

THE REVOLUTIONARY GOVERNMENT OF ZANZIBAR

MINISTRY OF EDUCATION AND VOCATIONAL TRAINING

SCIENCE

SYLLABUS FOR PRIMARY SCHOOLS

STANDARD V – VI

2009

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ZANZIBAR.

TABLE OF CONTENTS

	Page
INTRODUCTION	iv
Reasons for the Development of the New Primary Education Curriculum	iv
Importance of Science	v
Goals of Education in Zanzibar	
General Objectives of Primary Education in Zanzibar	vi
General Competences in Science	vii
General Objectives of Science	viii
Selection of Topics	
Structure of the Syllabus	X
STANDARD FIVE	1
COMPETENCES	1
OBJECTIVES	2
STANDARD SIX	
COMPETENCES	43
OBJECTIVES	44

INTRODUCTION

This is the syllabus for Science which is a new subject. In the 1998 curriculum Science topics were taught under Sayansi Subject which was taught in Kiswahili medium from Standard IV to VII. This introduction consists of explanations on the background to the improved curriculum (2009) and the importance of Science Subject in the curriculum. This is followed by lists of the Goals of Education in Zanzibar and the Objectives of Primary Education. Then there are lists of general subject competences and objectives followed by explanations on the selection of topics/content. Finally, there are explanations on the contents of the teaching/learning tables.

Reasons for the Development of the New Primary Education Curriculum

In 2008/09 the Revolutionary Government of Zanzibar undertook the revision, condensation and improvement of the curriculum for primary education. Its goal was to make the curriculum conform with the focus of Zanzibar Education Policy (2006). The policy seeks to improve the unsatisfactory structure, quality and relevance of primary education. Furthermore, it makes pre-primary education part of basic education. Similarly, it reduces the primary education cycle from seven (7) to six (6) years. Finally provides that English shall be use as a medium of instruction for some of the subject in Standard V and VI

Other reasons for the revision, condensation and improvement of the curriculum were as follows:

- Government response to global trends regarding social, scientific and technological changes /advancements.
- Government response to public pressure for expanding access and promoting the quality of education.
- Government response to the findings of the 2008 Needs Assessment Survey for Primary Curriculum Review.

The 2008 survey pointed out the following weakness in the 1998 curriculum:

- Failure of primary education curriculum to promote communication skills and creative thinking.
- Inadequate focus on the needs of the disadvantaged learners/pupils, cross-cutting issues, life-skills and globalization.
- The predominance of teacher-centred approaches (instead of learner-centred ones).
- The overuse of theoretical teaching/learning (instead of applying interactive or participatory techniques).
- Minimal assignments to pupils geared to English usage and the teaching/learning of English language.

In response to those challenges the government made a number of basic decisions. For example, it directed that more subjects be taught in English at upper primary level (Standard V - VI). The curriculum of Science subject was designed and developed as a result of that decision. It was also decided to provide competence based education in order to enable the pupils develop basic skills and attitudes needed by the society. More over, the government Thirdly, it was resolved that the primary education curriculum be linked carefully with both pre-primary and secondary curricula. This caution aimed at avoiding repetition or duplication of subject content across levels of the education system.

Importance of Science Subject

Science enables pupils to acquire useful knowledge, skills and attitudes through inquiry and investigation. In the process, their intellectual and practical abilities are developed. Thus, they are enabled to manage the changes brought by modern science and technology.

When Science is taught appropriately, pupils apply the acquired knowledge, skills and attitudes to for example, investigate and appreciate the relationship between body health and nutrition, machines and work, soil fertility and local productivity. Furthermore, science enables pupils to realize that problems can be solved. It enables them to search for information, try-out new ideas and become creative.

Goals of Education in Zanzibar

The goals of education are:

- 1. To promote and sustain cultural values, attitudes, customs of the peoples of Zanzibar/Tanzania to enhance unity and cultural identity.
- 2. To promote the acquisition and appropriate use of all forms of knowledge and skills for the full development of the human personality and quality life improvement of the society.
- 3. To enable every citizen to understand and respect the fundamentals of the National Constitution as well as the enshrined human and civic rights, obligations and responsibilities.
- 4. To promote and enable rational use, management and conservation of the environment.
- 5. To instill love and respect for work, self and wage employment, self work discipline and best performance.
- 6. To inculcate principles and practices of tolerance, peace, love, justice, understanding, Human Rights and fundamental freedoms, national unity and international cooperation as enshrined in the international basic charters.

General Objectives of Primary Education in Zanzibar

The General Objectives of Primary Education are as follows:

- 1. To enable all children of school going age develop and sustain strong foundations of skills in reading, writing, counting, creativity and communication in Kiswahili, English and other foreign languages.
- 2. To enable learners understand the application of science and technology and recognize its contribution to national and international development.

- 3. To lay, develop and sustain in learners strong foundations of thinking skills and inquisitiveness in order to understand their environment and social relationships.
- 4. To enable the learners understand how past events influence present events as well as future ones.
- 5. To discover learner's talents from their early age in order to sustain and develop them.
- 6. To lay strong foundations of skills of observation, thinking and co-operation in solving problems which hinder their personal development and the development of their society.
- 7. To prepare learners for joining secondary education.
- 8. To enable the learners develop mental abilities and interest in continuous search for knowledge.
- 9. To familiarize learners with productive vocational activities and promote their readiness for fulfillment of their social responsibilities.
- 10. To enable learners recognize and uphold national unity as well as the cooperation between their nation and other nations and people.
- 11. To enable the learners develop acceptable moral, cultural and ideological values in order to promote patriotism and enable them to understand their country's historical, political and social situation.
- 12. To develop and sustain learners' self discipline, observance of gender equality and maintenance of personal and other peoples' health.
- 13. To enable the learners develop habits of smartness, cleanliness and proper use of their leisure time.
- 14. To promote learners' love for their environment and interest in environmental conservation.

General Competences in Science

This curriculum is competence-based. Therefore, after studying Science up to Standard VI the pupils shall demonstrate the ability to:

- 1. Maintain body health and explain the human body system.
- 2. Identify and explain the characteristics of living and non-living things.

- 3. Identify the causes of hazards and protect themselves from those hazards.
- 4. Identify factors of environmental pollution and take steps to protect it.
- 5. Identify and apply principles, laws and knowledge of science to solve daily problems.
- 6. Make and apply simple machines for simplification of work and generation of energy.
- 7. Search knowledge and science skills from libraries and ICT facilities.

General Objectives of Science

Science subject is taught in primary schools in order to enable the pupils to:

- 1. Understand the requirements of body health and body systems.
- 2. Understand the characteristics of living and non-living things.
- 3. Develop habits of applying skills, knowledge, laws and concepts of science in solving daily life problems.
- 4. Develop habits of using library and ICT facilities to acquire scientific knowledge and skills.
- 5. Understand the applications of machines for personal and community development.

Selection of Topics

This syllabus is presented in a sequence of science topics, each with its corresponding sub-topics. Also included are topics on cross-cutting issues such as HIV and AIDS as well as the environment. These are arranged such that the knowledge and skills acquired in Standard V form the basis for learning other aspects of the same topics in Standard VI. Teachers are advised to teach related topics in the same order they appear in the syllabus. Below follow the main topics covered in the syllabus and their sequence:

NO	MAIN TOPICS	STANDARD V	STANDARD VI
1.	Body Health.		
2.	Food and Nutrition.		
3.	Body systems.	V	V
4.	Animals.	V	V
5.	Plants.	V	V
6.	Matter.	V	V
7.	Water.	V	V
8.	Air.	V	V
9.	Soil.	V	V
10.	Light.	√	V
11.	Sound.	V	-
12.	Heat.	V	V
13.	Electricity.		$\sqrt{}$
14.	Magnets.	V	V
15.	Machines.	$\sqrt{}$	$\sqrt{}$

Structure of the Syllabus

This syllabus consists of two main sections the preliminary matters and the teaching/learning tables. Below follows an explanation of each section:

Preliminary matters

This section is consists of the cover page, title page, issuing authority page and table of contents. Then, there is information on the background to the 2009 curriculum, Goals of Education in Zanzibar and the Objectives of Primary Education. Other matters include the general competences in Science subject, general objectives of Science subject and explanations on the components of the teaching/learning tables.

The Teaching/Learning Tables

This section of the syllabus is divided into two main parts representing Standard V and VI. The syllabus for each class is preceded by lists of class level competences and objectives. These are followed by a table composed of six sub-headings, namely: topics/sub-topics, specific objectives, teaching/learning techniques, materials/aids, assessment and periods. Below follow explanations of the components mentioned above:

Topics and sub-topics

The main topics reflect the subject content to be taught/learnt. Under each main topic follow its sub-topics. These determine the scope of coverage of the main topic.

Specific Objectives

These are statements about knowledge, skills and attitude that learners should achieve after being taught/learnint the given sub-topic. For each specific objective there is corresponding content in the form of a sub-topic. Specific objectives suggest the scope of the content to be taught/learnt at each level. They also guide the teacher in the development of lesson objectives as well as in the teaching/learning process. Specific objectives focus each individual pupils. Therefore, sign language and hearing aids shall be applied for pupils with hearing impairmen. Tactile materials, materials in Braille notation and the Braille machine shall be applied for pupils with visual impairment. The teaching/learning process for other categories of pupils with special needs shall follow current policies and procedures as well as appropriate techniques and materials/aids.

Teaching/Learning Techniques

This column consists of some recommendable teaching/learning techniques. Participatory or learner – centred techniques are proposed because they promote interaction and activity – based teaching and learning. Therefore, they enable the pupils to construct meaning from what they learn. Teachers are encouraged to read extensively materials on participatory or learner – centred techniques. This will enable them to select the most suitable techniques to apply when teaching.

Materials/aids

These are suggestions of teaching materials/aids for given topics/sub-topics. Textbooks and teacher's guides are among the essential textual materials. The teacher is encouraged to apply other suitable resources at his/her disposal. Moreover, it is advisable for teachers to improvise or make materials/aids for effective teaching/learning of the given topic/subtopic.

Assessment

In this column are given suggestions about assessment of pupils' achievement of teaching/learning objectives. Assessment should be done on all instructional objectives. Varieties of ways of assessment should be applied and given daily, weekly, monthly, at the end of the term and at the end of the academic year.

Periods

This column shows the estimated number of periods for teaching a given topic. They are calculated on the basis of the number of days in the academic year (224) divided by the number of days per week and multiplied by the number of periods per week. The total number of periods is further divided by the number of sub-topics in the syllabus to get the average number of periods per sub-topic. Eight (8) periods have been reserved for examinations. However, the teacher may slightly adjust the estimated number of periods for a given topic or sub-topic depending on the needs of his/her class.

Science has been allocated four (4) periods per week. From Monday to Thursday, during the morning sessions, the duration of each period shall be 40 minutes. It shall be 35 minutes in the afternoon sessions. On Fridays the duration of each period shall be 35 minutes only. The allocated time should be utilized fully. Lost instructional time should be compensated through the school's local arrangements.

PRINCIPAL SECRETARY
MINISTRY OF EDUCATION AND VOCATIONAL TRAINING
ZANZIBAR

STANDARD FIVE

COMPETENCES

By the end of Standard V the pupils shall demonstrate the ability to:-

- 1. Explain the causes of STIs, HIV/ AIDS and protect themselves against those infections.
- 2. Investigate three states of water and apply them in daily life.
- 3. Identify the characteristics of animals and plants and explain their interdependence.
- 4. Identify and explain the hazards of water and electricity and take precautions against them.
- 5. Identify the causes of air and water pollution and take measures to control them.
- 6. Identify and explain the nutritional needs of different groups of people.
- 7. Show the properties of forms of energy and apply them in daily life.
- 8. Identify and explain the functions of human body systems.
- 9. Identify, construct and use simple machines to simplify work.
- 10. Use library and ICT facilities in order to acquire scientific knowledge and skills.

OBJECTIVES

The objectives of teaching Science subject in Standard V are to enable the pupils to:-

- 1. Describe the causes of STIs, HIV and AIDS and protect themselves against those infections.
- 2. Describe the nutritional needs of different groups of people and serve them appropriately.
- 3. Acquire knowledge of the three states of water, their characteristics and their applications.
- 4. Show an understanding of the impact and protection against hazards caused by water and electricity.
- 5. Show knowledge on the characteristics of animals and plants and their interdependence.
- 6. Describe the functions of human body systems and maintain them properly.
- 7. Describe the properties of forms of energy and their applications in daily life.
- 8. Use library and ICT facilities to get scientific knowledge and skills.
- 9. Describe the applications of simple machines for personal and community development.

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
1. BODY HEALTH	The pupil should be able	By using brainstorming technique,	1. Chart of sexually	Can the pupil	6
a) Sexually Transmitted	to:	the teacher to guide the pupils to	transmitted infections.	mention different	
Infections (ST Is)	(i) Mention different	name different sexually transmitted	2. Chart of sexually	sexually transmitted	
	sexually transmitted	infections.	transmitted infections	infections?	
	infections.		in Braille notation.		
	(ii) Identify causes mode	1. By using the group discussion	1. Chart showing causes	Can the pupil	
	of transmission and	technique, the teacher to guide	and symptoms of STIs.	1. Identify causes	
	symptoms of STIs.	the pupils to identify different	2. Tactile chart showing	of STIs?	
		causes of STIs.	causes mode of	2. Identify the	
		2. By using the group discussion	transmission and	mode of	
		technique, the teacher to guide	symptoms of STIs.	transmission	
		the pupils to discuss the mode	3. Video cassettes on	symptoms of STIs?	
		and symptoms of each of the	STIs of transmission		
		named STIs.			

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(iii) Explain methods of	1. The teacher to guide pupils	1. Pamphletes and	Can the pupil	
	prevention of STIs.	to read on pamphletes and	brochures.	explain the	
		brochures on methods of	2. Pamphletes and	methods of	
		prevention of STIs.	brochure in Braille	prevention of	
		2. By using the group	notation.	STIs?	
		discussion technique the			
		teacher to guide the pupils			
		to discuss methods of			
		prevention of STIs.			
b) HIV and AIDS.	The pupil should be able	1.The teacher to guide pupils to	1. Pamphletes and	Can the pupil:	4
	to:	read on pamphletes and	brochures on HIV	1. Explain the	
	(i) Explain cause, mode	brochures on causes, mode of	and AIDS.	causes of HIV	
	of transmission and	transmission and symptoms of	2. Pamphletes and	and AIDS?	
	symptoms of HIV and	AIDS.	brochures on HIV	2. Explain mode	
	AIDS.	2. By using the group discussion	and AIDS in Braille	of transmission	
		technique, the teacher to guide	notation.	of HIV?	
		the pupils to discuss causes	3. Video cassettes on	3. Explain the	
		mode of transmission and	HIV/AIDS	symptoms of	
		symptoms of AIDS.		HIV and AIDS?	

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
	(ii) Mention methods of	By using the group discussion	1. Brochures.	Can the pupil	
	prevention.	technique, the teacher to guide the	2. Brochures in Braille	mention methods	
		pupils to discuss the methods of	notation.	of prevention of	
		prevention of HIV infections.		HIV and AIDS?	
c) Care for People	The pupil should be able to:	By using the guest speaker	1. Pamphlets and brochures	Can the pupil	4
Living with	(i) Explain how to care for the	technique, the teacher to guide the	on caring for PLWA.	explain how to	
HIV and	people living with HIV/AIDS.	pupils to explain how to care for	2. Video cassettes and	care for people	
AIDS.		the people living with HIV and	CD/DVD concerning	living with HIV	
		AIDS.	people living with	and AIDS?	
			HIV/AIDS. 3. Pamphlets and brochures on caring for PLWA in Braille notation.		
	(ii) Explain the precautions to be	By using guest speaker technique,	1. Charts showing	Can the pupil	
	taken when caring for people	the teacher to guide pupils to	precautions to be taken	explain the	
	living with HIV and AIDS.	explain the precautions to be	when caring for people	precautions to be	
		taken when caring for people	living with HIV and	taken for caring	
		living with HIV and AIDS.	AIDS.	people living with	
			2. Tactile charts showing precautions to be taken when caring for people living with HIV and AIDS.	HIV and AIDS?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
2. FOOD AND	The pupil should be	By using the brain storming technique,	1. Chart of types of food	Can the pupil	4
NUTRITION	able to identify	the teacher to guide the pupils to	needed by children	identify nutritional	
a) Nutrition for	nutritional needs for	identify the nutritional needs for	(protein, carbohydrate,	needs for children?	
Children.	the children.	children.	vitamin, and fats).		
			2. Tactile charts on types		
			of foods needed by		
			children.		
b) Nutrition for the	The pupil should be	By using the group discussion	1. Chart of foods	Can the pupil	4
Elderly and the	able to:	technique, the teacher to guide the	containing vitamins,	identify nutritional	
Sick.	(i) Identify	pupils to identify the nutritional needs	protein and	needs for elderly?	
	nutritional needs	for elderly.	carbohydrates.		
	for elderly.		2. Tactile charts of foods containing vitamins, protein and carbohydrates.		
	(ii) Identify	1. By using the group discussion	1. Books concerning	Can the pupil	
	nutritional needs	technique, the teacher to guide the	nutritional needs for	identify nutritional	
	for the sick.	pupils to identify the nutritional needs	the sick.	needs for the sick?	
		for the sick.	2. Books concerning		
		2. The teacher to guide the pupils to	nutritional needs for		
		conduct library study in order to	the sick in Braille		
		identify the nutritional needs for the	notation.		
		sick.			

TOPICS/	SPECIFIC	TEACHING/LEARNING TECHNIQUES	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES				
3. BODY	The pupil should be	By using the short lecture technique, the teacher	1. Chart and model of the	Can the pupil	6
SYSTEMS	able to:	to guide the pupils to identify different parts of	digestive system.	identify different	
a) Digestive	(i) Identify different	the digestive system.	2. Tactile chart of the	parts of the	
System.	parts of digestive		digestive system.	digestive system?	
	system.				
	(ii) Draw and label	By using the drawing technique, the teacher to	1. Chart and model of the	Can the pupil	
	the digestive	guide the pupils to draw and label the human	digestive system.	draw and label	
	system.	digestive system.	2. Tactile chart of the	the digestive	
			digestive system.	system?	
	(iii) State the	1. The teacher to guide pupils to conduct library	1. Chart and model of the	Can the pupil	
	functions of	study to collect facts about the functions of	digestive system.	state the functions	
	various parts of	various parts of the digestive system.	2. Tactile chart of the	of various parts of	
	the digestive	2. By using the group discussion technique, the	digestive system.	the digestive	
	system.	teacher to guide the pupils to state the	3. Books concerning	system?	
		functions of various parts of the digestive	digestive system.		
		system.	4. Books concerning		
			digestive system in		
			Braille notation.		
			5. Dissected rat to show the		
			digestive system of a		
			mammal.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
b) Respiratory	The pupil should be able	By using the short lecture	1. Chart showing different	Can the pupil	6
System.	to:	technique, the teacher to guide	parts of the respiratory	identify different	
	(i) Identify different parts	the pupils to identify different	system.	parts of respiratory	
	of the respiratory	parts of respiratory system.	2. Tactile chart showing	system?	
	system.		different parts of the		
			respiratory system.		
	(ii) Draw and label the	By using the drawing technique,	1. Chart showing different	Can the pupil draw	
	respiratory system.	the teacher to guide the pupils to	parts of the respiratory	and label the	
		draw and label respiratory	system.	respiratory system?	
		system.	2. Tactile chart showing		
			different parts of the		
			respiratory system.		
	(iii) State the functions of	1. The teacher to guide pupils to	1. Chart showing different	Can the pupil state	
	various parts of the	conduct library study to collect	parts of the respiratory system.	the functions of	
	respiratory system.	facts about the functions of	2. Tactile chart showing	various parts of	
		various parts of the respiratory	different parts of the	respiratory system?	
		system.	respiratory system.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
		2. By using the group discussion	3. Books concerning respiratory		
		technique, the teacher to guide the	system.		
		pupils to state the functions of	4. Books concerning respiratory		
		various parts of the respiratory	system in Braille notation.		
		system.			
c) Skeletal	The pupil should be	By using the short lecture	1. A labelled chart of the skeletal	Can the pupil	4
System.	able to:	technique, the teacher to guide the	system.	identify different	
	(i) Identify different	pupils to identify different parts of	2. Model of human skeleton.	parts of skeletal	
	parts of the	the skeletal system.	3. A labelled tactile chart of the	system?	
	skeletal system.		skeletal system.		
	(ii) Draw and label	By using the drawing technique,	A labelled chart of skeletal	Can the pupil draw	-
	the skeletal	the teacher to guide the pupils to	system.	and label the	
	system.	draw and label skeletal system.	2. Model of human skeleton.	skeletal system?	
			3. A labelled tactile chart of		
			skeletal system.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(iii) State the functions of	The teacher to guide the	1. A labelled chart of	Can the pupil	
	skeletal system.	pupils to conduct library	skeletal system.	state the	
		study in order to find	2. Model of human	functions of	
		information on the	skeleton.	skeletal system?	
		functions of various parts	3. A labelled tactile chart of		
		of skeletal system.	human skeletal system.		
			4. Books concerning		
			skeletal system.		
			5. Books concering skeletal		
			system in Braille notation.		
d) Blood	The pupil should be able	By using the short lecture	1. A labelled chart of blood	Can the pupil	6
Circulatory	to:	technique, the teacher to	components.	explain the	
System.	(i) Explain the components	guide the pupils to explain	2. A labelled tactile chart	components of	
	of blood.	the components of blood.	of blood components.	blood?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(ii) State the functions of	By using the brainstorming	1. A labelled chart of blood	Can the pupil state	
	blood.	technique, the teacher to	components.	the functions of	
		guide the pupils to state the	2. A labelled tactile chart of	blood?	
		functions of blood.	blood components.		
	(iii) Explain the blood	The teacher to guide the	1. A labelled chart of the	Can the pupil explain	-
	circulatory system.	pupils to read text books to	blood circulatory system.	the blood circulatory	
		explain the blood circulatory	2. A labelled tactile chart of	system?	
		system.	the blood circulatory system.		
			3. Textbook.		
			4. Textbook in Braille		
			notation.		
	(iv) Draw and label blood	By using the drawing	1. Blood circulatory system	Can the pupil draw	=
	circulatory system.	technique, the teacher to	chart.	and label blood	
		guide the pupils to draw and	2. Tactile chart of the blood	circulatory system?	
		label blood circulatory	circulatory system.		
		system.			

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
4. ANIMALS	The pupil should be able to:	1. By using the reading	1. Pictures and drawings of	Can the pupil	4
a) Herbivorous	(i) Explain the meaning of	technique, the teacher to guide	some herbivorous animals.	explain the	
Animals	herbivorous animals.	the pupils to read textbooks to	2. Tactile pictures and drawings	meaning of	
		explain the meaning of	of some herbivorous animals.	herbivorous	
		herbivorous animals.	3. Textbook.	animals?	
		2. By using out-door activities,	4. Textbook in Braille notation.		
		the teacher to guide the pupils to	5. Actual herbivorous animals		
		observe herbivorous animals in			
		the field.			
	(ii) Mention some	By using the brain storming	. 1. Pictures and drawings of	Can the pupil	
	herbivorous animals	technique, the teacher to guide	some herbivorous animals.	mention some	
		the pupils to mention some of the	2. Tactile pictures and drawings	herbivorous	
		herbivorous animals.	of some herbivorous animals.	animals?	
			3. Actual herbivorous animals		
	.(iii) Draw the pictures of	By using the drawing technique,	.1. Pictures/drawings of some	Can the pupil	
	herbivorous animals	the teacher to guide the pupils to	herbivorous animals (e.g. cow,	draw pictures of	
		draw some of the herbivorous	goat, donkey.)	herbivorous	
		animals.	2. Tactile pictures/drawings of	animals?	
			some herbivorous animals		

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
b) Carnivorous	. The pupil should be able to:	By using the short lecture	. 1. Pictures and drawings of some	Can the pupil	4
Animals	(i) Explain the meaning of	technique, the teacher to guide	carnivorous animals.	explain the	
	carnivorous animals	the pupils to explain the meaning	2. Tactile pictures and drawings of	meaning of	
		of carnivorous animals.	some carnivorous animals.	carnivorous	
				animals?	
	. (ii) Mention some	By using the brainstorming	1. Pictures and drawings of	Can the pupil	
	carnivorous animals.	technique, the teacher to guide	some carnivorous animals.	mention some carnivorous	
		the pupils to mention some of the	2. Tactile pictures and drawing of some carnivorous animals.	animals?	
		carnivorous animals.	3. Actual carnivorous animals.		
	(iii) Draw the pictures of	By using the drawing technique,	1. Picture and drawings of some	Can the pupil	
	carnivorous animals	the teacher to guide the pupils to	carnivorous animals.	draw pictures of	
		draw some of the carnivorous	2. Tactile pictures and drawings	carnivorous	
		animals.	of some carnivorous animals.	animals?	
c) Omnivorous	. The pupil should be able to:	By using the short lecture	Pictures and drawings of	Can the pupil	4
Animals.	(i) Explain the meaning of	technique, the teacher to guide	some omnivorous animals.	explain the	
	omnivorous animals.	the pupils to explain the meaning	2. Tactile pictures and drawings	meaning of	
		of omnivorous animals.	of some omnivorous animals.	omnivorous	
				animals?	

TOPICS/ SUB-	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
TOPICS		TECHNIQUES			
	(ii) Mention some	By using the group discussion	1. Pictures and drawing of some	Can the pupil	
	omnivorous animals	technique, the teacher to guide	omnivorous animals.	mention some	
		the pupils to mention some of the	2. Tactile pictures and drawings	omnivorous	
		omnivorous animals	of some omnivorous animals.	animals?	
			3. Actual omnivorous animals		
			4. Video cassettes of animals		
	.(iii) Draw the pictures of	. By using the drawing technique,	1. Pictures and drawings of	Can the pupil	
	omnivorous animals.	the teacher to guide the pupils to	some omnivorous animals.	draw pictures of	
		draw the omnivorous animals.	2. Tactile pictures and drawings	omnivorous	
			of some omnivorous animals.	animals?	

TOPICS/ SUB-	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
TOPICS	OBJECTIVES	TECHNIQUES			
d) Care for the	The pupil should be	1. By using the brain storming	1. Charts on basic needs for	Can the pupils	4
animal	able to identify the	technique the teacher to	animals welfare.	identify the animal's	
	basic animal needs for	guide the pupils to mention	2. Charts in Braille notation.	basic needs?	
	their survival and	the basic animal need.	3. Pampheletes on animal's		
	welfare.	2. By using field visit	needs.		
		technique, pupils to visit a	4. Video cassettes/CDs/DVD		
		veterinary centre to observe	on animal's needs.		
		medical care given to			
		animals.			
5. PLANTS	The pupils should be	By using the observation	1. Actual flowers(varieties)	Can the pupil identify	4
a) Flower Structure.	able to:	technique, the teacher to guide	2. Drawings showing parts of	different parts of a	
	(i) Identify different	the pupils to identify different	flowers.	flower?	
	parts of a flower.	parts of a flower.	3. Tactile drawings showing		
			parts of flowers.		

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
	(ii) Explain the functions of each part of the flower.	 The teacher to guide pupils to read textbooks in orders get information on the function of each part of a flower. By using the group discussion technique, the teacher to guide the pupils to explain the functions of each part of the flower. 	 Actual Flower. Drawings showing parts of a flower. Tactile drawings showing parts of a flower. Textbook. Textbook in Braille notation. 	Can the pupil explain the functions of each part of the flower?	
	(iii) Draw and label parts of the flower.	By using the drawing technique, the teacher to guide the pupils to draw and label the parts of a flower.	 Drawings showing parts of the flower. Tactile drawings showings parts of the flower. 	Can the pupil draw and label the parts of the flower?	
b) Pollination.	The pupil should be able to: (i) Explain the meaning of pollination.	By using short lecture technique, the teacher to guide the pupils to explain the meaning of pollination.	 Chart showing the process of pollination. Tactile chart showing the process of pollination. 	Can the pupil explain the meaning of pollination?	6

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
	(ii) Identify the types of pollination.	 By using the library reading technique, the teacher to guide pupils to conduct library reading on types if pollination. By using the brainstorming technique, the teacher to guide the pupils to identify types of pollination. 	 Charts of different types of pollination. Tactile charts of different types of pollination. Textbook. Textbook in Braille notation. 	Can the pupil identify the types of pollination?	
	(iii) Explain the agents of pollination.	1.By using the group discussion technique, the teacher to guide the pupils to discuss the agents of pollination.2.By using an outdoor activity, the teacher to guide the pupils to shake different flowers so as to observe how is pollination taking place.	 Charts showing some agents of pollination. Tactile charts showing some agents of pollination. Variety of flowers on field. 	Can the pupil explain the agents of pollination?	
	(iv) Explain the importance of pollination.	The teacher to guide the pupils read text book in order to explain the importance of pollination.	 Charts showing the process of pollination. Tactile charts showing the process of pollination. Textbook. Textbook in Braille notation. 	Can the pupil explain the importance of pollination?	

TOPICS/ SUB-	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
TOPICS		TECHNIQUES			
c) Fertilization.	The pupil should be able to:-	By using the short lecture technique,	1. Textbook.	Can the pupil	4
	(i) Explain the meaning of	the teacher to guide the pupils to	2. Textbook in Braille	explain the	
	fertilization.	explain the meaning of fertilization.	notation.	meaning of	
				fertilization?	
	(ii) Explain the process of	1. The teacher to guide pupils to	1. Charts and diagrams	Can the pupil	
	fertilization.	conduct library study in order to	showing the process of	explain the	
		find facts about the process of	fertilization.	process of	
		fertilization.	2. Tactile charts and diagrams	fertilization?	
		2. By using the group discussion	showing the process of		
		technique, the teacher to guide the	fertilization.		
		pupils to explain the process of	3. Textbook.		
		fertilization.	4. Textbook in Braille notation.		
	(iii) Explain the importance	By using the group discussion	1. Charts and diagrams	Can the pupil	
	of fertilization.	technique, the teacher to guide the	showing the importance of fertilization.	explain the	
		pupils to explain the importance of	2. Tactile charts and diagrams	importance of	
		fertilization.	showing the importance of fertilization.	fertilization?	
d) Interdependence	The pupil should be able to	By using the group discussion	1. Charts showing	Can the pupil	3
of Animals and	explain the interdependence	technique, the teacher to guide the	interdependence of animals	explain the	
Plants.	of animals and plants.	pupils to explain the interdependence	and plants.	interdependence	
		of animals and plants.	2. Tactile charts showing	of animals and	
			interdependence of animals	plants?	
			and plants.		

TOPICS/ SUB-	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
TOPICS		TECHNIQUES			
6. MATTER	The pupil should be able to:-	By using the short lecture technique,	1. Water/Boiling water.	Can the pupil	3
a) States of	(i) Explain the meaning of	the teacher to guide the pupils to	2. Stone.	explain the	
Matter.	matter.	explain the meaning of matter.	3. Stick.	meaning of	
			4. Oil.	matter?	
			5. Dish.		
	(ii) Identify the states of	1. The teacher to guide pupils to	1. Water/Boiling water.	Can the pupil	
	matter.	read text books in order to find	2. Stones.	identify the states	
		facts about states of matter.	3. Oil.	of matter?	
		2. By using the brainstorming	4. Textbook.		
		technique, the teacher to guide the	5. Textbook in Braille		
		pupils to identify the states of	notation.		
		matter.			
b) Characteristics	The pupil should be able to	By using the group discussion	1. Water/Boiling water.	Can the pupil	3
of Matter.	explain the characteristics of	technique, the teacher to guide the	2. Stone.	explain the	
	matter.	pupils to explain the characteristics of	3. Kerosine.	characteristics of	
		matter.		matter?	

SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
OBJECTIVES	TECHNIQUES			
The pupil should be	By using the brainstorming	1. Water.	Can the pupil	3
able to:-	technique, the teacher to guide the	2. Ice.	identify the states	
(i) Identify the states	pupils to identify the states of	3. Boiling water.	of water?	
of water.	water.			
(ii) Explain the uses	By using the group discussion	1. Chart showing uses of states	Can the pupil	
of states of water.	technique, the teacher to guide the	of water.	explain the uses	
	pupils to explain the uses of states	2. Tactile chart showing uses	of states of water?	
	of water.	of state of water.		
		3. Water.		
		4. Ice.		
		5. Boiling water.		
The pupils should be	The teacher to guide the pupils to	1. Refrigerator.	Can the pupil:	4
able to explain the	conduct library study in order to	2. Water.	1. Explain the	
freezing and boiling	find information about freezing and	3. Thermometer.	freezing point	
points of water.	boiling points.	4. Dishes.	of water?	
		5. Kerosine stove.	2. Explain the	
			boiling point	
			of water?	
	OBJECTIVES The pupil should be able to:- (i) Identify the states of water. (ii) Explain the uses of states of water. The pupils should be able to explain the freezing and boiling	The pupil should be able to:- (i) Identify the states of water. (ii) Explain the uses of states of states of water. By using the brainstorming technique, the teacher to guide the pupils to identify the states of water. By using the group discussion technique, the teacher to guide the pupils to explain the uses of water. The pupils should be able to explain the conduct library study in order to find information about freezing and	TECHNIQUES The pupil should be able to:- (i) Identify the states of water. (ii) Explain the uses of states of states of water. (iii) Explain the uses of states of water. (iv) Pupils to explain the uses of states of water. (iv) Explain	The pupil should be able to:- (i) Identify the states of water. (ii) Explain the uses of states of water. By using the group discussion technique, the teacher to guide the pupils to explain the uses of water. By using the group discussion technique, the teacher to guide the pupils to explain the uses of states of water. 1. Chart showing uses of states of water. 2. Tactile chart showing uses of states of state of state of water. 3. Water. 4. Ice. 5. Boiling water. The pupils should be able to explain the freezing and boiling points of water. The pupils should be freezing and boiling points. The pupils should be able to explain the freezing should be find information about freezing and boiling points. The pupils should be able to explain the freezing should be find information about freezing and boiling points. The pupils should be able to explain the freezing should be able to explain the freezing should be should be able to explain the freezing should be should be able to explain the freezing should be should be able to explain the freezing should be should be able to explain the freezing should be should be able to explain the should be should be able to explain the should be should be should be able to explain the should be should b

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
c) Types of Water.	The pupil should be able to:- (i) Identify the types of water. (ii) Differentiate the types of water.	By using the brainstorming technique, the teacher to guide the pupils to identify the types of water. By using the experimentation technique, the teacher to guide the pupils to differentiate the types of water.	 Sea water. Spring water. Rain water. Tape water. Soap. Sea water. Spring water. Rain water. Tape water. Soap. 	Can the pupil identify the types of water? Can the pupil differentiate the types of water?	4
d) Water Pollution.	The pupil should be able to:- (i) Explain the meaning of water pollution.	By using the short lecture technique, the teacher to guide the pupils to explain the meaning of water pollution.	1. Charts/Pictures showing water pollution. 2. Tactile charts/pictures showing water pollution.	Can the pupil explain the meaning of water pollution?	3

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(ii) Explain the causes	1. By using internet, the teacher to	1. Charts /Pictures showing	Can the pupil:	
	and effects of water	guide pupils to acquire information	water pollution.	1. Explain the	
	pollution.	about causes and effects of water	2. Tactile charts/pictures	causes of water	
		pollution.	showing water pollution.	pollution?	
		2. By using the group discussion	3. Computer with internet.	2. Explain the	
		technique, the teacher to guide the	4. Computer with internet and	effects of water	
		pupils to explain the causes and	narrator.	pollution?	
		effects of water pollution.			
e) Water Borne Diseases.	The pupil should be able to:- (i) Identify the water borne diseases. (ii)Explain the causes and mode of transmission of waterborne diseases.	By using the short lecture technique, the teacher to guide the pupils to identify the water borne diseases. 1. Pupils to watch a video cassettes on water contamination by people due to poor sanitary /sewerage systems. 2. By using the group discussion technique, the teacher to guide the pupils to explain causes and mode of transmission of the named waterborne diseases.	Chart showing water born diseases. Tactile chart showing water born diseases. Video cassettes.	Can the pupil identify the water borne diseases? Can the pupil explain the cause and mode of transmission of the named water- borne diseases?	4
	(iii) Explain the symptoms of the named waterborne diseases.	The teacher to guide pupils to read textbooks in order to find information on symptoms of the named water borne diseases.	Textbooks. Textbooks in Braille- notation.	Can the pupil explain the symptoms of the named water borne diseases?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
		2. By using the group discussion			
		technique, the teacher to guide the			
		pupils to explain the symptoms of			
		the water borne diseases.			
	(iv) Explain the	By using the group discussion	1. Textbooks.	Can the pupil	-
	prevention of the	technique, the teacher to guide the	2. Textbooks in Braille	explain the	
	named waterborne	pupils to explain the prevention of	notation.	prevention of the	
	diseases.	the named water borne diseases.	3. video cassette on good	named water borne	
			sanitary habits.	diseases?	
f) Hazards of	The pupil should be	By using the short lecture	1. Picture showing hazards of	Can the pupil	3
Water and	able to:	technique, the teacher to guide the	water.	identify different	
Related	(i) Identify different	pupils to identify different types of	2. Tactile picture showing	hazards of water?	
Precautions.	hazards of water.	hazards of water.	hazards of water.		
	(ii) Describe safety	By using the small group	Pictures showing safety	Can the pupil	_
	measures of water	discussion technique, the teacher	measures of water hazards.	describe safety	
	hazards.	to guide the pupils to describe	2. Tactile pictures showing	measures of water	
		safety measures of water hazards.	safety measures of water	hazards?	
			hazards.		

TOPICS/ SUB-	SPECIFIC	TEACHING/LEARNING TECHNIQUES	MATERIALS/AIDS	ASSESSMENT	PERIODS
TOPICS	OBJECTIVES	TECHNIQUES			
	(iii) Explain the	1. By using the library research	1. Pictures showing precautions to be	Can the pupil explain the	
	related	technique, the teacher to guide pupils	taken on water hazards.	related precautions of	
	precautions on	find information about the	2. Tactile pictures showing	water hazards?	
	water hazards.	precautions to take in order prevent	precautions to be taken on water		
		water hazards.	hazards.		
		2. By using the group discussion	3. Books concerning precautions on		
		technique, the teacher to guide the	water hazards.		
		pupils to explain the precautions to	4. Books concerning precaution on		
		be taken in order to prevent water	water hazard in Braille notation.		
		hazards.	5. Video cassettes.		
8. AIR	The pupil should be	1. By using the library study	1. Chart showing composition of air.	Can the pupil identify the	3
a) Composition	able to:	technique, the teacher to guide	2. Tactile chart showing composition	composition of air?	
of Air.	(i) Identify the	pupils to find information on	of air.		
	composition of	composition of air.			
	air.	2. By using the brainstorming			
		technique, the teacher to guide the			
		pupils to identify the composition			
		of air.			
	(ii) Explain the uses	By using the group discussion	1. Pictures of uses of air.	Can the pupils explain the	
	of air.	technique, the teacher to guide the	2. Textbook	uses of air.	
		pupils to explain the uses of air.	3. Textbook in Braille.		

TOPICS/ SUB- TOPICS	SPECIFIC OBJECTIVES	TEACHING/LEARNING TECHNIQUES	MATERIALS/AIDS	ASSESSMENT	PERIODS
b) Combustion.	The pupil should be	By using the short lecture technique,	Various substances such as:	Can the pupil explain the	4
	able to:	the teacher to guide the pupils to	1. Piece of paper.	concept of combustion?	
	(i) Explain the	explain the concept of combustion.	2. Dry piece of wood.		
	concept of combustion.		3. Match box.		
	(ii) Burn various	By using the demonstration	Various substances such as:	Can the pupil burn	-
	substances in air.	technique, the teacher to guide the	1. Candle.	various substances in air?	
		pupils to burn different substances in	2. Pieces of paper.		
		air.	3. Phosphorus metal.		
c) Pollution of	The pupil should be	The teacher to guide the pupils to	1. Pictures showing pollution of air.	Can the pupil explain the	3
Air.	able to:	read text books in order to find	2. Tactile pictures showing pollution	meaning of air pollution?	
	(i) Explain the	explanations of air pollution.	of air.		
	meaning of air		3. Textbook.		
	pollution.		4. Textbook in Braille notation.		
	(ii) Explain the	By using the group discussion	1. Charts/picture showing the causes	Can the pupil explain the	-
	causes of air	technique, the teacher to guide the	of air pollution.	causes of air pollution?	
	pollution.	pupils to discuss the causes of air	2. Tactile charts/pictures showing		
		pollution.	causes of air pollution.		
	iii) Explain the	The teacher to guide the pupils to	1. Written text on the effects of air	Can the pupils explain the	-
	effects of air	read texts on the effects of air	pollution.	causes of air pollution?	
	pollution.	pollution.	2. Written text in Braille notation.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
9. SOIL	The pupils should be	By using the outdoor activity the	1. Soil in the garden/farm.	Can the pupil	4
a) Soil	able to:-	teacher the to guide the pupils to	2. Actual soil organism	identify the	
Organisms.	(i) Identify the	dig in the school farm/garden		different soil	
	different soil	and identify different soil		organisms?	
	organisms.	organisms.			
	(ii) Explain the	1. By using the library study	1. Chart showing various soil	Can the pupil	_
	importance of soil	technique, the teacher to guide	organisms.	explain the	
	organisms.	pupils to find facts on the	2. Tactile chart showing	importance of soil	
		importance of soil organisms.	various of soil organisms.	organisms?	
		2.By using the group discussion			
		technique, the teacher to guide			
		the pupils to explain the			
		importance of soil organisms.			

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
b) Soil Fertility.	The pupil should be	By using the short lecture	1. Textbook.	Can the pupil	4
	able to:	technique, the teacher, to guide	2. Textbook in Braille.	explain the concept	
	(i) Explain the concept	the pupils to explain the concept		of soil fertility?	
	of soil fertility.	of soil fertility.			
	(ii) State the	By using the brainstorming	1. Chart showing components	Can the pupil state	
	components of soil	technique, the teacher to guide	of soil fertility.	the components of	
	fertility.	the pupils to state the	2. Tactile chart showing	soil fertility?	
		components of soil fertility.	components of soil fertility.		
	(iii) Explain the	By using the group discussion	1. Chart showing the	Can the pupil	
	importance of soil	technique, the teacher to guide	importance of soil fertility.	explain the	
	fertility.	the pupils to explain the	2. Tactile chart showing the	importance of soil	
		importance of soil fertility.	importance of soil fertility.	fertility?	
c) Fertilizers and	The pupil should be	By using the short lecture	1. Fertilizer.	Can the pupil	6
Manures.	able to:	technique, the teacher to guide	2. Chart/Picture showing	explain the	
	(i) Explain the	the pupils to explain the meaning	fertilizer.	meaning of	
	meaning of	of fertilizer.	3. Tactile chart showing	fertilizer?	
	fertilizer.		fertilizer.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	M	ATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES				
	(ii) Identify different	By using the brainstorming technique,	1.	Various types of	Can the pupil identify	
	types of fertilizers.	the teacher to guide the pupils to identify		fertilizers.	different types of	
		different types of fertilizers.	2.	Chart of different types of	fertilizers?	
				fertilizers.		
			3.	Tactile chart of different		
				types of fertilizers.		
	(iii) Explain the	1. By using internet, the teacher to guide	1.	Chart of different types of	Can the pupil explain	
	importance of	pupils to acquire materials from the		fertilizers.	the importance of	
	fertilizers.	internet on importance of fertilizers.	2.	Tactile chart of different	fertilizers?	
		2. By using the group discussion technique,		types if fertilizers.		
		the teacher to guide the pupils to explain	3.	1		
		the importance of fertilizers.	4.	Computer with internet and		
				narrator.		
	(iv) Explain the	By using the short lecture technique, the	1.	Manure.	Can the pupil explain	
	meaning of	teacher to guide the pupils to explain the	2.	Chart/Picture showing	the meaning of	
	manure.	meaning of manure.		manure.	manure?	
			3.	Tactile chart/picture		
				showing manure.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(v) Identify	By using the brainstorming	1. Chart of different types of	Can the pupil identify	
	different types	technique, the teacher to guide the	manure.	different types of	
	of manures.	pupils to identify different types of	2. Tactile chart of different	manures?	
		manures.	types of manure.		
	(vi)Prepare	By using a project technique, the	House hold organic refuse.	Can the pupil prepare	
	compost	teacher to guide students to		compost manure?	
	manure.	prepare compost manures using			
		house hold organic refuse,			
	(vii) Explain the	By using the group discussion	Chart of different types of	Can the pupil explain the	
	importance of	technique, the teacher to guide the	manure.	importance of manure?	
	manure.	pupils to explain the importance of	2. Tactile chart of different		
		manure.	types of manure.		
	(viii) Use fertilizers	By using the practical technique,	1. School garden.	Can the pupil use	
	and manures.	the teacher to guide the pupils to	2. Fertilizers.	fertilizers and manures?	
		use fertilizers and manure in the	3. Manures.		
		school garden.			
10 LIGHT	The pupil should	1. By using the short lecture	1. Source of light.	Can the pupil explain the	4
a) Properties of Light.	be able to explain	technique, the teacher to guide the pupils to explain the	2. Four cards with a small hole at the centre.	properties of light?	
	the properties of	properties of light.	3. Mirror.		
	light.	2. By using the experiment	4. Optical pins.5. Glass.		
		technique, the teacher to guide the pupils to explain the	6. Pencil.		
		properties of light.	7. Water.		

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
b) Formation of	The pupil should be able to	By using the demonstration	1. Plane mirrors.	Can the pupil	4
Images in Plane	demonstrate formation of	technique, the teacher to guide	2. Optical pins.	demonstrate	
Mirrors.	image in plane mirrors.	the pupils to demonstrate	3. Piece of paper.	formation of	
		formation of image in plane	4. Pencil.	images in plane	
		mirrors.	5. Ruler.	mirrors?	
11. SOUND	The pupil should be able to:	The teacher to guide the	1. Charts/model showing	Can the pupil	4
The Structure of	(i) Identify the different parts	pupils to read textbooks in	parts of ear.	identify the	
the Ear and	of the ear.	order to identify different	2. Tactile charts showing	different parts of	
Mechanism of		parts of the ear.	parts of ear.	the ear?	
Hearing.			3. Textbook		
J			4. Textbook in Braille		
			notation.		
	(ii) Draw and label the	By using the drawing	1. Charts/model showing	Can the pupil draw	
	internal structure of the	technique, the teacher to guide	parts of the ear.	and label the	
	ear.	the pupils to draw and label	2. Tactile charts showing	structure of the ear?	
		the structure of the ear.	parts of the ear.		
	(iii) Explain the functions of	By using the group discussion	1. Charts/model showing	Can the pupil	
	different parts of the ear.	technique, the teacher to guide	parts of the ear.	explain the	
		the pupils to explain the	2. Tactile charts showing	functions of	
		functions of different parts of	parts of the ear.	different parts of	
		the ear.		the ear?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(iv) Explain the hearing mechanism in human being.	By using the short lecture technique, the teacher to guide the pupils to explain the hearing mechanism in human being.	-	Can the pupil explain the hearing mechanism in human being?	
	(v) Take care of their ears	 By using demonstration technique, the teacher to lead the pupils to clean their internal ears weekly By using practice techniques, the teacher to lead the pupils to clean their weekly. 	1.Cotton buds 2.Clean handkerchief	Can the pupils the internal part Of their ears	
12. HEAT a) Body Heat Control.	The pupil should be able to:- (i) Identify the different parts of the skin. (ii) Explain how human skin controls heat.	By using the short lecture technique, the teacher to guide the pupils to identify different parts of the skin. By using the library study technique, the teacher to guide the pupils to find explanations on how the human skin controls heat.	 Chart/Model showing parts of the skin. Tactile charts showing parts of the skin. Chart/model showing parts of the skin Tactile charts showing parts of the skin. Text concerning heat control of the skin. Text concerning heat control of the skin in Braille notation 	Can the pupil identify the different parts of the skin? Can the pupil explain how human skin controls heat?	4

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
b) Sustainable	The pupil should be able	By using the brain-storming	1. Photograph and pictures showing	Can the pupil identify	3
Use of	to:	technique, the teacher to guide	some plants that are used as fuel.	different plants that	
Plants as	(i) Identify different	the pupils to identify different	2. Tactile pictures showing some plants	are used for fuel?	
Fuel.	plants that are used	plants that are used for fuel.	that are used as fuel.		
	for fuel.		3. Actual plants that are used as fuel.		
	(ii) Mention the	By using the group discussion	1. Photographs and pictures showing	Can the pupil:	-
	advantages and	technique, the teacher to guide	positive and negative impact of	1. Mention the	
	disadvantages of	the pupils to mention the	using plants as a source of fuel.	advantages of using	
	using plants as a	advantages and disadvantages of	2. Tactile pictures showing positive	plants as a source of	
	source of fuel.	using plants as a source of fuel.	and negative impact of using	fuel?	
			plants as a source of fuel.	2. Mention the disadvantages of using plants as a source of fuel?	
	(iii) Explain sustainable	By using the library study	1.Chart/Picture showing the	Can the pupil explain	
	use of plants as fuel.	technique, the teacher to guide	methods of sustainable use of	sustainable use of	
		the pupils to find explanations	plants as fuel.	plants as fuel?	
		on sustainable use of plants as fuel.	2. Tactile chart showing the methods of sustainable use of plants as fuel.		
			3. Books concerning sustainable use of plants.4.Books in Braille notation concerning sustainable use of plants.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
13.	The pupil should be	By using the demonstration	1. Cells.	Can the pupil identify	3
ELECTRICITY	able to identify	technique, the teacher to guide	2. Wires.	components of	
a) Components of	components of	the pupils to prepare an electric	3. Bulbs.	electric circuits?	
Electric	electric circuits.	circuit.	4. Switch.		
Circuits.					
b) Symbols of	The pupil should be	By using the short lecture	1. Charts showing symbols of	Can the pupil identify	3
Electric	able to:	technique, the teacher to guide the	electric circuit components.	the symbols of	
Circuit	(i) Identify symbols	pupils to identify the symbols of	2. Tactile charts showing	electric circuit	
Components.	of electric circuit	electric circuit components.	symbols of electric circuit	components?	
	components.		components.		
	(ii) Draw the symbols	By using the drawing technique,	1. Chart showing symbols of	Can the pupil draw	
	of electric circuit	the teacher to guide the pupils to	electric circuit components.	the symbols of	
	components.	draw the symbols of electric	2. Tactile chart showing symbols	electric circuit	
		circuit components.	of electric circuit components.	components?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
c) Cells and Battery.	The pupils should be able	By using the short lecture technique,	1. Cells.	Can the pupil explain	4
	to:	the teacher to guide the pupils to	2. Diagram of a cell.	the meaning of cell?	
	(i) Explain the meaning	explain the meaning of a cell.	3. Diagram of a cell in		
	of a cell.		Braille.		
	(ii) Identify the types of	By using the group discussion	1. Diagrams of different	Can the pupil identify	
	cells.	technique, the teacher to guide the	types of cells.	the types of cells?	
		pupils to identify types of cell.	2. Dry cell and wet cell.		
			3. Diagram of different		
			types of cells in Braille.		
	(iii) Draw a dry and wet	By using the drawing technique, the	1. Diagram showing dry	Can the pupil draw a	
	cells.	teacher to guide the pupils to draw a	and wet cells.	dry cell and a wet	
		dry cell and wet cell.	2. Diagram showing dry	cell?	
			and wet cells in Braille.		
	(iv) Explain the meaning	The teacher to guide the pupils to	1. Diagram of battery.	Can the pupil explain	
	of battery.	read textbook in order to explain the	2. Battery.	the meaning of	
		meaning of battery.	3. Diagram of battery in	battery?	
			Braille.		
			3. Textbook.		
			4. Textbook in Braille		
			notation.		

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
d) Electric	The pupil should be able to:	By using the brainstorming technique,	1. Charts showing electric	Can the pupil	3
Hazards and	(i) Identify different types of	the teacher to guide the pupils to	hazards.	identify different	
Related	electric hazards.	identify different types of electric	2. Tactile chart showing	types of electric	
Precautions.		hazards.	electric hazards.	hazards?	
	(ii) Describe safety measures	By using the library study technique,	1. Charts showing safety	Can the pupil	_
	when dealing with electric	the teacher to guide the pupils to find	measures of electric	describe safety	
	hazards.	information about safety measures to	hazards.	measure when	
		be taken when dealing with electric	2. Tactile charts showing	dealing with	
		hazards.	safety measures of	electric hazards?	
			electric hazards.		
			3. Books concerning		
			electric hazards.		
			4. Books concerning		
			electric hazards in Braille		
			notation.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AID	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES	S		
14. MAGNETS	The pupil should be	By using the experimentation	1. Bar magnets.	Can the pupil	3
Laws of Magnets.	able to explains the	technique, the teacher to guide the	2. Textbook.	explain the laws of	
	laws of magnets.	pupils to explain laws of magnets.	3. Textbook in	magnets?	
			Braille notation.		
15. MACHINES	The pupil should be	By using the short lecture	Various substances	Can the pupil	5
Simple Machine.	able to:	technique, the teacher to guide the	such as: 1. Sped. 2. Scissors.	explain the concept	
	(i) Explain the concept	pupils to explain the concept of	3. Wheel barrow.	of simple machine?	
	of simple machine.	simple machine.	4. Sand. 5. Stone. 6. Balance.7.		
			Opener.		
			8. Nut cracker.		
	(ii) Mention parts and	By using the group discussion	1. Sped 2. Scissors.	Can the pupil	
	groups of a simple	technique, the teacher to guide the	3. Wheel barrow.	mention parts and	
	machine.	pupils to discuss the parts and	4. Sand. 5. Stone.	groups of simple	
		groups of a simple machine.	6. Balance.	machine?	
			7. Opener. 8. Nut cracker.		
	(iii) Show how a	1.By using the demonstration	1. Textbook.	Can the pupil show	
	simple machine	technique, the teacher to guide	2. Textbook in	how simple	
	simplifies work.	the pupils to show how simple	Braille notation.	machines simplifies work?	
		machine simplify work.			
		2.By using practice techniques,			
		pupils to use various simple			
		machines to simplify work.			

STANDARD SIX

COMPETENCES

By the end of Std VI the pupils shall demonstrate the ability to:-

- 1. Identify and apply services for controlling the transmission and effects of STIs, HIV and AIDS.
- 2. Identify water applications and use them in daily life.
- 3. Identify and explain the characteristics of living and non-living things.
- 4. Identify the causes of soil pollution and take steps to control them.
- 5. Demonstrate the properties of forms of energy and take precautions to prevent their hazards.
- 6. Identify and explain the hazards of heat and take precautions against them.
- 7. Identify and explain the functions of human body systems.
- 8. Identify and explain the uses of complex machines.
- 9. Use library and ICT facilities in order to acquire scientific knowledge and skills.

OBJECTIVES

The objectives of teaching Science subject in Standard VI are to enable the pupils to:-

- 1. Describe the importance and application of available community services in controlling the transmission and effects of STIs, HIV and AIDS.
- 2. Show knowledge of water applications and their usage in daily life.
- 3. Describe the importance and characteristics of living things.
- 4. Acquire skills of applying forms of energy and protecting themselves against their related hazards.
- 5. Describe the applications of complex machines for personal and community development.
- 6. Acquire knowledge of the functions of human body systems.
- 7. Use library and ICT facilities to get scientific knowledge and skills.

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
1. BODY	The pupil should be able	By using the guest speaker	1. Chart showing services	Can the pupil to	6
HEALTH	to:	technique, the teacher to guide the	provided by VCT centre.	explain the concept of	
a) Voluntary	(i) Explain the concept of	pupils to explain the concept of	2. Tactile chart showing	voluntary counselling	
Counselling	voluntary counselling	voluntary counselling and testing.	services provided by	and testing?	
and Testing	and testing (VCT).		VCT centre.		
(VCT).					
	(ii) Explain the	1.By using the guest speaker	1. Chart showing	Can the pupil explain	-
	importance of	technique, the teacher guide the	importance of voluntary	the importance of	
	voluntary	pupils to explain the	counselling and testing.	voluntary counselling	
	counselling and	importance of voluntary	2. Tactile chart showing	and testing?	
	testing.	counselling and testing.	importance of voluntary		
			counselling and testing.		
		2. By using the field trip	3. Video cassettes showing		
		technique, the teacher to guide	volunteers attending		
		the pupils visit VCT centre to	counselling and testing		
		observes provided.	session.		

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
b) The use of Anti -	The pupil should be able to	By using the guest speaker	Samples of ARVs	Can the pupil explain	4
Retroviral Drugs	explain the advantages of	technique, the teacher to guide the	drugs.	the advantages of	
(ARVs).	Anti Retroviral Drugs	pupils to explain the advantages		Anti-Retroviral	
	(ARVs).	of ARVs.		drugs?	
c) Stigmatization.	The pupil should be able to: (i) Explain the meaning of stigmatization.	By using the case study technique, the teacher to guide the pupils to explain the meaning of stigmatization.	Video cassettes showing stigmatization.	Can the pupil explain the meaning of stigmatisation?	4
	(ii) Explain the effects of stigmatization.	By using the pair and group work technique, the teacher to guide the pupils to explain the effects of stigmatization.	Video cassettes showing the effects of stigmatization.	Can the pupil explain the effects of stigmatisation?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
2. FOOD AND	The pupil should be able	1. By using the library study	1. Protein food (meat, fish, milk).	Can the pupil	4
NUTRITION	to identify the food	technique, the teacher to guide	2. Carbohydrates (cassava, rice, irish	identify the food	
a) Nutrition for	requirements for	pupils to find information on	potatoes).	requirements for	
Pregnant and	pregnant and lactating	food requirements for pregnant	3. Vitamins (fruits, carrots).	pregnant and	
Lactating	mothers.	and lactating mothers.	4. Minerals (seafood).	lactating	
Mothers.		2. By using the group- work technique, the teacher to guide	5. Fats/Lipids (butter, groundnuts).	mothers?	
		the pupils to identify the food	6. Roughages (spinach)		
		requirements for pregnant and	7. Books concerning diet for pregnant and		
		lactating mothers.	lactating mothers.		
			8. Books in Braille notation concerning		
			diet of pregnant and lactating mothers		
			foods.		
b) Nutritional	The pupils should be	By using the short lecture	1.Chart showing different types of	Can the pupil	4
Disorders.	able to:	technique, the teacher to guide	nutritional disorders (marasmus,	identify different	
	(i) Identify different	the pupils to identify different	kwashiorkor, obesity, goitre, rickets etc).	types of	
	types of nutritional	types of nutritional disorders.	2. Tactile chart showing different types of	nutritional	
	disorders.		nutritional disorders.	disorders?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(ii) Explain the signs and	1. By using the library research	1. Chart showing	Can the pupil	
	symptoms of each	technique, the teacher to guide the	nutritional disorders.	explain the signs	
	type of nutritional	pupils to find facts on the signs	2. Tactile chart showing	and symptoms of	
	disorder.	and symptoms of each type of the	nutritional disorders.	each types of	
		named nutritional disorders.	3. Books concerning	nutritional	
		2. By using study visit technique,	nutritional disorders.	disorder?	
		pupils to attend the MCH clinic to	4. Books in Braille		
		observe malnourished children.	notation concerning		
			nutritional disorders.		
	(iii) Explain the	By using the guest speaker	1. Chart showing	Can the pupil	1
	treatment of each	technique, the teacher to guide the	nutritional disorder.	explain the	
	types of nutritional	pupils to explain the treatment of	2. Tactile chart showing	treatment of each	
	disorder.	each types of nutritional disorder.	nutritional disorders.	types of nutritional	
			3. Video tapes/CDs/DVD	disorder?	
			concerning treatment of		
			nutritional disorder.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIOD
SUB-TOPICS	OBJECTIVES	TECHNIQUES			S
3. BODY	The pupil should be	The teacher to guide the pupils read	1. Chart showing human	Can the pupil identify	6
SYSTEMS	able to:	textbooks in order to identify	urine- excretory system urine.	different parts of the	
a) Excretory	(i) Identify different	different parts of the human urine-	2. Model of the human urine	human urine- excretory	
System.	parts of the human	excretory system.	excretory system.	system?	
	urine- excretory		3. Tactile chart showing human		
	system.		urine- excretory system.		
			4. Textbook.		
			5. Textbook in Braille notation .		
	(ii) Draw and label the	By using the drawing technique, the	1. Chart showing the human	Can the pupil draw and	-
	human urine-	teacher to guide the pupils to draw	urine- excretory system.	label the human urine-	
	excretory system.	and label the human urine- excretory	2. Model of the human urine-	excretory system?	
		system.	excretory system.		
			3. Tactile chart showing the		
			human urine- excretory		
			system.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(iii) Explain the	By using the discussion technique,	1. Chart showing human	Can the pupil explain	
	functions of each	the teacher to guide the pupils to	urine- excretory system.	the functions of each	
	part of the human	explain the functions of each part of	2. Model of the human urine-	part of the human	
	urine- excretory	the human urine- excretory system.	excretory system.	urine- excretory	
	system.		3. Tactile chart showing	system?	
			human urine- excretory		
			system.		
b) Reproductive	The pupil should be	1. By using the short lecture	1. Charts showing the human	Can the pupil	8
System.	able to:	technique, the teacher to guide the	reproductive system of male	identify different	
	(i) Identify different	pupils to identify different parts of	and female.	parts of the human	
	parts of the	the human reproductive system.	2. Tactile charts showing	reproductive system?	
	human	2. By using internet, the teacher to	human reproductive system		
	reproductive	guide pupils to search information	of male and female.		
	system.	on different parts of the human	3. Computer with internet.		
		reproductive system.	4. Computer with internet and		
			narrator.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(ii) Draw and label	By using the drawing technique,	1. Charts showing the human	Can the pupil draw	
	male and female	the teacher to guide the pupils to	reproductive system of male and	and label the male	
	reproductive	draw and label the male and	female.	and female	
	organs.	female reproductive organs.	2. Tactile charts showing human	reproductive	
			reproductive system of male and	organs?	
			female.		
	(iii) Explain the	1. By using the library study	1. Charts showing the human	Can the pupil	-
	functions of each	technique, the teacher to	reproductive system of male and	explain the	
	part of the	guide pupils to find	female.	functions of each	
	reproductive	information on the	2. Tactile charts showing human	part of reproductive	
	system.	functions of each part of	reproductive system of male and	system?	
		the reproductive system.	female.		
		2. By using the group	3. Books concerning human		
		discussion technique, the	reproductive system.		
		teacher to guide the pupils	4. Books in Braille notation		
		to explain the functions of	concerning human reproductive		
		each part of the	system.		
		reproductive system.			

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(iv) Explain the	By using the brainstorming		Can the pupil explain the	
	meaning of	technique, the teacher to guide the		meaning of puberty?	
	puberty.	pupils to explain the meaning of	-		
		puberty.			
	(v) Identify	By using the library research	1. Different books.	Can the pupil identify the	-
	secondary sexual	technique, the teacher to guide the	2. Books in Braille notation.	secondary sexual	
	characteristics.	pupils to find facts on the male		characteristics?	
		and female secondary sexual			
		characteristics.			
	(vi) Explain the	By using the short lecture	1. Chart showing	Can the pupil explain the	-
	meaning of	technique the teacher, to guide the	ovulation and	meaning of ovulation and	
	ovulation and	pupils to explain the meaning of	menstruation.	menstruation?	
	menstruation.	ovulation and menstruation.	2. Tactile chart		
			showing ovulation		
			and menstruation.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(vii) Explain the	By using the library research	1. Chart showing stages of fertilization.	Can the pupil	
	process of	technique, the teacher to guide	2. Tactile chart showing stages of	explain the	
	fertilization in	the pupils to find explanations	fertilization .	process of	
	human beings.	on the process of fertilization	3. Books concerning reproductive	fertilization in	
		in human beings.	system.	human beings?	
			4. Books in Braille notation concerning		
			reproductive system.		
	(viii) Explain the	1. By using the library study	1. Charts showing disorders of the	Can the pupil	
	disorders of the	technique, the teacher to guide	reproductive system.	explain the	
	reproductive	the pupils to find information	2. Tactile charts showing disorders of	disorders of the	
	system.	on the disorders of the	the reproductive system.	reproductive	
		reproductive system.	3. Books concerning disorders of the	system?	
		2. By using the group discussion	reproductive system.		
		technique teacher to guide the	4. Books in Braille notation concerning		
		pupils to explain the disorders of	disorders of the reproductive system.		
		the reproductive system.	5. Video cassettes/CDs/DVD		
			concerning disorders of the reproductive		
			system.		

TOPICS/ SUB-	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
TOPICS	OBJECTIVES	TECHNIQUES			
c) Nervous	The pupil should be	By using the short lecture technique, the	1. Chart of the human Nervous	Can the pupil	6
System.	able to:	teacher to guide the pupils to explain the	system.	explain the term	
	(i) Explain the term	term nervous system.	2. Tactile chart of the human	nervous system?	
	nervous system.		nervous system.		
	(ii) Draw and label	By using the drawing technique, the	1. Chart of the human nervous	Can the pupil draw	
	the nervous	teacher to guide the pupils to draw and	system.	and label the	
	system.	label the parts of the nervous system.	2. Tactile chart of the human	nervous system?	
			nervous system.		
	(iii) Explain the	By using the discussion technique, the	1. Chart of the human nervous	Can the pupil	
	functions of each	teacher to guide the pupils to discuss the	system.	explain the	
	part of the	functions of each part of the nervous	2. Tactile chart of the human	functions of each	
	nervous system.	system.	nervous system.	part of nervous	
				system?	
	(iv) Draw different	1. By using the question and answer	1. Charts of the sense organs (eye,	Can the pupil draw	
	sense organs.	technique, the teacher to guide the	ear, nose, tongue, skin).	different sense	
		pupils to identify different sense	2. Model of the eye.	organs?	
		organs.	3. Model of the ear.		
		2. By using the drawing technique, the	4. Tactile charts of the sense		
		teacher to guide the pupils to draw and	organs.		
		label different sense organs.			

SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
OBJECTIVES	TECHNIQUES			
(v) Explain the	1. The teacher to guide pupils to read text	1. Charts of the sense organs.	Can the pupil	
functions of	books on the functions of each of the	2. Tactile chart of the sense	explain the	
each sense	sense organ.	organs.	functions of	
organ.	2. By using the group discussion	3. Textbook.	each sense	
	technique, the teacher to guide the	4. Textbook in Braille	organ?	
	pupils to discuss the functions of each	notation.		
	sense organ.			
The pupil should be	1. By using the library research	1. Charts/Pictures showing	Can the pupil	4
able to:	technique, the teacher to guide the pupils	different challenges of	identify the	
(i) Identify the	to find information on the identify and	adolescence.	challenges of	
challenges of	challenges of adolescence.	2. Tactile charts/pictures	adolescence?	
adolescence.	2. By using gallery walk technique, the	showing different		
	teacher to guide the pupils to identity the	challenges of adolescence.		
	challenges of adolescence.	3. Books concerning		
		adolescence.		
		4. Books in Braille		
		notation oncerning		
		adolescence.		
		4. Video tape/CDs/DVD		
		concerning challenges of		
		adolescence.		
	OBJECTIVES (v) Explain the functions of each sense organ. The pupil should be able to: (i) Identify the challenges of	OBJECTIVESTECHNIQUES(v) Explain the functions of each sense1. The teacher to guide pupils to read text books on the functions of each of the sense organ.organ.2. By using the group discussion technique, the teacher to guide the pupils to discuss the functions of each sense organ.The pupil should be able to:1. By using the library research technique, the teacher to guide the pupils(i) Identify the challenges of adolescence.to find information on the identify and challenges of adolescence.2. By using gallery walk technique, the teacher to guide the pupils to identity the	(v) Explain the functions of each sense organ. Organ. 2. By using the group discussion technique, the teacher to guide the pupils to discuss the functions of each sense organ. The pupil should be able to: (i) Identify the challenges of adolescence. 2. By using gallery walk technique, the teacher to guide the pupils to find information on the identify and challenges of adolescence. 2. By using gallery walk technique, the teacher to guide the pupils to find information on the identify and challenges of adolescence. 2. By using gallery walk technique, the teacher to guide the pupils to find information on the identify and challenges of adolescence. 2. Tactile charts/Pictures showing different challenges of adolescence. 2. Tactile charts/pictures showing different challenges of adolescence. 3. Books concerning adolescence. 4. Books in Braille notation oncerning adolescence. 4. Video tape/CDs/DVD concerning challenges of	(v) Explain the functions of each sense organ. 1. The teacher to guide pupils to read text books on the functions of each of the sense organ. 2. By using the group discussion technique, the teacher to guide the pupils to discuss the functions of each sense organ. The pupil should be able to: (i) Identify the challenges of adolescence. 2. By using gallery walk technique, the teacher to guide the pupils to find information on the identity the challenges of adolescence. 2. By using gallery walk technique, the teacher to guide the pupils to identity the challenges of adolescence. 4. Books in Braille notation oncerning adolescence. 4. Books in Braille notation oncerning adolescence. 4. Wideo tape/CDs/DVD concerning challenges of

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPIC	OBJECTIVES	TECHNIQUES			
	(ii) Identitfy the ways of	By using the discussion	1. Charts/Pictures showing	Can the pupil	
	coping with the	technique, the teacher to guide	different challenges of	identify the ways	
	challenges of	the pupils to identity the ways of	adolescence.	of copying with	
	adolescence.	coping with challenges of	2. Tactile charts/pictures	the challenges of	
		adolescence.	showing different	adolescence?	
			challenges of adolescence.		
4. ANIMALS	The pupil should be able to	1. By using the brainstorming	1. Different types of	Can the pupil	4
a) Types of	identify different types of	technique, the teacher to guide	aquatic animals	identify different	
Aquatic	aquatic animals.	the pupils to identify different	(Turtles, octopus, fish,	types of aquatic	
Animals.		types of aquatic animals.	oysters).	animals?	
		2. By using study visit	2. Pictures showing types		
		technique, the teacher to guide	of aquatic animals.		
		pupils to a nearby fish	3. Tactile pictures showing		
		market/beach to observe aquatic	types if aquatic animals.		
		animals.	4. Video cassettes/		
			CDs/DVD concerning		
			aquatic animals.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
b) Economic	The pupil should be able	By using the gallery walk	1. Charts showing the	Can the pupil	2
Importance of	to explain the economic	technique, the teacher to guide	economic importance of	explain the	
Aquatic Animals.	importance of aquatic	the pupils to explain the	aquatic animals.	economic	
	animals.	economic importance of	2. Tactile charts showing	importance of	
		aquatic animals.	the economic importance	aquatic animals?	
			of aquatic animals.		
c) Threats to aquatic	The pupils should be	By using library research,	Pampheletes/leaflets on	Can the pupil	2
animals	able to explain the	pupils to read leaflets /	threats, to aquatic animals (e.g poison fishing,	explain the	
	threats facing aquatic	pampheletes on threats to	dynamite, seine – net	threats facing	
	animals	aquatic animals	fishing, sewerage emission into the sea,	aquatic animals.	
			plastic bags etc)		
5. PLANTS	The pupil should be able	By using the observation	1. Actual fruits (maize	Can the pupil	4
a) Fruits and Seeds.	to:	technique, the teacher to guide	grain, bean pod, pea	distinguish	
	(i) Distinguish between	the pupils to distinguish	pod, oranges,	between fruits	
	fruits and seeds.	between fruits and seeds.	pawpaw).	and seeds?	
			2. Actual seeds (cereals, bean seed, cowpea).		
	(ii) Mention different	By using the brain storming	1. Actual fruits.	Can the pupil	
	examples of fruits	technique, the teacher to guide	2. Actual seed.	mention different	
	and seeds.	the pupil to mention different	3. Pictures/charts	examples of	
		example of fruits and seeds.	showing fruits and seeds.	fruits and seeds?	
			4. Tactile charts showing		
			fruits and seeds.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(iii) Draw and label	By using the drawing technique,	1. Pictures/Drawings	Can the pupil draw and	
	parts of fruits and	the teacher to guide the pupils to	showing fruits and seeds.	label parts of fruits and	
	seeds.	draw and label the parts of fruits	2.Textbook.	seeds?	
		and seeds.	3.Tactile pictures/drawing		
			showing fruits and seeds.		
			4. Textbook in Braille		
			notation		
b) Germination.	The pupil should be	By using the short lecture	1. Chart showing	Can the pupil explain the	6
	able to:	technique, the teacher to guide the	germination of seeds.	term germination?	
	(i) Explain the term	pupils to explain the meaning of	2. Tactile chart showing		
	germination.	germination.	germination of seed.		
	(ii) Identify the	By using the experimentation	1. Viable seeds.	Can the pupil identify the	
	conditions	technique, the teacher to guide the	2. Water.	conditions necessary for	
	necessary for	pupils to identify conditions	3. Cotton wool.	germination?	
	germination.	necessary for germination.	4. Empty tins.		
			5. Soil.		
			6. Cooking oil.		
			7. Refrigerator.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(iii) Germinate different	By using the practical technique, the	1. Viable seeds.	Can the pupil	
	seeds.	teacher to guide the pupils to germinate	2. Water.	germinate	
		different types of seeds.	3. Cotton wool.	different seeds?	
			4. Empty tins.		
			5. Soil.		
			6. Cooking oil.		
			7. Refrigerator.		
	(iv) Identify different	By using the observation technique, the	Potted germinated	Can the pupil	
	types of germination.	teacher to guide the pupils to identify	seeds of maize grains	identify different	
		different types of germination.	and bean seeds to	types of	
			show hypogeal and	germination?	
			epigeal types of seed		
			germination.		
6. MATTER	The pupil should be able	By using the experimentation	1. Source of heat –	Can the pupil	4
Effects of Heat on	to:	technique, the teacher to guide the	(candle,	investigate the	
Matter.	(i) Investigate the effects	pupils to investigate the effects of heat	Spirit lamp, stove).	effects of heat on	
	of heat on matter.	on matter.	2. Iron bar.	matter?	
			3. Tin.		
			4. Copper .		

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
	(ii) Measure the temperature	By using the practical technique, the	1. Ordinary thermometer.	Can the pupil	
	in degrees centigrade.	teacher to guide the pupils to measure	2. Beaker.	measure the	
		the temperature in degree centigrade.	3. Heat source.	temperature in °C	
			4. Water.	(degree	
			5. Tripod stand.	centigrade)?	
7. WATER	The pupil should be able to	By using the demonstration technique,	1. Water.	Can the pupil	4
a) Solvent	identify characteristics of	the teacher to guide the pupils to identify	2. Sugar.	identify	
Characteristics of	water as a solvent.	characteristics of water as a solvent.	3. Salt.	characteristics of	
Water.			4. Soap powder.	water as a solvent?	
b) Solutions.	The pupil should be able to:	By using the experimentation technique,	1. Salt.	Can the pupil	4
	(i) Explain the meaning of	the teacher to guide the pupils to explain	2. Sugar. 3. Water.	explain the	
	solution.	the meaning of solution.	4. Beakers.	meaning of	
			5. Stirrers.6. Spatula.	solution?	
			7. Watch glasses.		
			8. Soap.		
	(ii) Prepare different	By using the inquiry technique, the	1. Salt.	Can the pupil	
	solutions.	teacher to guide the pupils to prepare	2. Sugar. 3. Water.	prepare different	
		different solutions.	4. Beakers.	solutions?	
			5. Stirrers.		
			6. Spatula.		
			7. Watch glasses.		
			8. Soap.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
c) Water Pressure and its Applications.	The pupil should be able to: (i) Explain the concept of water pressure. (ii) Identify the parameters on which water pressure depends.	By using the short lecture technique, the teacher to guide the pupil to explain the concept of water pressure. By using the experimentation technique, the teacher to guide the pupils to identify the parameters on which water	 Container with water (e.g. can, bucket, tins). Plastic bottles with holes on the sides. Water tanks. Thistle funnel. Ureka can. Container with water. Plastic bottles with holes on its sides. Water tanks. Ureka - can. 	Can the pupil explain the concept of water pressure? Can the pupil identify the parameters on which water	5
	(iii) Explain the applications of water pressure in daily life.	pressure depends. By using the group discussion technique, the teacher to guide the pupils to discuss the application of water pressure in daily life.	 Container with water. Water tanks. Pictures/diagrams of overhead tanks and dams. Tactile pictures/diagrams of overhead tanks and dams. 	pressure depends? Can the pupil explain the applications of water pressure in daily life?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-	OBJECTIVES	TECHNIQUES			
TOPICS					
	(iv) Identify the	1. By using the library reading	1. Picture /chart showing effects of water	Can the pupil	
	effects of water	technique, the teacher to	pressure.	identify the effects	
	pressure.	guide pupils to find facts	2. Tactile picture/chart showing effects	of water pressure?	
		about the effects of water	of water pressure.		
		pressure.	3. Books concerning effects of water		
		2. By using the written exercise	pressure.		
		technique, the teacher to	4. Books in Braille notation concerning		
		guide the pupils to identify	effects of water pressure.		
		the effects of water pressure.			
d) Floatation	The pupil should be	By using the demonstration	1. Container with water.	Can the pupil	6
and	able to:	technique, the teacher to guide	2. Floating bodies (e.g. corks, piece of	explain the concepts	
Sinking of	(i) Explain the	the pupils to explain the	wood).	of floatation and	
Bodies.	concepts of	concepts of floatation and	3. Sinking bodies (e.g. stone, piece of	sinking?	
	floatation and	sinking.	iron coins).		
	sinking.		4. Textbook.		
			5. Textbook in Braille notation.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(ii) Identify objects	By using the experimentation	1. Container with water.	Can the pupil	
	which float and	technique, the teacher to guide the	2. Floating bodies.	identify objects	
	objects which	pupils to identify objects which float	3. Sinking bodies.	which float and	
	sink.	and those which sink.		objects which sink?	
	(iii) Identify the	By using the demonstration	1. Objects with spherical shape.	Can the pupil	
	shapes which	technique, the teacher to guide the	2. Objects with cylindrical shape.	identify the shapes	
	facilitate	pupils to identify the shapes which	3. Ring shaped objects.	which facilitate	
	floatation.	facilitate floatation.		floatation?	
	(iv) Explain the	By using the question and answers	1. Air filled objects (e.g. air filled	Can the pupil	
	reasons which	technique, the teacher to guide the	scaled bottles).	explain the reasons	
	bring about	pupils to explain the reasons which	2. Submarine.	which bring about	
	floatation.	bring about floatation.	3. Ship made from pieces of paper.	floatation?	
			4. Bucket full of water.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(v) Explain the reasons which bring about sinking.	 The teacher to guide pupils to read textbook on reasons for sinking. By using the group discussion technique, the teacher to guide the pupils to explain the reasons which bring about sinking. 	 Air filled objects. Submarine. Model of a ship made from pieces of paper. Bucket full of water. Textbook. Textbook in Braille notation. 	Can the pupil explain the reasons which bring about sinking?	
8. AIR a) Air bone Diseases.	The pupil should be able to: (i) Identify different types of airborne diseases.	By using the short lecture technique, the teacher to guide the pupils to identity different types of airborne diseases.	 Chart showing airborne diseases. Tactile chart showing airborne diseases. 	Can the pupil identify different type of airborne diseases?	4
	(ii) Explain the preventive measures against air borne diseases.	By using the group work technique, the teacher to guide the pupils explain the preventive measures against airborne diseases.	 Picture/chart showing illustration of preventive measures of airborne diseases. Tactile picture/chart showing preventive measures of airborne diseases. Video cassettes/CDs/DVD concerning prevention of airborne diseases. 	Can the pupil explain the preventive measures against airborne diseases?	

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
9. SOIL	The pupil should be able to:	By using the library research	1. Picture/chart showing soil	Can the pupil	4
a) Soil Degradation.	(i) Explain the meaning of soil	technique, the teacher to guide the	degradation.	explain the	
	degradation.	pupils to find facts on the	2. Tactile picture/ chart showing	meaning of soil	
		meaning of soil degradation.	soil degradation.	degradation?	
			3. Books concerning soil		
			degradation.		
			4. Books in Braille notation		
			concerning soil degradation.		
	(ii) Identify factors which lead	By using the group discussion	1. Chart showing factors leading	Can the pupil	
	to soil degradation.	technique, the teacher to guide the	to soil degradation.	identify factors	
		pupils to identity the factors which	2. Tactile chart showing factors	which lead to	
		lead to soil degradation.	leading to soil degradation.	soil	
				degradation?	
b) Soil Erosion.	The pupil should be able to:	By using the short lecture	1. Picture/chart showing soil	Can the pupil	6
	(i) Explain the meaning of soil	technique, the teacher to guide the	erosion.	explain the	
	erosion.	pupil to explain the meaning of	2. Tactile picture chart showing	meaning of soil	
		soil erosion.	soil erosion.	erosion?	

TOPICS/	SPECIFIC	TEACHING/LEARNING TECHNIQUES	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-	OBJECTIVES				
TOPICS					
	(ii) Mention agents	By using the question and answers technique,	1. Chart illustrating agents	Can the pupil	
	which cause soil	the teacher to guide the pupils to mention	of soil erosion.	mention agents which	
	erosion.	agents which causes soil erosion.	2. Tactile chart illustrating	cause soil erosion?	
			agents of soil erosion.		
	(iii) Explain types of	1. The teacher to guide pupils to read	1. Pictures showing	Can the pupil explain	
	soil erosion.	textbook on types of soil erosion.	types of soil erosion.	types of soil erosion?	
		2. By using the written exercise	2. Tactile picture		
		technique, the teacher to guide the	showing types of soil		
		pupils to explain types of soil erosion.	erosion.		
			3. Textbook.		
			4. Textbook in Braille		
			notation.		
	(iv) Explain effects	1. By using the group discussion technique,	1. Chart showing effects of	Can the pupil explain	
	of soil erosion.	the teacher to guide the pupils to explain	soil erosion.	effects of soil	
		effects of soil erosion.	2. Tactile chart showing	erosion?	
		2. By using study visit technique, the teacher	effects of soil erosion.		
		to guide the pupils observe the eroded areas	3. Video cassettes/		
		(specially along the beaches) and then explain	CDs/DVD concerning		
		the effects of soil erosion.	effects of soil erosion.		

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(v) Explain the	By using the pair work technique, the	1. Pictures showing preventive	Can the pupil	
	preventive measures	teacher to guide the pupils to explain	measures of soil erosion.	explain	
	of soil erosion.	the preventive measures of soil	2. Tactile pictures showing	preventive	
		erosion.	preventive measures of soil erosion.	measures of soil	
				erosion?	
c) Soil	The pupil should be able	By using the short lecture technique,	1. Chart illustrating soil pollution.	Can the pupil	4
Pollution.	to:	the teacher to explain to the pupils the	2. Tactile chart illustrating soil	explain the	
	(i) Explain the meaning	concept of soil pollution.	pollution.	meaning of soil	
	of soil pollution.			pollution?	
	(ii) Describe the effects	1. By using the internet, the	1. Chart showing effects of soil	Can the pupil	
	of soil pollution on	teacher to guide pupils to	pollution on the environment.	describe the	
	the environment.	acquire information from the	2. Tactile chart showing effects of	effects of soil	
		internet on effects of soil	soil pollution on the environment.	pollution on the	
		pollution on the environment.	3. Computer with internet.	environment?	
		2. By using the group discussion	4. Computer with internet and		
		technique, the teacher to guide	narrator.		
		the pupils to describe the			
		effects of soil pollution on the			
		environment.			

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(iii) Identify ways in	By using the brainstorming technique,	1. Chart showing ways of	Can the pupil	
	which soil	the teacher to guide the pupils to	preventing soil pollution.	identify ways in	
	pollution can be	identify ways in which soil pollution	2. Tactile chart showing	which soil	
	prevented.	can be prevented.	ways of preventing soil	pollution can be	
			pollution.	prevented?	
10. LIGHT	The pupil should be	By using the short lecture technique,		Can the pupil	6
a) Lenses and	able to:	the teacher to guide the pupils to		explain the	
Image	(i) Explain the	explain the meaning of lens.	-	meaning of lens?	
Formation.	meaning of lens.				
	(ii) Mention types of	By using the observation technique,	1. Concave lens.	Can the pupil	=
	lens.	the teacher to guide the pupils to	2. Convex lens.	mention types of	
		mention types of lens.		lens?	
	(iii) Explain the process	By using the short lecture technique,	1. Drawing showing image	Can the pupil	
	of image formation	the teacher to guide the pupils to	formation in	explain the	
	in lenses.	explain the process of image	concave lens and	process of image	
		formation in concave and in convex	convex lens.	formation in	
		lenses.	Tactile drawing showing	lenses?	
			image formation in		
			concave and convex		
			lenses.		

TOPICS/ SUB-	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
TOPICS	OBJECTIVES	TECHNIQUES			
	(iv) Demonstrate the	By using the demonstration technique,	1. Convex lens.	Can the pupil	
	process of image	the teacher to guide the pupils to	2. Concave lens.	demonstrate the	
	formation in	demonstrate the process of image	3. Lens stand.	process of image	
	lenses.	formation in concave and in convex	4. White paper.	formation in	
		lenses	5. Optical pins.	lenses?	
b) Structure of the	The pupil should be	By using the short lecture technique,	1. Model of the eye.	Can the pupil	7
Eye, Defects	able to:	the teacher to guide the pupils to	2. Chart illustrating the	identify different	
and Corrective	(i) Identify different	identify the different parts of the eye.	structure of the eye.	parts of the eye?	
Measures.	parts of the eye.		3. Tactile chart illustrating		
			the structure of the eye.		
	(ii) Draw and label the	By using the drawing technique, the	1. Chart illustrating	Can the pupil	
	structure of the	teacher to guide the pupils to draw and	structure of the eye.	draw and label	
	eye.	label different parts of the human eye.	2. Tactile chart illustrating	the structure of	
			structure of the eye.	the eye?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT
SUB-TOPICS	OBJECTIVES	TECHNIQUES		
	(iii) State the functions of	By using the group discussion	1. Picture/chart	Can the pupil state
	each part of the eye.	technique, the teacher to guide the	illustrating parts	the functions of
		pupils to state the functions of	of the eye.	each part of the
		each part of the eye.	2. Tactile picture/chart illustrating parts of the eye.	eye?
	(iv) Describe image	By using the short lecture	1. Diagram of image	Can the pupil
	formation in the eye.	technique, the teacher to guide the	formation in the eye.	describe image
		pupils to describe image	2. Tactile diagram of	formation in the
		formation in the eye.	image formation in the eye.	eye?
	(v) Explain the defects of	1. By using the library research	1. Library.	Can the pupil
	the eye and their	technique, the teacher to guide the	2. Charts/Pictures	explain the defects
	corrective measures.	pupils to find explanations for the	illustrating eyes	of the eyes and their
		defects of the eye and their	defects and their	corrective
		corrective measures.	corrective measures.	measures?
		2. By using the gallery walk technique the teacher to guide the pupils to give explanations of eye defects and their corrective measures.	3. Tactile charts/pictures illustrating eyes defects and their corrective measures.	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
c. Photosynthesis.	The pupils should be able	1. By using short lecture technique,	1. Chart/drawing showing	Can the pupils	8
	to:	the teacher to guide the pupils to	internal structure of the leaf.	describe the	
	(i) Describe internal	describe the internal structure of a	2. Light microscope.	internal	
	structure of a leaf.	leaf.	3. Prepared slides of the	structure of a	
		2. By using the observation technique,	internal structure of a leaf.	leaf.	
		the teacher to guide pupils to	4. Tactile chart/ drawing		
		observe under the microscope the	showing internal structure		
		different parts of the internal	of the leaf.		
		structure of a leaf.	5. Actual leaf.		
		3. By using the drawing technique, the			
		teacher to guide the pupils to draw			
		and label different parts of the			
		internal structure of a leaf.			
	(ii) Define the term	By using the short lecture technique,	-	Can the pupil	
	photosynthesis.	the teacher to guide the pupils to		define the term	
		define the term photosynthesis.		photosynthesis?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
	(iii) State the	By using the experimentation	1. Cards.	Can the pupil	
	conditions	technique, the teacher to guide the	2. Potted plants.	state the	
	necessary for	pupils to state the conditions necessary	3. Sodium hydroxide.	conditions	
	photosynthesis.	for photosynthesis.	4. Conical flask.	necessary for	
			5. Vasseline.	photosynthesis?	
			6. Cork.		
			7. Retort stand.		
			8. Variegated leaf.		
			9. Spirit.		
			10. Iodine solution.		
			11. Hot water.		
			12. White tile.		
			13. Test tube.		
			14. Wire gauze.		
			15. Tripod stand.		
			16. Dropping pipette.		
	(iv) Describe the	1. The teacher to guide the pupils to	1. Chart illustrating the	Can the pupil describe the	
	process of	read textbook in order to find facts on	process of photosynthesis.	process of	
	photosynthesis.	the process of photosynthesis.	2. Tactile chart illustrating the	photosynthesis?	
		2. By using the group discussion	process of photosynthesis.		
		technique the teachers to guide the	3. Textbook.		
		pupils to describe the process of	4. Textbook in Braille		
		photosynthesis.	notation.		
I		r · · · · · · · · · · · · · · · · · · ·			

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
12. HEAT a) Rainfall Formation.	The pupil should be able to explain the stages of the process of rainfall formation.	 By using the internet, the teacher to guide pupils to acquire information from the internet on rain formation. By using the group discussion technique, the teacher to guide the pupils to explain the stages of the process of rainfall formation. 	 Chart showing stages of the rainfall formation. Tactile chart showing stages of the rainfall formation. Computer with internet. Computer with internet and narrator. 	Can the pupil explain the stages of the process of rainfall formation?	3
b) Hazards of Heat.	The pupil should be able to: (i) Identify different hazards of heat.	By using the group discussion technique, the teacher to guide the pupils to identify different hazards of heat.	1. Pictures/charts illustrating hazards of heat. 2. Tactile pictures/charts illustrating hazards of heat.	Can the pupil identify different hazards of heat?	4
	(ii) Explain measures of preventing hazards of heat.	By using the group discussion technique, the teacher to guide the pupils to explain measures needed to prevent hazards of heat.	1. Chart illustrating prevention heat hazards. 2. Tactile chart illustrating prevention of heat hazards.	Can the pupil explain measures of preventing hazards of heat?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
13. ELECTRICITY	The pupil should be able	By using the group discussion	1. Cells.	Can the pupil identify	4
a) Construction of	to:	technique, the teacher to guide the	2. Wires.	different circuits?	
Simple	(i) Identify different	pupils to identify different types of	3. Bulbs.		
Electric	types of circuits.	circuits.	4. Switch.		
Circuits.	(ii) Construct different	1. By using the demonstration	1. Cells.	Can the pupil construct	
	circuits.	technique, the teacher to guide	2. Wires.	different circuits?	
		the pupils to construct different	3. Bulbs.		
		circuits.	4. Switch.		
		2. By using the practice			
		technique, the teacher to guide			
		pupils to construct different			
		circuits.			

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
b) Dynamo and	The pupil should be able	By using the short lecture	1. Actual dynamo.	Can the pupil	4
Generator.	to:	technique, the teacher to guide the	2. Actual generator.	identify dynamo	
	(i) Identify dynamo and	pupils to identify dynamo and	3. Pictures/charts	and generator?	
	generator.	generator.	showing dynamo and		
			generator.		
			4. Tactile pictures/charts		
			showing dynamo and		
			generator.		
	(ii) Explain the uses of	By using the demonstration	1. Chart showing uses of	Can the pupil	
	dynamo and generator.	technique, the teacher to guide the	dynamo and Generator.	explain the uses	
		pupils to explain the uses of	2. Tactile chart showing	of dynamo and	
		dynamo and generator.	uses of dynamo and	generator?	
			generator.		
c) Motor.	The pupil should be able	By using the short lecture	1. Motor.	Can the pupil	4
	to:	technique, the teacher to guide the	2. Diagram of motor.	explain the term	
	(i) Explain the term motor.	pupils to explain the term motor.	3. Diagram of motor in	motor?	
			Braille.		

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
	(ii) Explain uses of motor.	By using the group discussion	1.Actual motor.	Can the pupil explain	
		technique, the teacher to guide	2. Diagram of motor.	the uses of motor?	
		the pupils to explain uses of	3. Diagram of motor in		
		motor.	Braille.		
14. MAGNETS	The pupil should be able to:	By using the short lecture	1. Magnetic compass.	Can the pupil explain	4
a) Magnetic	(i) Explain the meaning of	technique, the teacher to guide	2. Chart/diagram of magnetic	the meaning of a	
Compass.	magnetic compass.	pupils to explain the meaning	compass.	magnetic compass?	
		of magnetic compass.	3. Tactile chart/ diagram of		
			magnetic compass.		
	(ii) Draw the magnetic	By using the drawing	1. Chart/diagram of magnetic	Can the pupil draw	
	compass.	technique, the teacher to guide	compass.	the magnetic	
		the pupils to draw magnetic	2. Tactile chart/ diagram	compass?	
		compass.	of magnetic compass.		
b) Uses of	The pupil should be able to	1. The teacher to guide pupils	1. Magnetic compass.	Can the pupil	4
Magnetic	mention the uses of a	to read textbooks on the uses	2. Chart/diagram of	mention the uses of a	
Compass.	magnetic compass.	of magnetic compass.	magnetic compass.	magnetic compass?	
		2. By using the group	3. Tactile chart/diagram		
		discussion technique, the	of a magnetic		
		teacher to guide the pupils to	compass.		
		mention the uses of a			
		magnetic compass.			

TOPICS/	SPECIFIC OBJECTIVES	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS		TECHNIQUES			
c) Electromagnetism.	The pupil should be able to:	By using the short lecture	1. Wire.	Can the pupil give the	4
	(i) Give the meaning of the	technique, the teacher to guide	2. Nail.	meaning of the term	
	term electromagnetism.	the pupils to give the meaning	3. Cell.	electromagnetism?	
		of electromagnetism.	4. Pencil.		
	(ii) Demonstrate the concept	By using the demonstration	1. Wire.	Can the pupil	
	of electromagnetism.	technique, the teacher to guide	2. Nail.	demonstrate the	
		the pupils to demonstrate the	3. Cell.	concept of	
		concept of electromagnetism.	4. Pencil.	electromagnetism?	
	(iii) Identify the applications	1. By using the internet, the	1. Picture of items that	Can the pupil identify	
	of electromagnetism.	teacher to guide pupils to	use electromagnetism.	the applications of	
		acquire information	2. Tactile picture of	electromagnetism?	
		from the internet on	items that uses		
		applications of	electromagnetism.		
		electromagnetism.	3. Computer with		
		2. By using the group	internet.		
		discussion technique, the	4. Computer with		
		teacher to guide the	internet and narrator.		
		pupils to identify the	5. Actual items that		
		applications of	uses electromagnetism.		
		electromagnetism.			

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
16. MACHINES	The pupil should be	By using the library research technique,	Video cassettes/CDs/DVD	Can the pupil	6
a) Hydro Electric	able to:	the teacher to guide the pupils to identify	concerning Hydro electric	identify Hydro-	
Power Plants.	(i) Identify the location	the location of different Hydro Electric	power plants in Tanzania.	electric power	
	of Hydro Electric	Power plants in Tanzania.		plants in	
	Power plants in			Tanzania?	
	Tanzania.				
	(ii) Explain how	1. The teacher to guide the pupils to	1. Diagram of Hydroelectric	Can the pupil	-
	electric power is	read materials on how Hydro Electric	power plant.	explain how	
	transmitted and	Power (HEP) is transmitted in	2. Tactile diagram of	Electric power is	
	distributed.	Tanzania.	Hydroelectric power	transmitted and	
		 By using the guest speaker technique the teacher to guide the pupils to discuss how Hydro Electric Power is transmitted and distributed in Zanzibar. By using the group discussion technique the teacher to guide the pupils to explain how electricity is transmitted and distributed in Zanzibar. By using the study visit technique, , the teacher to guide pupils to visit Fumba/Mtoni/Wesha Sub/Power stations to observe how Hydroelectric power is received and distributed. 	plant. 3. Chart showing HEP transmission and distribution. 4. Tactile chart showing HEP transmission and distribution plant.	distributed?	

TOPICS/	SPECIFIC	TEACHING/LEARNING	MATERIALS/AIDS	ASSESSMENT	PERIODS
SUB-TOPICS	OBJECTIVES	TECHNIQUES			
b) Wind Turbines.	The pupil should be	By using the short lecture technique, the	1. Diagram of wind turbine.	Can the pupil	4
	able to:	teacher to guide the pupils to explain the	2. Tactile diagram of wind	explain the	
	(i) Explain the	meaning of wind turbine.	turbine.	meaning of wind	
	meaning of wind			turbine?	
	turbine.				
	(ii) Mention the uses	1. By using the internet, the teacher to guide	1. Diagram of wind turbines.	Can the pupil	
	of wind turbines.	pupils to acquire information from the	2. Tactile diagram of wind	mention the uses	
		internet on the uses of wind turbines.	turbines.	of wind turbines?	
		2. By using the group discussion technique,	3. Computer with internet.		
		the teacher to guide the pupils to	4. Computer with internet		
c) Solar Panels.	The pupil should be	mention the uses of wind turbines. By using the short lecture technique, the	and narrator. 1. Drawing/	Can the pupil	4
c) Solai Palleis.			diagram of solar panel.		4
	able to:	teacher to guide the pupils to explain the	2. Actual solar panels.	explain the term	
	(i) Explain the term	term "solar panel".	3. Tactile drawing/diagram	solar panel?	
	solar panel.		of solar panel.		
	(ii) Mention the uses	1. The teacher to guide pupils to conduct	1. Solar panels.	Can the pupil	
	of solar panels.	library study on the uses of solar panels. 2. By using the study visit technique the	2. Drawing/diagram of solar panel.	mention the uses	
		teacher to guide pupils to visit areas	3. Slides showing the	of solar panels?	
		and buildings that use solar electricity	uses of solar panels.		
		and learn its uses.	4. Tactile		
		3. By using the group discussion technique,	drawing/diagram of		
		the teacher to guide the pupils to mention the uses of solar panels.	solar panels. 5. Books concerning		
		mention the uses of solar panels.	solar panels.		
			6. Books concerning		
			solar panels in		
			Braille.		