Grade Four

Science And Technology Schemes Of Work

			Tern	n <u>One</u> Ye	ear	School			
Wee k	Ls n	Strand/ Theme	Sub Strand	Specific learning outcomes	Key inquiry Questions	Learning experiences	Learning Resources	Assessme nt methods	Refl
	1	Living Things	Plants (Characteristic s Of Plants)	By the end of the sub strand the learner should be able to: a) Identify living and non- living things in the environment	What makes plants living things?	a) Learners take a walk in the school compound and the neighbourhood to observe, discuss and record evidence that plants: feed, grow, breathe, reproduce, remove waste, move, respond to changes in their environment and die.	Protective clothing, gloves, forceps, goggles, tongs, overcoats videos, digital devices, internet, textbooks, tree nurseries, real assorted plants	Oral Questions, Assignme nts, project work	
1	2		Plants (Characteristic s Of Plants)	 b) Identify the characteristics of plants as living things. 	What makes plants living things?	 Learners take a walk in the school compound and the neighbourhood to observe, discuss and record evidence that plants: feed, grow, breathe, reproduce, remove waste, move, respond to changes in their environment and die. 	Protective clothing, gloves, forceps, goggles, tongs, overcoats videos, digital devices, internet, textbooks, tree nurseries, real assorted plants	Oral Questions, Assignme nts, project work	
	3		Plants (Characteristic s Of Plants)	c) Observe characteristics of plants in the environment.	What makes plants living things?	 b) Learners use digital devices to observe, discuss and record evidence that plants: feed, grow, breathe, reproduce, remove waste materials, move, respond to changes in their environment and die. 	Protective clothing, gloves, forceps, goggles, tongs, overcoats videos, digital devices, internet, textbooks, tree nurseries, real assorted plants	Oral Questions, Assignme nts, project work	
	4		Plants (Characteristic s Of Plants)	 d) Demonstrate responsibility while handling plants. 	What makes plants living things?	 c) In groups, learners are guided to observe safety precautions when handling plants (Examples: practise use of gloves, forceps, goggles, tongs, overcoats) 	Protective clothing, gloves, forceps, goggles, tongs, overcoats videos, digital devices, internet, textbooks, tree nurseries, real assorted plants	Oral Questions, Assignme nts, project work	
2	1		Plants (Characteristic s Of Plants)	e) Grow some plants found in the locality	What makes plants living things?	Project: With the help of parents, learners' plant seeds, observe as they grow and record the changes taking place as the plants grow to maturity.	Protective clothing, gloves, forceps, goggles, tongs, overcoats videos, digital devices, internet, textbooks, tree nurseries, real assorted plants	Oral Questions, Assignme nts, project work	

	2	Animals (Characteristic s Of Animals)	By the end of the sub strand the learner should be able to: a) Identify the characteristics of animals as living things.	1. 2.	What makes animals living things? Which ways do animals differ from each other':	 Learners take a walk in the school compound and the neighbourhood to observe, discuss and record evidence that animals: feed, grow, breathe, reproduce, remove waste, move, respond to changes in their environment and die. 	Gloves, forceps, goggles, tongs, overcoats, videos, digital devices, internet, textbooks, assorted animals	Oral Questions, Assignme nts, project work	
	3	Animals (Characteristic s Of Animals)	By the end of the sub strand the learner should be able to: a) Identify the characteristics of animals as living things.	1. 2.	What makes animals living things? Which ways do animals differ from each other':	a) Learners take a walk in the school compound and the neighbourhood to observe, discuss and record evidence that animals: feed, grow, breathe, reproduce, remove waste, move, respond to changes in their environment and die.	Gloves, forceps, goggles, tongs, overcoats, videos, digital devices, internet, textbooks, assorted animals	Oral Questions, Assignme nts, project work	
	4	Animals (Characteristic s Of Animals)	 b) Observe characteristics of animals in the r environment. 	1.	What makes animals living things? Which ways do animals differ from each other':	 b) Learners use digital devices to observe, discuss and record evidence that animals: feed, grow, breathe, reproduce, remove waste materials, move, respond to changes in their environment and die. c) In groups, learners discuss the main difference between vertebrates and invertebratescts. 	Gloves, forceps, goggles, tongs, overcoats, videos, digital devices, internet, textbooks, assorted animals	Oral Questions, Assignme nts, project work	
	1	Animals (Characteristic s Of Animals)	 b) Observe characteristics of animals in the r environment. 	1.	What makes animals living things? Which ways do animals differ from each other':	 b) Learners use digital devices to observe, discuss and record evidence that animals: feed, grow, breathe, reproduce, remove waste materials, move, respond to changes in their environment and die. c) In groups, learners discuss the main difference between vertebrates and invertebratescts. 	Gloves, forceps, goggles, tongs, overcoats, videos, digital devices, internet, textbooks, assorted animals	Oral Questions, Assignme nts, project work	
3	2	Animals (Characteristic s Of Animals)	 c) Distinguish between vertebrates and invertebrates. 	1. 2.	What makes animals living things? Which ways do animals differ from each other's	 In groups, learners are guided to observe safety precautions when handling animals (Examples: practise use of gloves, forceps, goggles, tongs, overcoats) 	Gloves, forceps, goggles, tongs, overcoats, videos, digital devices, internet, textbooks, assorted animals	Oral Questions, Assignme nts, project work	
	3	Animals (Characteristic s Of Animals)	 c) Distinguish between vertebrates and invertebrates. 	1.	What makes animals living things? Which ways do animals differ from each other':	 In groups, learners are guided to observe safety precautions when handling animals (Examples: practise use of gloves, forceps, goggles, tongs, overcoats) 	Gloves, forceps, goggles, tongs, overcoats, videos, digital devices, internet, textbooks, assorted animals	Oral Questions, Assignme nts, project work	

	4	Animals (Characteristic s Of Animals)	 d) Demonstrate responsibility while handling animals. 	1. 2.	What makes animals living things? Which ways do animals differ from each other':	Project: With the help of parents, learners make a portfolio of vertebrate and invertibrates animals	Gloves, forceps, goggles, tongs, overcoats, videos, digital devices, internet, textbooks, assorted animals	Oral Questions, Assignme nts, project work	
	1	Animals (Characteristic s Of Animals)	 d) Demonstrate responsibility while handling animals. 	1.	What makes animals living things? Which ways do animals differ from each other?	Project: With the help of parents, learners make a portfolio of vertebrate and invertibrates animals	Gloves, forceps, goggles, tongs, overcoats, videos, digital devices, internet, textbooks, assorted animals	Oral Questions, Assignme nts, project work	
	2	Human Body System (Digestive System)	By the end of the sub strand the learner should be able to: a) Identify parts of the digestive system.	1.	the digestive system suited to their functions? How do teeth differ? How are the different parts of a) the digestive system suited to their functions? How do teeth differ? How are the different parts of a) the digestive system suited to their functions?	 a) In groups, learners are guided to use digital devices and visual aids to observe and identify parts of the digestive system (mouth, teeth, oesophagus, stomach, small intestines, liver, pancreas, large intestines, rectum, anus) 	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work	
4	3	Human Body System (Digestive System)	By the end of the sub strand the learner should be able to: a) Identify parts of the digestive system.	1.		 a) In groups, learners are guided to use digital devices and visual aids to observe and identify parts of the digestive system (mouth, teeth, oesophagus, stomach, small intestines, liver, pancreas, large intestines, rectum, anus) 	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work	
	4	Human Body System (Digestive System)	By the end of the sub strand the learner should be able to: a) Identify parts of the digestive system.	1.		 a) In groups, learners are guided to use digital devices and visual aids to observe and identify parts of the digestive system (mouth, teeth, oesophagus, stomach, small intestines, liver, pancreas, large intestines, rectum, anus) 	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work	
5	1	Human Body System (Digestive System)	 b) Describe functions of the different parts of the digestive system 	1.	How are the different parts of the digestive system suited to their functions? How do teeth differ?	 b) In groups, learners are guided to use digital devices and visual aids to discuss the functions of parts of the digestive system (the mouth, oesophagus, stomach, small intestines, large intestines, rectum, anus) 	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work	

	2	Human Body System (Digestive System)	 b) Describe functions of the different parts of the digestive system 	1.	 the digestive system suited to their functions? How do teeth differ? How are the different parts of the digestive system suited to their functions? How do teeth differ? How are the different parts of the digestive system suited to their functions? How do teeth differ? How are the different parts of the digestive system suited to their functions? How do teeth differ? How do teeth different parts of the digestive system suited to their functions? How do teeth differ? 	 b) In groups, learners are guided to use digital devices and visual aids to discuss the functions of parts of the digestive system (the mouth, oesophagus, stomach, small intestines, large intestines, rectum, anus) 	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work
	3	Human Body System (Digestive System)	 b) Describe functions of the different parts of the digestive system 			 b) In groups, learners are guided to use digital devices and visual aids to discuss the functions of parts of the digestive system (the mouth, oesophagus, stomach, small intestines, large intestines, rectum, anus) 	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work
	4	Human Body System (Digestive System)	c) Develop curiosity about taking care of the teeth			c) In groups learners are guided to demonstrate the use of different types of teeth (Incisors, Canines, Pre-molars and Molars) using locally available food items (e.g. sugar cane, carrots, fruits, tubers), and digital devices.	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work
	1	Human Body System (Digestive System)	 c) Develop curiosity about taking care of the teeth 	1. How are the	c) In groups learners are guided to demonstrate the use of different types of teeth (Incisors, Canines, Pre-molars and Molars) using locally available food items (e.g. sugar cane, carrots, fruits, tubers), and digital devices.	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work	
6	2	Human Body System (Digestive System)	c) Develop curiosity about taking care of the teeth	1.	How are the different parts of the digestive system suited to their functions? How do teeth differ?	c) In groups learners are guided to demonstrate the use of different types of teeth (Incisors, Canines, Pre-molars and Molars) using locally available food items (e.g. sugar cane, carrots, fruits, tubers), and digital devices.	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work
	3	Human Body System (Digestive System)	d) Model the four different types of teeth.	1.	How are the different parts of the digestive system suited to their functions? How do teeth differ?	d) In groups learners are guided to draw/model the four types of teeth using locally available materials.	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work

	4		Human Body System (Digestive System)	 d) Model the four different types of teeth. 	1. 2.	 How are the different parts of the digestive system suited to their functions? How do teeth differ? How are the different parts of the digestive system suited to their functions? How do teeth differ? 	d) In groups learners are guided to draw/model the four types of teeth using locally available materials.	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work
	1		Human Body System (Digestive System)	d) Model the four different types of teeth.			d) In groups learners are guided to draw/model the four types of teeth using locally available materials.	Sugar cane, carrots, fruits, tubers	Oral Questions, Assignme nts, project work
	2	Enviro nment	Air Pollution	By the end of the sub strand the learner should be able to:a) State the meaning of the terms "pollution" and "air pollution".b) Identify air pollutants in his/her environment.	1. 2. 3.	effects of air pollution?	a) In groups, learners are guided to discuss the meaning of the terms "pollution" and "air pollution".b) Learners to be guided as they use visual aids and digital devices to explore the meaning of "pollution" and "air pollution".	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
7	3		Air Pollution	By the end of the sub strand the learner should be able to:a) State the meaning of the terms "pollution" and "air pollution".b) Identify air pollutants in his/her environment.	1. 2. 3.	What causes air pollution? What are the effects of air pollution? How can you reduce air pollution?	a) In groups, learners are guided to discuss the meaning of the terms "pollution" and "air pollution".b) Learners to be guided as they use visual aids and digital devices to explore the meaning of "pollution" and "air pollution".	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
	4		Air Pollution	 c) Distinguish between clean and polluted air in his/her environment. d) Identify effects of air pollution on living things. 	1. 2. 3.	effects of air pollution?	c) In groups, learners walk around the school and neighbourhood to observe, identify and record air pollutants (bad smell, dust, smoke).d) Learners to be guided as they use visual aids and digital devices to identify and record air pollutants.	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work

	1	Air Pollution	c) Distinguish between clean and polluted air in his/her environment.d) Identify effects of air pollution on living things.	 What causes air pollution? What are the effects of air pollution? How can you reduce air pollution? 	 c) In groups, learners walk around the school and neighbourhood to observe, identify and record air pollutants (bad smell, dust, smoke). d) Learners to be guided as they use visual aids and digital devices to identify and record air pollutants. 	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
O	2	Air Pollution	 e) Appreciate the importance of clean air in his/her environment. 	 What causes air pollution? What are the effects of air pollution? How can you reduce air pollution? 	 e) In groups, learners walk around the school and neighbourhood to observe and identify clean and polluted air (toilets, dusty area, smoky areas and decomposing matter). f) Learners to be guided as they use visual aids and digital devices to differentiate between clean and polluted air. 	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
8	3	Air Pollution	e) Appreciate the importance of clean air in his/her environment.	 What causes air pollution? What are the effects of air pollution? How can you reduce air pollution? 	 e) In groups, learners walk around the school and neighbourhood to observe and identify clean and polluted air (toilets, dusty area, smoky areas and decomposing matter). f) Learners to be guided as they use visual aids and digital devices to differentiate between clean and polluted air. 	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
	4	Air Pollution	e) Appreciate the importance of clean air in his/her environment.	 What causes air pollution? What are the effects of air pollution? How can you reduce air pollution? 	 g) In groups, learners walk around the school and neighbourhood to observe, identify and record the effects of air pollution on living things (breathing problems, irritation of eyes, visibility and growth of plants) h) In groups, learners to use visual aids and digital devices to identify the effects of air pollution on living things. 	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
9	1	Air Pollution	 f) Identify ways of reducing air pollution. 	 What causes air pollution? What are the effects of air pollution? How can you reduce air pollution? 	 i) Learners are guided to identify and discuss ways of reducing air pollution (proper disposal of waste; Ventilation; Use of Ventilation Improved Pit latrines; sprinkling ash in pit latrines; Sprinkling water on dusty grounds). j) In groups, learners are guided to observe safety precautions when working in air polluted environment (Example: practise use of dust masks, goggles, overcoats). 	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work

	2	Air Pollution	 f) Identify ways of reducing air pollution. 	1. 2. 3.	What causes air pollution? What are the effects of air pollution? How can you reduce air pollution?	 i) Learners are guided to identify and discuss ways of reducing air pollution (proper disposal of waste; Ventilation; Use of Ventilation Improved Pit latrines; sprinkling ash in pit latrines; Sprinkling water on dusty grounds). j) In groups, learners are guided to observe safety precautions when working in air polluted environment (Example: practise use of dust masks, goggles, overcoats). 	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
	3	Air Pollution	 f) Identify ways of reducing air pollution. 	1. 2. 3.	What causes air pollution? What are the effects of air pollution? How can you reduce air pollution?	Project 1: In groups, learners are guided to make a simple air pollution detector using a clean white piece of cloth.	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
	4	Air Pollution	 g) Make a functional air pollution detector. h) Make a functional dust mask using locally available materials. 	1. 2. 3.	What causes air pollution? What are the effects of air pollution? How can you reduce air pollution?	Project 1: In groups, learners are guided to make a simple air pollution detector using a clean white piece of cloth.	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
10	1	Air Pollution	 g) Make a functional air pollution detector. h) Make a functional dust mask using locally available materials. 	1. 2. 3.	What causes air pollution? What are the effects of air pollution? How can you reduce air pollution?	Project 2: Learners are guided to make a functional dust mask using locally available materials.	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
10	2	Water Pollution	By the end of the sub strand the learner should be able to:a) State the meaning of the term "water pollution".b) Identify water pollutants in his/her environment.	1. 2. 3.	What causes wate pollution? What are the effects of water pollution? How can water pollution be reduced?	a) In groups, learners are guided to discuss the meaning of the term "water pollution".b) Learners to be guided as they use visual aids and digital devices to explore the meaning of the term "water pollution".	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work

	3	Water Pollution	By the end of the sub strand the learner should be able to:a) State the meaning of the term "water pollution".b) Identify water pollutants in his/her environment.	1. 2. 3.	effects of water pollution? . How can water pollution be reduced? . What causes wate pollution? . What are the effects of water pollution?	a) In groups, learners are guided to discuss the meaning of the term "water pollution".b) Learners to be guided as they use visual aids and digital devices to explore the meaning of the term "water pollution".	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
	4	Water Pollution	 c) Distinguish between clean and polluted water in his/her environment. 	1. 2. 3.		 c) In groups, learners walk around the school and neighbourhood to observe, identify and record water pollutants (soil and waste). d) Learners to be guided as they use visual aids and digital devices to observe, identify and record water pollutants. 	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
	1	Water Pollution	 c) Distinguish between clean and polluted water in his/her environment. 	1. 2. 3.	What causes wate pollution? What are the effects of water pollution? How can water pollution be reduced?	 c) In groups, learners walk around the school and neighbourhood to observe, identify and record water pollutants (soil and waste). d) Learners to be guided as they use visual aids and digital devices to observe, identify and record water pollutants. 	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
11	2	Water Pollution	d) Identify effects of water pollution on living things.e) Appreciate the importance of clean water in his/her environment.	1. 2. 3.	What causes wate pollution? What are the effects of water pollution? How can water pollution be reduced?	 e) In groups, learners walk around the school and neighbourhood to observe and identify clean and polluted water (water in a pit, open pools, ponds, rivers, sewers and watering troughs). f) Learners to be guided as they use visual aids and digital devices to differentiate between clean and polluted water. 	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
	3	Water Pollution	 d) Identify effects of water pollution on living things. e) Appreciate the importance of clean water in his/her environment. 	1. 2. 3.	What causes wate pollution? What are the effects of water pollution? How can water pollution be reduced?	 e) In groups, learners walk around the school and neighbourhood to observe and identify clean and polluted water (water in a pit, open pools, ponds, rivers, sewers and watering troughs). f) Learners to be guided as they use visual aids and digital devices to differentiate between clean and polluted water. 	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work

	4	Water Pollution	f) Identify ways of reducing water pollution.	1. 2. 3.	What causes wate pollution? What are the effects of water pollution? How can water pollution be reduced?	 g) In groups, learners walk around the school and neighbourhood to observe, identify and record the effects of water pollution on living things (waterborne diseases, death of plants and animals that live in water). h) In groups, learners to use visual aids and digital devices to identify the effects of water pollution 	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
12	1	Water Pollution	 f) Identify ways of reducing water pollution. 	1. 2. 3.	What causes wate pollution? What are the effects of water pollution? How can water pollution be reduced?	 g) In groups, learners walk around the school and neighbourhood to observe, identify and record the effects of water pollution on living things (waterborne diseases, death of plants and animals that live in water). h) In groups, learners to use visual aids and digital devices to identify the effects of water pollution 	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
	2	Water Pollution		1. 2. 3.	What causes wate pollution? What are the effects of water pollution? How can water pollution be reduced?	 i) Learners are guided to identify and discuss ways of reducing water pollution (proper disposal of waste; proper disposal of dirty water). j) In groups, learners are guided to observe safety precautions when working in water polluted environment (Example: practise use of gumboots and gloves). 	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
	3	Water Pollution		1. 2. 3.	What causes wate pollution? What are the effects of water pollution? How can water pollution be reduced?	 i) Learners are guided to identify and discuss ways of reducing water pollution (proper disposal of waste; proper disposal of dirty water). j) In groups, learners are guided to observe safety precautions when working in water polluted environment (Example: practise use of gumboots and gloves). 	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work
	4	Water Pollution		1. 2. 3.	What causes wate pollution? What are the effects of water pollution? How can water pollution be reduced?	Project: In groups, learners are guided to make a functional water filter using locally available materials.	Gumboots, gloves, digital devices digital devices, internet, textbooks	Oral Questions, Assignme nts, project work

13- 14	End Term Assessment
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