteristics of living vs non-living things.	Pupils are provided with samples of specimens and asked to separate living and non-living things.
	2. identify components of an aquatic habitat.	Observe living and non-living components.	Teacher and pupils set up an artificial pond. Pupils observe activity of animals over a period of time. Discussion on the importance of the non-living things to the pond.	Make a drawing of a pond showing living and non-living things.
	3. identify components of a terrestrial habitat .	Observe living and non-living components.	Pupils identify easily observable organisms in a selected terrestrial habitat e.g.: school grounds, garden, tree. Pupils observe activity of animals and their interaction with plants. Pupils identify non-living components e.g.: sunlight ,air, soil etc. Visit to the Wild Fowl Trust, The Arboretum.	Pupils make a model of a terrestrial habitat.

INFANT 2 – STRUCTURES AND MECHANISMS

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
Form is related to function.	Pupils will be able to: 1. create structures showing a relationship between form and function.	Design structures.	Pupils are asked to name an object they use and tell how its form (shape) relates to its function. Pupils will design and create a model of a structure and show a relationship between form and function. eg: toy, furniture.	Presentation and display of structure created.

INFANT 2 – MATTER AND MATERIALS

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
The appearance of some materials can be changed.	Pupils will be able to: 1. describe the appearance of some familiar objects or materials in the environment. 2. predict how the appearance of materials could be changed.	Observe how various processes can change the appearance of some materials. Predict changes in the appearance of materials.	Elicit from pupils how the appearance of materials such as sponge, plastercine, clay, etc., can be changed. Challenge the ideas previously elicited. Help pupils carry out proposed changes and check their predictions. Reporting of new ideas generated.	Provide pupils with shapes made from substances that can be changed and ask them to change the shape. Provide a new set of materials for pupils and ask for predictions of how the appearance of these materials can be changed.

INFANT 2 - ENERGY

Concepts	Objectives	Enquiry Skills	Teaching/Learning Strategies	Assessment Strategies
Energy can be converted to other forms.	Pupils will be able to: 1. identify energy sources that produce heat, light and sound.	Observe a variety of devices.	Pupils are asked to identify any appliance that produces heat, light or sound. Pupils are asked to identify the energy source that causes the appliance to function. Teacher provides other examples to identify energy source and the effects.	Pupils will produce a poster of appliances, energy source and effects.

INFANT 2 – EARTH AND SPACE

Concepts	Objectives	Enquiry Skills	Suggested Teaching/Learning Strategies	Suggested Assessment Strategies
Seasonal cyclical changes have different effects	Pupils will be able to: 1. identify seasonal cycles (wet and dry seasons). 2. collect data to distinguish between the different seasons.	Observe variations in weather conditions during the day. Interpret data. Predict weather conditions based on data collected.	Discuss with pupils, what they observe at different times of the year, e.g. rainfall, length of day. Collect data related to daily variations Teacher assists students in entering data in charts. Do a long-term study to collect data on the characteristics of each season. (Teachers refer to www.globe.gov).	Make a drawing to show events occurring during the dry/wet season. At the end of each month, pupils would review data collected for that month. Pupils make predictions based on data collected.