

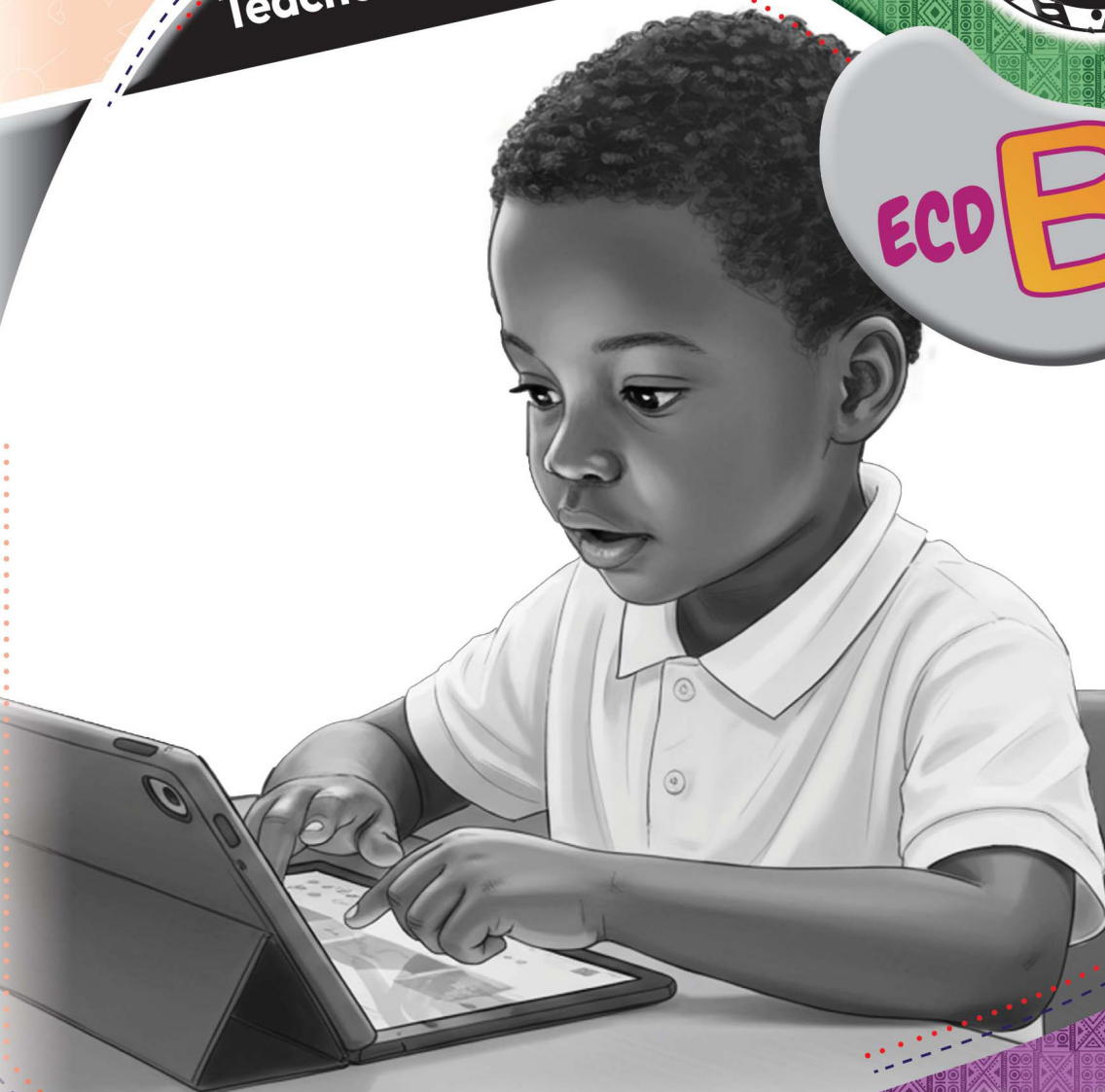
PlusOne

Science and Technology

Teacher's Guide



ECD **B**



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PlusOne

Science and Technology

ECD B

Teacher's Guide



**SECONDARY
BOOK PRESS**

Anchors of the schools curricula

Published by:

Secondary Book Press Private Limited
4th Floor, CABS Centre Building,
Cnr Jason Moyo & 2nd Street,
Harare, Zimbabwe
Tel: +263 242 771 406 | +263 242 753 201
Mobile: +263 712 560 870 | +263 788 954 870
Email: sales@secondarybookpress.co.zw
Website: www.secondarybookpress.co.zw

Plus**One** Social Science | **ECD B - Teacher's guide**

ISBN: 978-1-77932-137-4

First Published in 2025

Copyright: Secondary Book Press

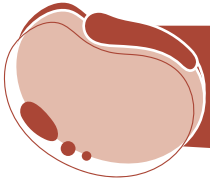
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Development Editor: Reggies Chapwanya

Design and text layout: Nyarai Tapa

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Topic 1

Health and hygiene

Personal hygiene

Unit objectives

By the end of this lesson, learners should be able to:

- a** mimic brushing teeth.
- b** describe correctly at least one picture.

Source of materials

- PlusOne Science and Technology ECD B workbook page 1.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Hair brush/comb.
- Toothbrushes
- Toothpaste
- Water in a bottle.
- Cup
- Tap
- Chart/pictures showing people washing hands, brushing teeth.

Suggested activities

- Learners sing an activity song.
- Facilitator explains what personal hygiene is.
- Learners state personal hygiene activities.
- Learners identify personal hygiene activities on charts or pictures.
- Learners mimic/demonstrate bathing, brushing teeth or washing hands.
- Learners do colouring.

Personal hygiene

Unit objectives

By the end of this lesson, learners should be able to:

- a** state where they keep their clothes.
- b** colour the picture within the frame.

Source of materials

- PlusOne Science and Technology ECD B workbook page 2.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Different clothing items.
- Cupboards
- Model wardrobes.
- Pictures of wardrobes.
- Chest of drawers and rails.
- Crayons

Suggested activities

- Facilitator leads learners in singing “This is the way”.
- Learner give a recap of the previous lesson.
- Facilitator asks learners to state what they are wearing.
- Learners identify clothing items available.
- Learners discuss proper storage of clothes.
- Learners identify and discuss the images on the chart/pictures.
- Learners do colouring within the frame.

Personal hygiene: Trimming nails

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify at least one tool used to trim nails.
- b** colour the picture within the frame.

Source of materials

- PlusOne Science and Technology ECD B workbook page 3.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Nail cutter/clipper
- Razor blades
- Nail files
- Chart/pictures showing a person cutting nails.
- Crayons

Suggested activities

- Facilitator leads learners in singing an action rhyme.
- Learners describe how they keep nails clean.
- Learners identify the media available.
- Class discusses nail hygiene.
- Learners colour the picture.

Personal hygiene – Toilet training

Unit objectives

By the end of this lesson, learners should be able to:

- a** demonstrate how to sit properly on the potty.
- b** colour at least one picture well.

Source of materials

- PlusOne Science and Technology ECD B workbook page 4.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Potty
- Learner's toilets.
- Pictures of people using the toilets (pit and chamber).
- Crayons

Suggested activities

- Learners give a recap of the previous lesson.

- Facilitator explains the focus of the lesson.
- Class visits the school toilets.
- Learners demonstrate how to use the potty/pit toilets.
- Learners tell a story from the pictures.
- Learners colour the pictures within the frame.

Healthy eating habits

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify at least one fruit from workbook page 5.
- b** state at least one good eating habit.

Source of materials

- PlusOne Science and Technology ECD B workbook page 5.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Different fruits available locally.
- Carrots
- Leafy green vegetables.
- Cabbages
- Rice
- Meat
- Potatoes
- Eggs
- Chart/pictures showing different foods.
- Crayons

Suggested activities

- Learners sing a song mentioning different foods.
- Facilitator explains good eating habits.
- Learners discuss healthy eating habits.
- Class identifies the different food items available.
- Learners do picture reading.
- Learners colour the picture within the frame.

Food hygiene: Food storage

Unit objectives

By the end of this lesson, learners should be able to:

- a** state at least one place they store food.
- b** state at least two healthy food.

Source of materials

- PlusOne Science and Technology ECD B workbook page 6.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Model fridge
- Freezer
- Cupboards
- Boxes
- Food samples.
- Chart/pictures of fridges, baskets and kitchen units.
- Crayons

Suggested activities

- Facilitator leads learners in singing songs about food.
- Learners identify the food available.
- Facilitator explains the concept of food storage.
- Learners identify the storage equipment available.
- Learners in groups, sort food and their storage places.
- Learners give feedback on their group work.
- Learners identify healthy foods.
- Learners colour the picture.

Food hygiene – Food handling

Unit objectives

By the end of this lesson, learners should be able to:

- a** state at least one food item that must be washed before eating.
- b** demonstrate washing fruits.

Source of materials

- PlusOne Science and Technology ECD B workbook page 7.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Locally available fruits (fruits in season).
- Vegetables
- Meat (beef, chicken or pork).
- Running water.
- Water buckets and jugs.
- Crayons

Suggested activities

- Learners sing an action song.
- Facilitator explains proper food handling.
- Learners identify the food available.
- Class demonstrates how to wash food.
- Learners discuss washing food as well as when to wash them (before or after) eating.
- Learners colour the picture.

Environmental hygiene

Unit objectives

By the end of this lesson, learners should be able to:

- a** sweep the classroom.
- b** identify the broom correctly.

Source of materials

- PlusOne Science and Technology ECD B workbook page 8.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Grass brooms
- Long brooms
- Mops
- Dust pans
- Bins
- Crayons
- Chart/pictures showing people sweeping the yard.

Suggested activities

- Facilitator leads learners in singing “this is the way we sweep our floors”.
- Learners identify the media available.
- Facilitator explains what environmental hygiene is.
- Learners demonstrate cleaning their classrooms.
- Learners sweep and mop their classroom.
- Learners discuss the pictures in the workbook.
- Learners colour the picture.

Environmental hygiene

Unit objectives

By the end of this lesson, learners should be able to:

- a** clean windows of their classroom.
- b** colour the picture as shown.

Source of materials

- PlusOne Science and Technology ECD B workbook page 9.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Dry cloth
- Wet cloth
- Soap
- Water
- Buckets
- Newspaper
- Crayons
- Chart/pictures showing children cleaning windows.

Health and wellness- Physical activities

Unit objectives

By the end of this lesson, learners should be able to:

- a** demonstrate jogging.
- b** colour the pictures as shown.

Source of materials

- PlusOne Science and Technology ECD B workbook page 10.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Videos of children exercising.
- Video player.
- Skipping rope.
- Outside play area.
- Crayons
- Charts/pictures of children exercising.

Suggested activities

- Facilitator leads learners in singing an action song.
- Facilitator explains what physical fitness is and gives examples of physical fitness.
- Learners state physical activities they know.
- Learners watch different videos/pictures.
- Learners demonstrate jogging, jumping and other physical activities.
- Class discusses the need for exercises.
- Learners colour the picture within the frame.

Health and Wellness- Balanced diet

Unit objectives

By the end of this lesson, learners should be able to:

- a** paste a sticker of a basket of fruits.
- b** name at least one fruit in the basket.

Source of materials

- PlusOne Science and Technology ECD B workbook page 11.
- Heritage Based Curriculum HBC Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Rice
- Mealie-meal
- Chicken
- Beef

- Fruits
- Vegetables
- Learner's lunch boxes.
- Chart/pictures showing different foods.

Suggested activities

- Learners sing a song mentioning foods.
- Facilitator explains what a balanced diet is.
- Learners identify the food examples available and those on the charts and pictures.
- Learners identify foods that make a balanced diet.
- Learners paste the fruit basket from the sticker page.
- Learners state what they like to eat.

Health and wellness-Sleep and rest

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify the action in the picture.
- b** colour the blankets only.

Source of materials

- PlusOne Science and Technology ECD B workbook page 12.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Blankets
- Mattress
- Pillows
- Chart/pictures of a person sleeping.
- Model bed and blankets.
- Dolls
- Crayons

Suggested activities

- Facilitator leads learners in singing a song.
- Facilitator explains the need for sleep and rest.
- Learners do picture reading.
- Learners demonstrate sleeping properly.
- Class discusses the need for sleep and rest and the time they sleep.

- Learners discuss dreams.
- Learners colour the blankets only.

Diseases protection

Unit objectives

By the end of this lesson, learners should be able to:

- identify the nurse/doctor in the picture.
- colour the picture as shown.

Source of materials

- PlusOne Science and Technology ECD B workbook page 13.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Nurse/doctor's uniform
- Model injections
- Model pills
- Model stethoscope
- Sick bay
- Videos of children at a clinic.
- Video player
- Chat/pictures of children at a clinic.
- Crayons

Suggested activities

- Learners sing a song.
- Class states illnesses they know.
- Facilitator explains causes of different diseases.
- Learners watch videos/pictures of children visiting the clinic.
- Learners tell a story from the pictures.
- Learners colour the picture as shown.

Topic 2

Food and nutrition

Food groups

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify a carrot correctly.
- b** identify the odd one out (milk).

Source of materials

- PlusOne Science and Technology ECD B workbook page 14.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Carrots
- Wheat
- Mangoes
- Milk
- Cucumbers
- Chart/pictures of plant foods.
- Cabbage
- Meat
- Bread
- Mealies
- Crayons

Suggested activities

- Learners sing ‘*dudu muduri*’.
- Facilitator explains food groups.
- Learners identify plant foods from the chart, pictures and workbook.
- Learners identify the odd one out.
- Learners colour the pictures.
- Learners sing songs about food.

Balanced meals

Unit objectives

By the end of this lesson, learners should be able to:

- a** colour the apple and maize.
- b** paste a sticker of a fish from the sticker page.

Source of materials

- PlusOne Science and Technology ECD B workbook page 15.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Beans
- Apples
- Mealies
- Rice
- Potatoes
- *Sadza*
- Fish
- Pictures/chart of food
- Crayons

Suggested activities

- Learners give a recap of the previous lesson.
- Learners state their favourite food.
- Learners identify the food available as well as those in the pictures.
- Facilitator and class discuss a balanced diet.
- Learners colour the apple and maize.
- Learners paste a sticker of a fish from the sticker page.

Healthy snacks

Unit objectives

By the end of this lesson, learners should be able to:

- a** name at least one food in the picture.
- b** paste the nuts from the sticker page.

Source of materials

- PlusOne Science and Technology ECD B workbook page 16.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested materials

- Yoghurt
- Fruits
- Biscuits
- Learner's lunch boxes.
- Crayons

Suggested teaching and learning materials

- Learners sing a song stating food.
- Facilitator explains what snacks are.
- Learners state their favourite snacks.
- Learners produce the food/snacks from home.
- Class discusses healthy snacks.
- Learners colour the pictures.
- Learners paste a sticker of nuts from the sticker page.

Unhealthy snacks

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify the ice-cream from the pictures.
- b** paste a sticker of fried chips from the sticker page.

Source of materials

- PlusOne Science and Technology ECD B workbook page 17.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Biscuits
- Sweets
- Potato chips
- Chart/pictures of unhealthy snacks.
- Ice cream
- Freezits
- Cakes

Suggested activities

- Class sing a song about food.
- Learners give a recap of the previous lesson.
- Facilitator explains unhealthy snacks.
- Learners identify the foods available.
- Learners name the food in the picture.
- Learners colour the pictures.
- Learners paste a sticker of fried chips from the sticker page.

Food demonstrations

Unit objectives

By the end of this lesson, learners should be able to:

- a** paste a sticker of beef meat from the sticker page.
- b** identify correctly sadza from the pictures.

Source of materials

- PlusOne Science and Technology ECD B workbook page 18.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Potatoes
- Rice
- Beans
- Chicken
- *Sadza*
- Beef
- Chart/pictures of different foods.
- Cards showing different foods.

Suggested activities

- Learners sing ‘*dudu muduri*’ mentioning food.
- Class identify foods available as well as those on the pictures.
- Learners state their favourite food.
- In groups, learners discuss how food on their given card is prepared.
- Learners paste a sticker of beef meat from the sticker page.

Food demonstrations

Unit objectives

By the end of this lesson, learners should be able to:

- a** demonstrate preparing any vegetable for cooking.
- b** colour the picture as shown above.

Source of materials

- PlusOne Science and Technology ECD B workbook page 19.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Play knives.
- Cutting board.
- Vegetables (onions, carrots, cabbages, cucumbers).
- Pots
- Plates
- Crayons

Suggested activities

- Learners repeat an action rhyme.
- Class state their favourite foods.
- Facilitator explains food preparation.
- Learners role-play/ demonstrate preparing different vegetables for cooking.
- Learners colour the picture of mother preparing as shown.
- Learners tell stories about cooking at home.

Sources of food-Plants

Unit objectives

By the end of this lesson, learners should be able to:

- a** match the porridge to the source.
- b** identify the sugar cane.

Source of materials

- PlusOne Science and Technology ECD B workbook page 20.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Sugar cane
- Mealies
- Cabbage
- Porridge
- Wheat
- Peas
- Lettuce
- Tomatoes
- Chart/pictures of vegetables.

Suggested activities

- Facilitator explains food sources to learners and gives examples.
- Learners state and identify plant foods.
- Class discusses different vegetables.
- Learners match porridge and its source.
- Class discusses processed food from plants.

Topic 3

Crops, plants and animals

Sources of food-Animals

Unit objectives

By the end of this lesson, learners should be able to:

- a** match milk to the source (goat and cow).
- b** paste the milk from the sticker page.

Source of materials

- PlusOne Science and Technology ECD B workbook page 21.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Eggs
- Milk
- Meat
- Model cows
- Model goat
- Model sheep
- Chart of food from animals.

Suggested activities

- Learners give a recap of the previous lesson.
- Facilitator explains that animals give us food.
- Learners identify animals that give us food.
- Learners match the animals and the food they give us.
- Learners paste the sticker of milk on the space from the sticker page.
- Learners match the milk to its source.
- Learners colour the sheep and the goat.

Plants

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify at least two plants correctly.
- b** colour the leaves only.

Source of materials

- PlusOne Science and Technology ECD B workbook page 22.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Grass
- Trees
- School garden.
- Chart showing plants.
- Twigs
- Leaves
- Seeds
- School yard

Suggested activities

- Facilitator leads learners in singing a song about plants.
- Learners identify plants.
- Learners go on a nature walk identifying parts of plants.
- Facilitator shows learners branches, leaves, roots, seeds and fruits.
- Learners collect plant parts.
- Learners do sorting of plant parts.
- Learners colour the leaves only.

Vegetable gardening

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify at least two vegetables.
- b** colour one vegetable of their choice as shown.

Source of materials

- PlusOne Science and Technology ECD B workbook page 23.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Broccoli
- Cabbage
- Cauliflower
- Carrots
- Green beans
- Onions
- Leafy vegetables.
- School garden.
- Watering can

Suggested activities

- Learners give a recap of the previous lesson.
- Learners name vegetables.
- Facilitator takes learners to the school garden.
- Learners identify the vegetables in the garden.
- Class discusses and demonstrate how to take good care of plants.
- Learners colour only one vegetable as shown above.

Domestic animals and their habitats

Unit objectives

By the end of this lesson, learners should be able to:

- a** match correctly at least two animals and their habitats.
- b** name at least two domestic animals.

Source of materials

- PlusOne Science and Technology ECD B workbook page 24.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Model shelters for dogs.
- Model shelters for cattle.
- Model shelters for chicken.
- Model shelters for pigs.
- Model shelters for rabbits.
- Model dog

- Model cattle
- Model chicken
- Model pigs
- Model rabbits
- Chart/pictures of animals and their shelters.
- Work cards showing animals and shelter.

Suggested activities

- Class sing a song about animals.
- Facilitator explains domestic animals and their needs for shelter.
- Learners identify various animals available.
- Learners match animals and their shelters in groups using work cards.
- Learners give the feedback.

Wild animals

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify correctly the elephant.
- b** paste a zebra from the sticker page.

Source of materials

- PlusOne Science and Technology ECD B workbook page 25.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Model elephant
- Model lion
- Model monkey
- Model buffalo
- Pictures of different wild animals.
- Cards with different wild animals and their habitats.

Suggested activities

- Learners sing a song about animals.
- Facilitator gives examples of wild animals.
- Learners name and identify the animals on the pictures/ charts as well as the animal models.

- Learners identify the elephant, lion, impala and zebra in their books.
- Learners paste a sticker of a zebra.
- In groups, learners match wild animals and their habitats.

Wild animals

Unit objectives

By the end of this lesson, learners should be able to:

- a** tell a folktale about wild animals.
- b** tell a story from the picture in the workbook.

Source of materials

- PlusOne Science and Technology ECD B workbook page 26.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

Pictures of different wild animals.

Suggested activities

- Learners give a recap about the previous lesson.
- Facilitator picks an animal from a picture and tells a story.
- Learners identify the animals on the picture.
- Learners tell folk stories about baboon and hare.
- Learners imitate wild animal sounds.

Food chain

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify plant food for animals.
- b** name an animal that feed on other animals.

Source of materials

- PlusOne Science and Technology ECD B workbook page 27.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Food chain chart.
- Videos and pictures of herbivores and carnivores.
- Video player.

Suggested activities

- Learners sing a song about animals.
- Facilitator explains what a food chain is.
- Learners identify animals that eat plants.
- Facilitator explains that animals can also eat other animals e.g lions eat other animals.
- Learners identify animals that eat other animals.
- Facilitator explains that the impala eats grass and the impala is eaten by the lion (food chain).
- Learners paste a picture of a lion eating an impala.

Topic 4

Environmental awareness and conservation

Climate and weather

Unit objectives

By the end of this lesson, learners should be able to:

- a name at least two clothes for winter.
- b describe one weather condition shown on the picture (workbook page 28).

Source of materials

- PlusOne Science and Technology ECD B workbook page 28.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Wool hat
- Wool gloves
- Wool jersey
- Sun hat
- Winter boots
- Slippers
- Vest
- Pictures/chart showing a hot and a cold weather.

Suggested activities

- Facilitator leads learners in singing a song about weather.
- Learners identify the weather conditions on the pictures.
- Class discusses hot weather and its clothes.
- Learners discuss cold weather and the clothes associated with winter.
- Learners sort different weather conditions and their clothes.

Climate and weather

Unit objectives

By the end of this lesson, learners should be able to:

- a identify the weather condition shown (rain).
- b colour the pictures within the frame.

Source of materials

- PlusOne Science and Technology ECD B workbook page 29.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Umbrellas
- Raincoat
- Plastic shoes
- Chart/pictures showing rainy weather.
- Wool clothes
- Summer clothes

Suggested activities

- Learners give a recap of the previous lesson.
- Facilitator describes a rainy weather.
- Learners identify the clothes and accessories associated with rainy weather.
- Learners sort clothes according to weather.
- Learners present only rainy weather clothes.
- Class discusses why we need umbrellas.
- Learners colour the picture.

Soil types

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify correctly sand soil.
- b** model at least one clay artifact.

Source of materials

- PlusOne Science and Technology ECD B workbook page 30.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Clay soil
- Sand soil
- Loam soil
- Clay models

Suggested activities

- Learners sing an action song.
- Facilitator takes learners on a nature walk.
- Learners collect sand, clay and loam soils.
- Class discusses the different soil types.

- Learners identify the places where loam is found.
- Learners do clay modelling.

Soil – uses of soil

Unit objectives

By the end of this lesson, learners should be able to:

- State at least one use of soil.
- Tell a story from the pictures.

Source of materials

- PlusOne Science and Technology ECD B workbook page 31.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- School garden.
- Flower beds.
- Pottery
- Unpainted walls.
- Crayons

Suggested activities

- Learners give a recap of the previous lesson.
- Class discusses uses of soil (planting, animal shelter, building).
- Learners visit the school garden and flower beds and explore the soils.
- Learners tell a story from the pictures.
- Learners colour the flowers.
- Learners sing different songs.

Water

Unit objectives

By the end of this lesson, learners should be able to:

- identify at least two sources of water.
- state at least three uses of water.

Source of materials

- PlusOne Science and Technology ECD B workbook page 33.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Tap
- Borehole
- Well
- Pictures/chart of river and dam.
- Model tap
- Model borehole
- Model well
- Crayons

Suggested activities.

- Facilitator leads learners in singing water rhymes.
- Learners name water sources.
- Learners identify sources of water.
- Learners discuss uses of water and demonstrate using water.
- Learners colour the picture of the boy drinking water and the girl washing hands.

Land use: Residential

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify a house.
- b** colour the hut within the frame.

Source of materials

- PlusOne Science and Technology ECD B workbook page 33.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Model/actual huts
- Model/actual houses
- Crayons

Suggested activities

- Learners sing songs about shelter.
- Facilitator explains that land can be used for residential purposes.
- Learners identify places where people build houses and huts.
- Learners identify a hut and a house.
- Learners colour the hut only.

Land use- Agriculture

Unit objectives

By the end of this lesson, learners should be able to:

- a** name at least three crops.
- b** tell story from the picture.

Source of materials

- PlusOne Science and Technology ECD B workbook page 34.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- School garden.
- Flower beds.
- Different crops.
- Chart/pictures showing different farming activities.

Suggested activities

- Learners give a recap of the previous lesson.
- Facilitator explains that land can also be used for agricultural purposes.
- Learners discuss where they plant crops.
- Learners name the crops they know and those in the pictures.
- Learners tell a story from the picture.

Environmental conservation- Recycling programs

Unit objectives

By the end of this lesson, learners should be able to:

- a** name at least three things people throw away.
- b** colour the picture as shown above.

Source of materials

- PlusOne Science and Technology ECD B workbook page 35.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Classroom
- School yard

- Bins
- Chart/pictures of children picking up
- litter.
- Crayons

Suggested activities

- Facilitator leads learners in singing songs about tidying up.
- Learners state the need to pick litter and clean their classrooms.
- Facilitator explains the purpose of recycling.
- Learners sort litter into different bins.
- Class discusses the picture in the workbook.
- Learners colour the picture as shown above.

Environmental conservation- Planting

Unit objectives

By the end of this lesson, learners should be able to:

- a plant at least one plant (flower, tree, vegetable).
- b colour the picture within the frame.

Source of materials

- PlusOne Science and Technology ECD B workbook page 36.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Flower seedlings
- Tree seedlings
- Vegetable seedlings
- Prepared land
- Water
- Crayons
- Watering cans/tins

Suggested activities

- Learners sing any song about the environment.
- Learners give a recap of the previous lesson.
- Facilitator explains how to conserve land by planting different plants.
- Learners identify the seedling available.
- Learners imitate the teacher's demonstration of planting plants.
- Learners water the plants.
- Learners describe the picture.
- Learners colour the picture.

Topic 5

Tools, equipment and implements

Everyday tools and implements (kitchen utensils)

Unit objectives

By the end of this lesson, learners should be able to:

- a identify correctly at least two kitchen utensils.
- b state the uses of at least two kitchen utensils.

Source of materials

- PlusOne Science and Technology ECD B workbook page 37.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Cooking spoon
- Eating spoon
- Forks
- Spatula
- Knives
- Cooking stick
- Pots
- Pans
- Tongs

Suggested activities

- Learners sing a song naming kitchen utensils.
- Facilitator explains what kitchen utensils are and gives examples of kitchen utensils.
- Learners name and identify kitchen utensils.
- Learners do sorting of kitchen utensils.

Everyday tools and implements (garden tools)

Unit objectives

By the end of this lesson, learners should be able to:

- a name at least two garden tools.
- b state the use of at least two garden tools.

Source of materials

- PlusOne Science and Technology ECD B workbook page 38.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Watering can
- Shovel
- Hoe
- Garden fork
- Rake
- Horse pipe
- Chart showing different garden tools.
- School garden

Suggested activities

- Learners give a recap of the previous lesson.
- Facilitator explains what garden tools and implements are.
- Learners name garden tools.
- Learners identify garden tools.
- Learners practise using garden tools at the school garden.

Measuring devices

Unit objectives

By the end of this lesson, learners should be able to:

- a** name at least two measuring devices.
- b** colour the picture.

Source of materials

- PlusOne Science and Technology ECD B workbook page 39.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Measuring jug
- Kitchen scale (digital)
- Tape measure
- Ruler
- Scale

Suggested activities

- Learners sing any song.
- Facilitator explains what measuring devices are and gives examples.
- Learners identify the tools and discuss what they are used for.
- Class discusses and compare each other's height and weight.

- Learners measure their tables using hand spans.
- Learners colour the measuring devices.

Observation tools

Unit objectives

By the end of this lesson, learners should be able to:

- identify binoculars correctly.
- make binoculars using paper and glue.

Source of materials

- PlusOne Science and Technology ECD B workbook page 40.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- | | |
|--------------------|------------|
| • Model binoculars | • Paper |
| • Microscope | • Scissors |
| • Spectacles | • Glue |
| • Magnifying glass | |

Suggested activities

- Class recites a rhyme about sight.
- Learners state their organ of sight.
- Facilitator explains what observation tools are and gives examples.
- Learners identify the observation tools available.
- Class demonstrates how to use the observation tools.
- Facilitator demonstrates how to make binoculars.
- Learners make toy binoculars.

Digital devices: Computers

Unit objectives

By the end of this lesson, learners should be able to:

- identify the computer keyboard.
- colour the picture of a computer.

Source of materials

- PlusOne Science and Technology ECD B workbook page 41.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Desktop computer
- Laptop
- Toy tablet
- Mouse
- Keyboard
- Crayons
- Calculator

Suggested activities

- Learners sing any song about gadgets.
- Facilitator presents a computer and asks learners to identify it.
- Learners name and identify the different gadgets.
- Class discusses the use of each gadget.
- Learners colour the picture in their workbook.

Digital devices: Television and radio

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify a television correctly.
- b** state one use of a radio.

Source of materials

- PlusOne Science and Technology ECD B workbook page 42.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Model television
- Radios
- Crayons
- Chart/pictures of televisions and radios.

Suggested activities

- Learners give a recap of the previous lesson.
- Learners name the items on the chart.
- Class discusses the use of each device.
- Learners colour the radio and television.

Simple machines

Unit objectives

By the end of this lesson, learners should be able to:

- identify a scissors correctly.
- colour each machine as shown above.

Source of materials

- PlusOne Science and Technology ECD B workbook page 43.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Scissors
- Wheelbarrow
- See-saw
- Pen
- Crayons
- Chart/pictures showing simple machines.

Suggested activities

- Facilitator leads learners in singing a song.
- Learners name different machines.
- Facilitator explains what simple machines are and gives examples.
- Learners name and identify simple machines.
- Learners describe and demonstrate how to use the simple machine available.
- Learners do colouring as shown.

Simple machines

Unit objectives

By the end of this lesson, learners should be able to:

- identify the heavier person on the see-saw.
- colour the one who weighs less.

Source of materials

- PlusOne Science and Technology ECD B workbook page 44.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- See-saw
- Scale
- Chart of a see-saw
- Crayons

Suggested activities

- Facilitator leads learners in singing a song.
- Learners identify the scale and see-saw.
- Class discusses how a seesaw operates.
- Learners play on the seesaw.
- Learners identify the heavier child and the lighter child.
- Learners colour the one who weighs less.

Science and Technology careers

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify a medical doctor.
- b** colour the picture within the frame.

Source of materials

- PlusOne Science and Technology ECD B workbook page 45.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Chart/pictures of different professions.
- Professional uniforms, for example, chef's hat, apron, lab coat, nurse's uniform.
- Pots
- Model injections.
- Stethoscope
- Screwdriver

Suggested activities

- Learners sing an activity song.
- Facilitator explains different sectors of science and technology as well as the careers involved.

- Learners name careers in Science and Technology.
- Learners discuss each profession named and those shown on the pictures.
- Learners describe their career goals.
- Learners colour their favourite career.

Science and Technology careers

Unit objectives

By the end of this lesson, learners should be able to:

- state at least one responsibility of a farmer.
- paste the doctor from the sticker page.

Source of materials

- PlusOne Science and Technology ECD B workbook page 46.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Pictures/charts of a tractor.
- Hoe
- Irrigation pipes
- Tablets/pills
- Injection
- Nurse
- Real seedlings
- Medicine cups
- Watering can

Suggested activities

- Learners give a recap of the previous lesson.
- Learners sing songs about farming.
- Class discusses careers in farming.
- Class discusses careers in the medical field.
- Learners do picture reading.
- Learners imitate how a farmer, nurse and doctor works.
- Learners paste a sticker of the doctor.

Topic 6

Health and hygiene

Forms of energy

Unit objectives

By the end of this lesson, learners should be able to:

- a** colour the objects that produce light.
- b** identify correctly at least one object that produce sound.

Source of materials

- PlusOne Science and Technology ECD B workbook page 47.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Bulb
- Candle
- Radio
- Television
- Electric iron
- Coal iron
- Hair blowers
- Pictures/charts of the sun.

Suggested activities

- Learners sing about light and heat.
- Facilitator explains about different forms of energy.
- Learners name objects that give us heat, light and sound.
- Learners identify the available objects.
- Learners discuss how each object works and the type of energy they produce.

Source of energy

Unit objectives

By the end of this lesson, learners should be able to:

- a** identify a gas tank.
- b** colour the sun within the frame.

Source of materials

- PlusOne Science and Technology ECD B workbook page 48.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Chart/pictures of dam walls.
- Chart/pictures of a sun.
- Gas tank
- Gas stove
- Fan
- Heater

Suggested activities

- Learners give a recap of the previous lesson.
- Learners identify the different media available.
- Class discusses gas, water and solar energy.
- Learners colour the two pictures of the sun.
- Learners in groups sort pictures according to the type of energy they use.

Sources of energy

Objectives

By the end of this lesson, learners should be able to:

- a** identify correctly a windmill.
- b** state the source of energy for a windmill.

Source of materials

- PlusOne Science and Technology ECD B workbook page 49.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Model/ chart of windmill.
- Papers
- Cardboard boxes.
- Glue
- Scissors
- Trees and flowers outside the classroom.

Suggested activities

- Learners sing about the wind.
- Facilitator explains that wind is a form of energy.
- Learners describe whirl winds.
- Learners imitate the wind moving trees.
- Learners identify a windmill.
- Learners discuss how a windmill works.
- Learners make toy fans.
- Learners colour the picture.

Energy conservation

By the end of this lesson, learners should be able to:

Objectives

- a** state at least two reasons why we must conserve energy.
- b** demonstrate switching on and off a bulb.

Source of materials

- PlusOne Science and Technology ECD B workbook page 50.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Toys with switches.
- Cellphones
- Computers
- Stoves
- Bulb with switches.
- Chart/pictures showing people switching on/off appliances.
- Candles

Suggested activities

- Facilitator leads learners in singing a song.
- Facilitator explains what energy conservation is.
- Learners do picture reading.
- Learners discuss the need to conserve energy.
- Learners role play switching off bulbs, candles, gas and electric appliances.
- Learners sing songs.

Renewable energy technology

Objectives

By the end of this lesson, learners should be able to:

- a** identify the solar panels.
- b** state at least one renewable source of energy.

Source of materials

- PlusOne Science and Technology ECD B workbook page 51.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Firewood
- Matches
- Solar panels
- Batteries
- Model sun.
- Candles
- Charts/pictures of solar panel and the sun.

Suggested activities

- Facilitator explains what renewable energy is.
- Learners give a recap of the previous lessons.
- Learners identify the objects in the pictures.
- Learners discuss the use of solar panels.
- Learners discuss the uses of fire.
- Learners paste a sticker of burning fire from the sticker page.

Topic 7

Disaster risk management and resilience

Hazards

Objectives

By the end of this lesson, learners should be able to:

- a** state at least one hazard associated with water.
- b** colour the picture showing thunder.

Source of materials

- PlusOne Science and Technology ECD B workbook page 52.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Chart/videos showing windy weather.
- Chart/videos showing thunderstorms.
- Chart/videos showing flooding,
- Raincoats
- Umbrella
- Crayons

Suggested activities

- Class sings about the weather.
- Learners state different weather conditions.
- Facilitator explains disasters and risks that are associated with different weather conditions.
- Learners describe what is happening on the pictures.
- Learners watch videos on thunder, lightning and strong winds.
- Class discusses the videos.
- Learners colour the picture that shows thunder.

Emergency supplies

Objectives

By the end of this lesson, learners should be able to:

- a** identify correctly gloves and a mask.
- b** state the use of a flashlight during emergencies.

Source of materials

- PlusOne Science and Technology ECD B workbook page 53.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Flashlights (torch)
- Gloves
- Masks
- Injections
- Water
- First aid kit.
- Sick bay/ clinic area

Suggested activities

- Learners recite rhymes.
- Facilitator explains what emergency supplies are.
- Learners name emergency supplies.
- Learners identify emergency supplies available and on pictures.
- Class discuss the use of each emergency supply item.
- Learners colour the black and white pictures.

Emergency supplies

Objectives

By the end of this lesson, learners should be able to:

- a** state at least two emergency supplies.
- b** role play attending an injured person.

Source of materials

- PlusOne Science and Technology ECD B workbook page 54.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- First Aid kit
- Nurse's uniform
- Sick bay/clinic
- Picture of a nurse
- Water

Suggested activities

- Learners give a recap of the previous lesson.
- Learners state the use and need of emergency supplies.
- Learners describe what the nurse is doing.
- Learners role-play attending an injured person.
- Learners colour the picture.

Emergency supplies

Objectives

By the end of this lesson, learners should be able to:

- a identify correctly at least two emergency responders.
- b paste the sticker of a fire fighter.

Source of materials

- PlusOne Science and Technology ECD B workbook page 55.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Chart/pictures of emergency responders.
- Pictures/model ambulance.
- Pictures/model police car.
- Pictures/model fire engine.
- First aid kit.

Suggested activities

- Learners sing a song about disasters.
- Facilitator explains who emergency responders are.
- Learners name and identify emergency responders.
- Class discusses the responsibilities of each emergency responder.
- Learners role-play being emergency responders.
- Learners place a sticker of a firefighter.

Emotional resilience

Objectives

By the end of this lesson, learners should be able to:

- a** imitate at least one emotion shown in emergencies.
- b** sing at least one calming song.

Source of materials

- PlusOne Science and Technology ECD B workbook page 56.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Chart showing different facial expressions.
- Videos of people crying.
- Videos of people praying.
- Videos of people laughing.
- Videos of people being sad.
- Crayons.

Suggested activities

- Learners give a recap of the previous lesson.
- Facilitator explains what emotional resilience is.
- Learners do picture reading.
- Learners imitate feelings and emotions in times of emergency.
- Learners practise deep breathing, singing and playing calming games.
- Learners colour the child's t-shirt only.

Emotional resilience

Objectives

By the end of this lesson, learners should be able to:

- a** state at least one person they share emotions with.
- b** role play sharing different emotions.

Source of materials

- PlusOne Science and Technology ECD B workbook page 57.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Chart/pictures of children showing different emotions.
- Play area props.

Suggested activities

- Learners sing a song about emotions.
- Learners give a recap of the previous lesson.
- Learners describe what is happening on the pictures.
- Class discusses whether it is good to share emotions or not.
- Learners state who they share their emotions with.
- Learners do role-playing sharing emotions.

Topic 8

Educational technology and innovation

Everyday technology

Objectives

By the end of this lesson, learners should be able to:

- a demonstrate how to use a cellphone.
- b operate a laptop.

Source of materials

- PlusOne Science and Technology ECD B workbook page 58.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Cellphones
- Audio players
- Video players
- Laptops
- Tablets
- Desktop
- Radio
- Television

Suggested activities

- Learners recite rhymes about technology.
- Facilitator explains the concept of everyday technology.
- Learner name gadgets they use daily.
- Learners describe the devices shown.
- Learners describe and demonstrate how to use different devices.
- Learners colour only one picture.

Everyday technology

Objectives

By the end of this lesson, learners should be able to:

- a** name at least one computer game.
- b** play at least one computer game.

Source of materials

- PlusOne Science and Technology ECD B workbook page 59.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Laptop
- Desktop
- Tablets
- Toy/game tablets.
- Joysticks
- Cellphones

Suggested activities

- Learners give a recap of the previous lesson.
- Learners name computer games.
- Learners do picture reading.
- Learners discuss and describe how to play their favourite electronic games.
- Learners play games on tablets, laptops, desktops or cellphones.

Educational technology interaction

Objectives

By the end of this lesson, learners should be able to:

- imitate at least one action demonstrated.
- copy at least one sound made.

Source of materials

- PlusOne Science and Technology ECD B workbook page 60.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Video player.
- Videos
- Blocks

Suggested activities

- Learners give a recap of the previous lesson.
- Facilitator explains that some educational technology is interactive e.g cartoons or kids shows that ask a question then give the child time to answer and then the game gives correct answer or spelling game with feedback.
- Learners name interactive games.
- Facilitator play interactive television games/ shows like spelling/sounds/phonics and other shows that give feedback.
- Learners follow the video prompts.
- Learners identify familiar faces on the pictures on page 60.

Programming

Objectives

By the end of this lesson, learners should be able to:

- a** Code blocks as instructed by facilitator.
- b** Operate at least one robotic toy.

Source of materials

- PlusOne Science and Technology ECD B workbook page 61.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Blocks
- Battery operated toys.

Suggested activities

- Learners sing any action song.
- Facilitator explains coding.
- Learners do coding using blocks (give learners different coloured blocks).
- Facilitator gives instructions on where to place the blocks.
- Learners follow facilitator's instructions thereby creating a coded pattern.

- Facilitator demonstrates how to use robots.
- Learners play with robot toys.

Technology safety

Objectives

- a** identify correctly a thermometer.
- b** state at least one safety rule about gadgets.

Source of materials

- PlusOne Science and Technology ECD B workbook page 62.
- Heritage Based Curriculum (HBC) Science and Technology Infant syllabus.

Suggested teaching and learning materials

- Cellphones
- Laptops
- Toy laptops
- Desktop
- Thermometer
- Toy games.
- Video players
- Audio players

Suggested activities

- Learners give a recap of the previous lesson.
- Facilitator explains technology safety.
- Learners name technological gadgets.
- Learners identify available gadgets.
- Learners discuss how to keep gadgets safe.
- Learners describe how to use different gadgets.
- Learners colour the pictures.