REPUBLIC OF KENYA

MINISTRY OF EDUCATION

JUNIOR SCHOOL CURRICULUM DESIGN
GRADE 8

INTEGRATED SCIENCE
FOR
LEARNERS WITH HEARING IMPAIREMENT

KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

A Skilled and Ethical Society

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FOREWORD

The Government of Kenya is committed to ensuring that policy objectives for Education, Training and Research meet the aspirations of the Constitution of Kenya 2010, the Kenya Vision 2030, National Curriculum Policy 2019, the United Nations Sustainable Development Goals (SDGs) and the Regional and Global conventions to which Kenya is a signatory. Towards achieving the mission of Basic Education, the Ministry of Education (MoE) has successfully and progressively rolled out the implementation of the Competency Based Curriculum (CBC) at Pre-Primary, Primary and Junior School levels.

The implementation of Competency Based Curriculum involves monitoring and evaluation to determine its success. After the five-year implementation cycle, a summative evaluation of the primary education cycle was undertaken to establish the achievement of learning outcomes as envisaged in the Basic Education Curriculum Framework. The Government of Kenya constituted a Presidential working Party on Education Reforms (PWPER) in 2022 to address salient issues affecting the education sector. PWPER made far reaching recommendations for basic education that necessitated curriculum review. The recommendations of the PWPER, monitoring reports, summative evaluation, feedback from curriculum implementers and other stakeholders led to rationalisation and review of the basic education curriculum.

The reviewed Grade eight curriculum designs for learners with hearing impairment build on competencies attained by learners at Grade 7. Emphasis at this grade is the development of skills for exploration and making informed decision on pathways based on careers.

The curriculum designs present National Goals of Education, essence statements, general and specific expected learning outcomes for the subjects as well as strands and sub strands. The designs also outline suggested learning experiences, key inquiry questions, core competencies, Pertinent and Contemporary Issues (PCIs), values, and assessment rubric.

It is my hope that all Government agencies and other stakeholders in Education will use the designs to plan for effective and efficient implementation of the CBC.

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PREFACE

The Ministry of Education (MoE) nationally implemented Competency Based Curriculum (CBC) in 2019. Grade seven is the first grade of Junior School while Grade 9 is the final grade of the level in the reformed education structure.

The reviewed Grade eight curriculum furthers implementation of the CBC from Grade seven. The curriculum provides opportunities for learners to focus in a field of their choice to form a foundation for further education and training and/or gain employable skills. This is very critical in the realisation of the Vision and Mission of the on-going curriculum reforms as enshrined in the Sessional Paper No. I of 2019 whose title is: *Towards Realizing Quality, Relevant and Inclusive Education and Training for Sustainable Development* in Kenya. The Sessional Paper explains the shift from a content-focused curriculum to a focus on **nurturing every learner's potential.**

Therefore, the Grade eight curriculum designs for learners with hearing impairment are intended to enhance the learners' development in the CBC core competencies, namely: Communication and Collaboration, Critical Thinking and Problem Solving, Creativity and Imagination, Citizenship, Digital Literacy, learning to Learn and Self-efficacy.

The curriculum designs provide suggestions for interactive and differentiated learning experiences linked to the various sub strands and the other aspects of the CBC. They also offer several suggested learning resources and a variety of assessment techniques. It is expected that the designs will guide teachers to effectively facilitate learners to attain the expected learning outcomes for Grade eight and prepare them for smooth transition to Grade nine. Furthermore, it is my hope that teachers will use the adapted designs to make learning interesting, exciting and enjoyable.

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ACKNOWLEDGEMENT

The Kenya Institute of Curriculum Development (KICD) Act Number 4 of 2013 (Revised 2019) mandates the Institute to develop and review curricula and curriculum support materials for basic and tertiary education and training. The curriculum development process for any level of education involves thorough research, international benchmarking and robust stakeholder engagement. Through a systematic and consultative process, the KICD conceptualised the Competency Based Curriculum (CBC) as captured in the Basic Education Curriculum Framework (BECF) 2017, that responds to the demands of the 21st Century and the aspirations captured in the Constitution of Kenya 2010, the Kenya Vision 2030, East African Community Protocol, International Bureau of Education Guidelines and the United Nations Sustainable Development Goals (SDGs).

KICD receives its funding from the Government of Kenya to facilitate successful achievement of the stipulated mandate and implementation of the Government and Sector (Ministry of Education (MoE) plans. The Institute also receives support from development partners targeting specific programmes. The revised Grade eight curriculum designs for learners with hearing impairment were developed and adapted with the support of the World Bank through the Kenya Primary Education Equity in Learning Programme (KPEELP); a project coordinated by MoE. Therefore, the Institute is very grateful for the support of the Government of Kenya, through the MoE and the development partners for policy, resource and logistical support. Specifically, special thanks to the Cabinet Secretary-MoE and the Principal Secretary – State Department of Basic Education,

I also wish to acknowledge the KICD curriculum developers and other staff, all teachers, educators who took part as panellists; the Semi-Autonomous Government Agencies (SAGAs) and representatives of various stakeholders for their roles in the development and adaptation of the Grade eight curriculum designs for learners with hearing impairment. In relation to this, I acknowledge the support of the Chief Executive Officers of the Teachers Service Commission (TSC) and the Kenya National Examinations Council (KNEC) for their support in the process of developing and adapting these designs. Finally, I am very grateful to the KICD Council Chairperson and other members of the Council for very consistent guidance in the process.

I assure all teachers, parents and other stakeholders that this curriculum design will effectively guide the implementation of the CBC at Grade nine and preparation of learners with hearing impairment for transition to Senior school.

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TABLE OF CONTENTS

LESSON ALLOCATION FOR JUNIOR SCHOOL

S/ No.	Learning Area	No. of Lesson
1	English for Learners with Hearing Impairment	5
2	Kiswahili for Learners with Hearing Impairment /Kenyan Sign Language	4
3	Mathematics for Learners with Hearing Impairment	5
4	Religious Education	4
5	Integrated Science for Learners with Hearing Impairment	5
6	Agriculture & Nutrition for Learners with Hearing Impairment	4
7	Social Studies for Learners with Hearing Impairment	4
8	Creative Arts and Sports for Learners with Hearing Impairment	5
9	Pre- technical Studies for Learners with Hearing Impairment	4
10.	Pastoral/ Religious Instruction Programme	1
	Total	**41**

NATIONAL GOALS OF EDUCATION

Education in Kenya should:

i) Foster nationalism and patriotism and promote national unity.

Kenya's people belong to different communities, races and religions, but these differences need not divide them. They must be able to live and interact as Kenyans. It is a paramount duty of education to help young people acquire this sense of nationhood by removing conflicts and promoting positive attitudes of mutual respect which enable them to live together in harmony and foster patriotism in order to make a positive contribution to the life of the nation.

ii) Promote the social, economic, technological and industrial needs for national development.

Education should prepare the youth of the country to play an effective and productive role in the life of the nation.

a) Social Needs

Education in Kenya must prepare children for changes in attitudes and relationships which are necessary for the smooth progress of a rapidly developing modern economy. There is bound to be a silent social revolution following in the wake of rapid modernization. Education should assist our youth to adapt to this change.

b) Economic Needs

Education in Kenya should produce citizens with the skills, knowledge, expertise and personal qualities that are required to support a growing economy. Kenya is building up a modern and independent economy which is in need of an adequate and relevant domestic workforce.

c) Technological and Industrial Needs

Education in Kenya should provide learners with the necessary skills and attitudes for industrial development. Kenya recognizes the rapid industrial and technological changes taking place, especially in the developed world. We can only be part of this development if our education system is deliberately focused on the knowledge, skills and attitudes that will prepare our young people for these changing global trends.

iii) **Promote individual development and self-fulfilment**

Education should provide opportunities for the fullest development of individual talents and personality. It should help children to develop their potential interests and abilities. A vital aspect of individual development is the building of character.

iv) **Promote sound moral and religious values.**

Education should provide for the development of knowledge, skills and attitudes that will enhance the acquisition of sound moral values and help children to grow up into self-disciplined, self-reliant and integrated citizens.

v) **Promote social equality and responsibility.**

Education should promote social equality and foster a sense of social responsibility within an education system which provides equal educational opportunities for all. It should give all children varied and challenging opportunities for collective activities and corporate social service irrespective of gender, ability or geographical environment.

vi) **Promote respect for and development of Kenya's rich and varied cultures.**

Education should instil in the youth of Kenya an understanding of past and present cultures and their valid place in contemporary society. Children should be able to blend the best of traditional values with the changing requirements that must follow rapid development in order to build a stable and modern society.

vii) **Promote international consciousness and foster positive attitudes towards other nations.**

Kenya is part of the international community. It is part of the complicated and interdependent network of peoples and nations. Education should therefore lead the youth of the country to accept membership of this international community with all the obligations and responsibilities, rights and benefits that this membership entails.

viii) **Promote positive attitudes towards good health and environmental protection.**

Education should inculcate in young people the value of good health in order for them to avoid indulging in activities that will lead to physical or mental ill health. It should foster positive attitudes towards environmental development and conservation. It should lead the youth of Kenya to appreciate the need for a healthy environment.

LEVEL LEARNING OUTCOMES FOR JUNIOR SCHOOL

By end of Junior School, the learner should be able to:

1. Apply literacy, numeracy and logical thinking skills for appropriate self-expression.
2. Communicate effectively, verbally and non-verbally, in diverse contexts.
3. Demonstrate social skills, and spiritual and moral values for peaceful co-existence.
4. Explore, manipulate, manage and conserve the environment effectively for learning and sustainable development.
5. Practise relevant hygiene, sanitation and nutrition skills to promote health.
6. Demonstrate ethical behaviour and exhibit good citizenship as a civic responsibility.
7. Appreciate the country's rich and diverse cultural heritage for harmonious coexistence.
8. Manage pertinent and contemporary issues in society effectively.
9. Apply digital literacy skills for communication and learning.

ESSENCE STATEMENT

Integrated Science is a new learning area that enables learners to apply distinctive ways of logical valuing, thinking and working to understand natural phenomena in the biological, physical and technological world. The learning area is expected to create a scientific culture that inculcates scientific literacy to enable learners to make informed choices in their personal lives and approach life challenges in a systematic and logical manner. The inclusion of Integrated Science is therefore a deliberate effort to enhance the level of scientific literacy of all learners and equip them with the relevant basic integrated scientific knowledge, skills, values and attitudes needed for their own survival and/or career development. Concepts in Integrated Science are presented as units within which there are specific strands that build on the competencies acquired in Science and Technology at Upper Primary level. The emphasis of science education at lower secondary levels is to enhance learners' scientific thinking through learning activities that involve the basic science process skills.

Integrated Science provides the learner with the basic requisite skills, knowledge, values and attitudes necessary for specialisation in the STEM pathway at senior school level. The rationale for inclusion of Integrated Science is anchored on the Kenya Vision 2030, Sessional Papers No. 14 of 2012, and No. 1 of 2019, which all underscore the importance of science, technology and innovation in education and training. Integrated Science is taught through inquiry-based learning approaches with emphasis on the 5Es: engagement, exploration, explanation, elaboration and evaluation

As learners with hearing impairments engage in integrated science learning, it is advisable that they be exposed to a variety of learning experiences. These experiences should include the use of visual aids such as maps, charts, pictures, photographs, and realia, as well as interactions with and field trips. Additionally, learners with hearing impairments should be guided in pairs or groups during different learning activities to provide peer support and mentorship. To effectively cater to both categories of learners—those who are Hard of Hearing and those who are Deaf—the teacher should use proper articulation of signs with correct mouth movement while facilitating learning.

SUBJECT GENERAL LEARNING OUTCOMES

By the end of Junior School, the learner should be able to:

1. Acquire sufficient scientific knowledge, skills, values and attitudes to make informed choices on career pathways at Senior School and for everyday use, further education and training.
2. Select, improvise and safely use basic scientific apparatus, materials and chemicals effectively in everyday life.
3. Explore, manipulate, manage and conserve the environment for learning and sustainable development.
4. Practise relevant hygiene, sanitation and nutrition skills to promote good health.
5. Apply the understanding of body systems with a view to promoting and maintaining good health.
6. Develop capacity for scientific inquiry and problem solving in different situations.
7. Appreciate and use scientific principles and knowledge in everyday life.
8. Apply acquired scientific skills and knowledge to construct appropriate scientific devices from available resources.

SUMMARY OF STRANDS AND SUB STRANDS

Strands	Sub Strands	Suggested Number of Lessons
1.0 Mixtures, Elements and Compounds	1.1 Elements and Compounds	18
	1.2 Physical and chemical changes	22
	1.3 Classes of fire	20
2.0 Living things and the Environment	2.1 The Cell	20
	2.2 Movement of materials in and out of the cell	16
	2.3 Reproduction in human beings	18
3.0 Force and Energy	3.1. Transformation of Energy	20
	3.2. Pressure	16
Total Number of Lessons		**150**

STRAND 1.0: MIXTURES, ELEMENTS AND COMPOUNDS

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
1.0 Mixtures, Elements and Compounds	**1.1 Elements and Compounds (18 lessons)** ● *Relationship between atoms, elements, molecules and compounds* ● *symbols of common elements (oxygen, carbon, hydrogen, nitrogen, iron, aluminium, copper, silver, gold, chlorine,*	By the end of the sub-strand, the learner should be able to: a) sign words related to elements and compounds for effective communication, b) explain the relationship between an atom, an element, a molecule and a compound, c) assign symbols to elements for effective communication, d) write word equations to represent reactions of elements to form compounds,	● In groups, learners are guided to search for the meaning and sign of the words related to elements and compounds from print and digital media. Ensure that learners observe proper cyber ethics while conducting online searches. ● in pairs, learners are guided to fingerspell and sign words related to elements and compounds. In the absence of conventional signs, the learner is guided to create and harmonise meaningful signs for communication purposes.	1. Why is it important to use symbols for representing elements in day-to-day life? 2. How do element symbols contribu to clear and conc communication?

	sodium, mercury, lead) ● *word equations for reactions of elements to form compounds (sodium chloride, water, carbon dioxide, copper oxide, aluminium oxide)* ● *uses of some common elements in the society (jewellery, construction, electricity, food nutrients, minerals elements, medals*	e) outline the applications of common elements in the society, f) appreciate the information on packaging labels of commonly consumed substances.	● in groups, learners are guided to discuss the meaning of atoms, elements, molecules and compounds and make summary notes. ensure proper seating arrangement that allows learners to have a face-to-face conversation. ● in groups, learners are guided to sample labelled containers of different substances, identify and record the elements or compounds on the containers. ● in groups, learners are guided to use print and non-print media to find the symbols of elements identified from the containers. ● in pairs, learners prepare charts and deliver class presentations on selected elements using symbols.	

			Ensure learners with hearing difficulties are seated at the front in order to make use of their residual hearing and lip read. ● in groups, learners are guided to prepare charts of elements with their symbols and display them in the class for peer review. ● in purposive groups, learners are guided to write word equations to represent reactions of selected elements to form compounds *(sodium chloride, water, carbon dioxide, copper oxide, aluminium oxide).* ● in groups, the learners are guided to identify elements in selected compounds with peers (*compounds with only two elements).*	

			in groups, learners are guided to use digital devices or print media to explore the application of common elements and compounds in society and present them in plenary (*jewellery, construction, electricity, food nutrients, mineral elements, medals among others*). **HINT**: For experiments, guide the learner to: ● Identify and assemble reagents, apparatus, and chemicals to be used in the experiment. ● Observe a demonstration, signed video, video with captions, or animations on how to experiment. ● Experiment, making observations and recording them.	

			● in pairs or groups, discuss the observations and draw inferences from them.	

Core competencies to be developed:

- Learning to learn: The learner reflects on their own experiences as they identify elements and compounds on labels of containers.
- Communication and collaboration: The learner acquires writing skills as they write clearly and correctly the symbols of elements, compounds, and word equations.

Pertinent and Contemporary Issues (PCIs):

- Safety and security: The learner exercises cyber security measures as they use digital devices to explore the importance of common elements and compounds in society.

Values:

- Unity: The learner cooperates with others to identify elements and compounds from sample labelled containers of different substances.
- Integrity: The learner portrays honesty as they work out word equations to represent reactions of selected elements to form compounds

Link to other subjects:

- The learner is able to relate knowledge of common elements and compounds, such as table salt and baking powder, as food additives—a concept used in Agriculture and Nutrition.

Suggested Learning Resources

- Digital Devices
- Print media (charts, pictures, journals, magazines)
- Laboratory Apparatus and Equipment
- Science specific signs dictionary
- Coursebooks

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
1.0. Mixtures, Elements and Compounds	**1.2 Physical and chemical changes (**22 lessons) ● *kinetic theory of matter* ● *heating curve* ● *Effects of impurities on boiling point and melting point.* ● *physical and chemical changes (both temporary and permanent changes)* ● *applications of physical and chemical*	By the end of the sub-strand, the learner should be able to: a) sign words related to physical and chemical changes for effective communication, describe the characteristics of particles in the three states of matter, b) explain the effects of impurities on the boiling point and melting point of a substance, c) distinguish between physical and chemical changes in substances, d) outline applications of change of state of	● in groups, learners are guided to search for the meaning and sign of the words related to physical and chemical changes from digital and print media. Ensure that learners observe proper cyber ethics while conducting online searches, ● in pairs, learners practise fingerspelling and signing of the words related to physical and chemical changes. In the absence of some signs, learners are guided to create and harmonise meaningful signs for communication purposes. ● in groups, learners are guided to sit near a screen to watch a captioned video/ animation on the movement of particles in the different states of matter. Ensure the video is watched with pauses to allow learners to	1. How does the movement of particles in matter affect its physical properties? 2. How do impurities impact the boiling point and melting point of a substance?

	changes in day to day life	matter in day-to-day life, e) appreciate the applications of change of state of matter in day-to-day life.	make summarised notes. ● in groups, learners are guided to discuss the characteristics of particles in the three states of matter. Ensure proper seating arrangement that allows learners to have a face-to-face conversation. ● in groups, learners prepare charts and make presentations on the characteristics of particles in the three states of matter, (kinetic theory of matter). Learners with hearing difficulties are seated at the front to enable them to lip read, make use of their residual hearing and sometimes respond to the facilitator using speech. ● in groups, learners observe a demonstration on diffusion in liquids for example, water and ink to illustrate kinetic theory of matter. ● in groups, learners are guided to perform experiments to demonstrate diffusion in liquids, for example, water and ink to	

			illustrate kinetic theory of matter. ● in groups, learners are guided to carry out simple experiments to determine the boiling and melting points of pure and impure substances. ● in pairs, learners are guided to draw the heating curve and discuss the trends. ● in groups, learners are guided to discuss the effects of impurities on boiling point and melting point. ● in groups, learners are guided to carry out simple experiments to demonstrate physical changes, temporary chemical changes, and permanent changes in substances. ● in groups, learners are guided to make observations and correct inferences from the experiment. ● in purposive groups, learners are guided to discuss the applications of change of state of matter in day-to-day life. ensure learners are seated in an appropriate arrangement that supports the use	

			of bilingual communication.	

Core competencies to be developed:

- Critical thinking and problem solving: The learner develops active signing skills as they keenly observe and follow instructions to carry out experiments to determine the boiling and melting points of pure and impure substances.
- Digital literacy: The learner interacts with digital technology as they use digital devices to play and observe videos and animations showing movement of particles in the different states of matter.

Pertinent and Contemporary Issues (PCIs):

Disaster risk reduction: The learner observes safety while carrying out simple experiments to determine the boiling and melting points of pure and impure substances with peers.

Values:

- Unity: The learner cooperates with peers as they carry out simple experiments to determine the boiling and melting points of pure and impure substances.
- Responsibility: The learner observes safety precautions as they carry out simple experiments to determine the boiling and melting points of pure and impure substances.

Link to other subjects:

The learner can relate the knowledge of food preservation by cooling, a concept used in **Agriculture and Nutrition** to conserve resources.

Suggested Learning Resources

- Digital Devices
- Print media (charts, pictures, journals, magazines)
- Laboratory Apparatus and Equipment
- Coursebooks
- Science specific signs dictionary

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
1.0 Mixtures, Elements, and Compounds	**1.3 Classes of fire. (12 Lessons)** ● *Causes of fire (classes of fire),* ● *Fire triangle and Fire control (breaking the fire triangle and use of fire extinguishers),* ● *Dangers of fires.*	By the end of the sub-strand, the learner should be able to: a) sign words related to fire for effective communication, b) identify causes of fire in nature, c) explain the role of the fire triangle in the spread of fire, d) describe ways of controlling fires in nature, e) acknowledge the dangers of fires in nature.	● In groups, learners are guided to search for the meaning and sign of the words related to fire from digital and print media. Ensure that learners observe proper cyber ethics while conducting online searches. ● in pairs, learners practise fingerspelling and signing the words related to fire. In the absence of conventional signs, learners are guided to create and harmonise meaningful signs for communication purposes. ● in groups, learners are guided to discuss the possible causes of fire in	1. What are the dangers of fire in nature? 2. How do effective fire control methods contribute to environmental preservation?

			nature. Ensure proper a proper seating arrangement that allows learners to have a face-to-face conversation. ● in groups, learners are guided to use print and digital media to search for the roles of the fire triangle in the spread of fire. ● in groups, learners are guided to discuss the role of the fire triangle in the spread of fire. Learners to be seated in an appropriate arrangement that supports the use of bilingual communication. ● in pairs, learners brainstorm on the different classes of fire and make summary notes. Ensure that learners who are hard of hearing are paired with those who are	

			deaf to enhance total communication and lip-reading. ● in groups, learners are guided to engage a resource person on the role of the fire triangle in the spread of fire. ● in groups, learners are guided to discuss the dangers of fires in the environment. ● in pairs, learners are guided to practise fire control measures. (*breaking the fire triangle and use of fire extinguishers*). ● in groups, learners are guided to use print and digital media to search for the rights to safety and access to information on flammable substances and make a presentation for peer review.	

			• in groups, learners are guided to discuss rights to safety and access to information on flammable substances. • in groups, learners are guided to use digital devices or print media to search for fire control measures. • in purposive groups, learners are guided to prepare charts and make a class presentation on fire control measures. **Project** learner is guided to prepare posters on classes of fires and their control measures and hang at school, home and neighbouring markets.	
Core competencies to be developed: • Communication and collaboration: The learner acquires teamwork skills as the learners prepare posters on classes of fires and their control measures in groups. • Citizenship: Learner develops active community life skills while making posters on classes of fires and their control				

measures and hanging at school, home and neighbouring markets.
Pertinent and Contemporary Issues (PCIs: Disaster risk Reduction: Learner practises fire control measures with peers and prepares posters on classes of fires and their control measures and hang at school, home and neighbouring markets.
Values: ● Respect: The learner appreciates diverse opinions during group discussion to classify fire according to the cause and suggest control measures. ● Responsibility: The learner observes safety precautions when dealing with fires and flammable materials while practicing fire control measures with peers.
Link to other subjects The learner can relate the firefighting techniques used in Pre -Technical Studies as some of the ways of controlling fire in nature.
Suggested Learning Resources ● Digital Devices ● Science-specific signs dictionary ● Print media (charts, pictures, journals, magazines) ● Laboratory Apparatus and Equipment ● Coursebooks

Assessment Rubrics				
Level / **Indicators**	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Ability to sign terms related to physical and chemical changes.	The learner signs terms related to physical and chemical changes with exceptional accuracy demonstrating signing proficiency	The learner signs terms related to physical and chemical changes accurately conveying the intended meaning.	The learner signs terms related to physical and chemical changes with noticeable errors and inconsistencies in articulation.	The learner signs terms related to physical and chemical changes inaccurately and lack clarity in articulation.
Ability to assign symbols to elements.	The learner assigns symbols to all elements provided correctly and systematically.	The learner assigns symbols to all elements provided correctly.	The learner assigns symbols to most of the elements provided correctly.	The learner assigns symbols to a few elements provided correctly.
Ability to write word equations for reactions of elements to form compounds.	The learner writes word equations for all given reactions correctly giving illustrations.	The learner writes word equations for all given reactions correctly.	The learner writes word equations for most of the reactions correctly.	The learner writes word equations for a few reactions correctly.
Ability to describe the characteristics of particles in the three states of matter.	The learner describes the characteristics of particles in all the three states comprehensively.	The learner describes the characteristics of particles in all the three states of matter correctly.	The learner describes the characteristics of particles in the two states of matter correctly.	The learner describes the characteristics of particles in one state of matter correctly.

Ability to distinguish between physical and chemical changes.	The learner distinguishes between physical and chemical changes elaborately comprehensively.	The learner distinguishes between physical and chemical changes correctly.	The learner distinguishes between physical and chemical changes partially.	The learner partially distinguishes between physical and chemical changes leaving some points.
Ability to outline applications of physical and chemical changes.	The learner outlines applications of physical and chemical changes exhaustively.	The learner outlines applications of physical and chemical changes correctly	The learner partially outlines most of the applications of physical and chemical changes correctly.	The learner outlines a few applications of physical and chemical changes correctly.
Ability to identify classes of fires in nature.	The learner identifies all classes of fires in nature exhaustively.	The learner identifies all the classes of fire in nature correctly.	The learner identifies most of the classes of fire in nature correctly.	The learner identifies a few classes of fire in nature correctly
Ability to describe ways of controlling fires.	The learner describes ways of controlling all classes comprehensively.	The learner describes ways of controlling all classes of fires correctly.	The learner describes ways of controlling most of the classes of fires correctly.	The learner describes ways of controlling a few classes of fires correctly.

STRAND 2.0: LIVING THINGS AND THEIR ENVIRONMENT

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
2.0 Living Things and their Environment	**2.1 The Cell (20 lessons)** ● *Definition of the cell* ● *Cell structure as seen under a light microscope (plant and animal cells)* ● *Preparation of temporary slides of plant cells* ● *magnification of cells seen under the light microscope*	By the end of the sub-strand, the learner should be able to: a) sign words related to the cell for effective communication, b) describe the structure of plant and animal cells as observed under a light microscope, c) describe the functions of components of a cell as seen under the light microscope, d) compare plant and animal cells as observed under a light microscope, e) determine the magnification of cells seen under the light microscope,	● In groups, learners are guided to search for the meaning and sign of the words related to the cell using digital and print media. ensure that learners observe proper cyber ethics while conducting online searches. ● in pairs, learners practise fingerspelling and signing the words related to the cell. pair learners who are hard of hearing with those who are deaf to enhance total communication and lip-reading. ● in groups, learners are guided to prepare, mount, observe, and draw plant cells as seen under a light microscope, (*include a reminder on how to use and care for a light*	1.Why is it important to learn signs of words related to the cell? 2.How do plant and animal cells differ? 3.Why do we assess the magnified scale when studying cells under a microscope?

		f) appreciate that all living things are made of microscopic units.	*microscope)* ● in groups, learners are guided to prepare charts and deliver a class presentation on structure of the plant cell. ● in groups, learner is guided to observe, draw and label animal cells on permanent slides as seen under the light microscope, ● in groups, learners are guided to discuss the structure of the animal cell and make summary notes. any mistakes made after the presentation to be corrected. ● in groups, learners are guided to observe the components of the cell using a light microscope. ● in groups, learners are guided to prepare, mount, observe and draw plant cells as seen	

			under a light microscope. (*include how to use and care for a light microscope).* ● In groups, learners are guided to observe charts and other reference material to get information on the functions of different components of a cell as seen under the light microscope. ● In purposive groups, learners are guided to observe, draw and label the animal cell as seen under light microscope. In pairs, learners discuss the differences between plant and animal cells as seen under a light microscope. Ensure they are seated appropriately to allow them to have a face-to-face conversation. ● In groups, learners are guided to search on how to calculate	

			magnification at various objective lenses of the light microscope from print media. ● In purposive groups, learners practise calculations on magnification at various objective lenses of the light microscope. **HINT:** For experiments, guide the learner to: a) identify and assemble reagents, apparatus, and chemicals to be used in the experiment. b) observe a demonstration, signed video, video with captions, or animations on how to conduct the experiment. c) conduct the experiment, making observations and recording them. d) in pairs or groups, discuss the observations and draw inferences from them.	

Core competencies to be developed:

- Learning to learn: The learner acquires the skill of reflection on own work skills as the learner prepares, mounts, observes and draws plant cells as seen under a light microscope.
- Critical thinking and problem solving: The learner develops active listening and communication skills as the learner follows simple instructions to calculate magnification at various objective lenses of the light microscope.

Pertinent and Contemporary Issues (PCIs)

- Environmental Education and Climate Change: The learner safely uses and disposes of used specimens and used scalpels.

Values:

- Unity: The learner displays team spirit as they prepare, mount, observe and draw plant cells as seen under a light microscope.
- Responsibility: The learner takes care of the microscope as they use permanent slides to observe, draw and label animal cells as seen under the light microscope

Link to other subjects:

The learner is able to apply arithmetic skills from Mathematics to calculate the magnification of cells as observed under a light microscope.

Suggested Learning Resources

- Digital Devices
- Print media (charts, pictures, journals, magazines)
- Laboratory Apparatus and Equipment
- Science specific signs dictionary
- Coursebooks
- Mounted slides

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
2.0 Living Things and their Environment	**2.2 Movement of materials in and out of the cell (16 lessons)** ● Diffusion and Osmosis ● Demonstration of diffusion and osmosis ● Role of diffusion and osmosis in living things *(Absorption of water, nutrients in the intestines, gases in the lungs)*	By the end of the sub strand, the learner should be able to; a) sign the words related to the movement of materials in and out of the cell, b) outline the process of diffusion and osmosis in cells, c) demonstrate the process of osmosis in living things, d) explain the role of diffusion and osmosis in living things, e) appreciate the importance of diffusion and osmosis in living things.	● In groups, learners are guided to use print or digital media to search for the signs of the words related to the movement of materials in and out of the cell. *(osmosis, diffusion, visking tubing, semi-permeable).* Ensure that learners observe proper cyber ethics while conducting online searches. ● In pairs, learners practise fingerspelling and signing of the identified words. Pair learners who are hard of with those who are deaf to enhance total communication and lip-reading. ● In groups, learners are guided to watch a demonstration by a teacher	1. How do materials move in and out of a cell? 2. Why do materials move in and out of the cell?

			on the processes involved in movement of materials in and out of a cell. ● in groups, learners are guided to set-up experiments to demonstrate diffusion of materials in plant materials and share their findings with peers. ● in groups, learners are guided to use print media to search for the explanations on the processes involved in the movement of materials in and out of the cell. ● in purposive groups, learners are guided to carry out experiments to demonstrate semi-permeability of the cell membrane using a visking tubing. ● in groups, learners are guided to set-up and run experiments to	

			demonstrate osmosis using plant tissues and share their findings with peers. ● in groups, learners are guided to search for information on the roles of diffusion and osmosis in living things using print and non-print media. ● in groups, learners discuss the roles of diffusion and osmosis in living things and make a class presentation. *(absorption of water, nutrients in the intestines, gases in the lungs).*	
Core competencies to be developed: ● Communication and collaboration: The learner develops writing skills as the learner writes clearly and correctly while recording findings from experiments to demonstrate osmosis using plant tissues and visking tubing. ● Creativity and imagination**:** Experimenting skills are developed as the learner sets-up and runs experiments to demonstrate osmosis using plant tissues.				
Values: ● Respect: The learner appreciates the opinions of peers when discussing the roles of diffusion and osmosis in living things. ● Responsibility: The learner plays assigned roles while carrying out experiments to demonstrate semi-permeability				

of the cell membrane.
Pertinent and Contemporary Issues (PCIs) Environmental Education and Climate Change: The learner handles wastes of plant materials from experiments to demonstrate osmosis.
Link to other subjects: ● The learner is able to improve signing skills, a **KSL** concept, as they practice fingerspelling and signing words related to the movement of materials in and out of the cell. ● The information on diffusion and osmosis is linked to the absorption of water and mineral salts from the soil by crops in Agriculture and Nutrition.
Suggested Learning Resources ● Digital Devices ● Print media (charts, pictures, journals, magazines) ● Science specific signs dictionary ● Laboratory Apparatus and Equipment ● Coursebooks ● Visking tubing

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Living things and their Environment	**2.3 Reproduction in human beings** ● The menstrual cycle in human beings (omit details of hormonal control) ● Challenges related to the menstrual cycle (including *irregular periods, irregular bleeding, and pain)* ● Process of fertilisation and implantation (cover *fusion of sperm with the egg and implantation of the blastocyst in the uterus)* ***Note:*** *-details on the formation of blastocysts are not necessary* ● Symptoms and prevention of	By the end of the sub-strand the learner should be able to: a) sign words related to reproduction in human beings, b) outline the menstrual cycle and its related challenges in human beings, c) develop a plan to manage challenges related to the menstrual cycle in human beings, d) describe fertilisation and implantation in human beings, e) outline symptoms and prevention of common STIs in human beings,	● In groups, learners are guided to search for the meaning and sign of the words related to reproduction in human beings from print and digital media. Ensure that learners observe proper cyber ethics while conducting online searches. ● in pairs, learners are guided to fingerspell and sign words related to reproduction in human beings. ● in purposive groups, learners are guided to watch a captioned video and make summary notes on the human menstrual cycle. ● in groups, learners discuss and take note on the human menstrual cycle. *(Details of hormonal control not required; only mention).* Ensure proper seating	1. How does reproduction occur in human beings? 2. How best can challenges related to the menstrual cycle be managed?

	common STIs *(HIV& Aids, Gonorrhoea, Syphilis, Herpes - Avoid details of causative agent*) **(18 Lessons)**	f) appreciate the need for a healthy reproductive system.	arrangement that allows learners to have a face-to-face conversation. ● in pairs learners are guided to search for information from print or non-print media on challenges related to the menstrual cycle and discuss with peers. Pair learners who are hard of hearing with those who are deaf to enhance total communication and lip-reading. ● in groups, learners discuss management of challenges related to the menstrual cycle and share experiences with peers. (Include *irregular periods, irregular bleeding, pains*, a*mong other common challenges).* in purposive groups, learners are guided to study illustrations/ charts/ models	

			on fertilisation and implantation. ● In groups, learners are guided to engage a resource person on symptoms of common STIs and their prevention. ● In groups, learners are guided to discuss and make summary notes on the common symptoms of common STIs and their prevention, discuss *(HIV-Aids, gonorrhoea, Syphilis, Herpes - Avoid details of causative agent*). ● In groups, learners are guided to prepare charts and make class presentations on symptoms of common STIs and their prevention and make a class presentation. Ensure proper seating arrangement that allows	

			learners to have a face-to-face conversation.	

Core competencies to be developed:

- Learning to learn: The learner organises their learning while searching for information from print and non-print materials on symptoms of common STIs and their prevention.
- Self-efficacy: The learner appreciates and successfully manages challenges related to the menstrual cycle.

Values:

- Love: The learner shows empathy and embraces those with menstrual challenges.
- Respect: The learner shows open mindedness while discussing symptoms of common STIs and their prevention.

Pertinent and Contemporary Issues (PCIs):

- Health promotion issues the learner discusses challenges related to the menstrual cycle and prevention of common STIs.

Links to other learning areas:

The learner is able to enhance expressive skills used in **KSL** as they practise fingerspelling and signing words related to reproduction in human beings.

Suggested Learning Resources:

- Digital Devices
- Resource person
- Science-specific signs dictionary
- Print media (charts, pictures, journals, magazines)
- Laboratory Apparatus and Equipment
- Coursebooks
- Models on fertilisation and implantation

Suggested Assessment Rubric				
Levels / **Indicator**	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Ability to sign terms related to movement of materials in and out of the cell.	The learner signs terms related to movement of materials in and out of the cell with exceptional accuracy demonstrating signing proficiency.	The learner signs terms related to movement of materials in and out of the cell accurately conveying the intended meaning clearly.	The learner signs terms related to movement of materials in and out of the cell with noticeable errors and inconsistencies in articulation.	The learner signs terms related to movement of materials in and out of the cell inaccurately and lack clarity in articulation.
Ability to compare plant and animal cells as observed under a light microscope.	The learner compares plant and animal cells as observed under a light microscope comprehensively.	The learner compares plant and animal cells as observed under a light microscope.	The learner partially compares plant and animal cells as observed under a light microscope.	The learner too partially compares plant and animal cells as observed under a light microscope leaving out some points.
Ability to explain the role of diffusion and osmosis in living things.	The learner explains the role of diffusion and osmosis in living things comprehensively.	The learner explains the role of diffusion and osmosis in living things.	The learner explains the role of diffusion and osmosis in living things partially.	The learner explains the role of diffusion or osmosis in living things partially leaving out some key points.
Ability to demonstrate diffusion and osmosis in living things.	The learner demonstrates diffusion and osmosis in living things systematically.	The learner demonstrates diffusion and osmosis in living things.	The learner partially demonstrates diffusion and osmosis in living things.	The learner partially demonstrates diffusion or osmosis in living things.
Ability to outline the	The learner outlines the	The learner outlines the	The learner partially	The learner partially

menstrual cycle and its related challenges in human beings.	menstrual cycle and its related challenges in human beings comprehensively.	menstrual cycle and its related challenges in human beings.	outlines the menstrual cycle and its related challenges in human beings.	outlines the menstrual cycle or its related challenges in human beings.
Ability to develop a plan to manage challenges related to the menstrual cycle in human beings	The learner develops a plan to manage challenges related to the menstrual cycle in human beings demonstrating a deep understanding of the various challenges and offers innovative and effective solutions.	The learner develops a plan to manage challenges related to menstrual cycle in human beings showing a good understanding of common challenges and provides effective and practical solutions.	The learner develops a plan to manage challenges related to the menstrual cycle in human beings identifying common challenges and suggests simple and practical solutions.	The learner develops a plan to manage challenges related to menstrual cycle in human beings identifying only a few challenges and provides basic solutions.

STRAND 3.0: FORCE AND ENERGY

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
3.0 Force and energy	**3.1 Transformation of energy (20 lessons)** ● *forms of energy in nature,* ● *renewable and non-renewable energy sources,* ● *energy transformations in nature,* ● *safety measures associated with energy transformation,*	By the end of the sub strand, the learner should be able to; a) sign words related to transformation of energy in nature, b) identify forms of energy in nature, c) classify energy sources into renewable and non-renewable, d) demonstrate energy transformations in nature, e) describe safety measures associated with energy transformation, f) appreciate the applications of energy	● In groups, learners are guided to search for the meaning and sign of the words related to transformation of energy in nature from digital and print media. Ensure that learners observe proper cyber ethics while conducting online searches. ● In pairs, learners practise fingerspelling and signing words related to transformation of energy in nature. In the absence of conventional signs, learners are guided to harmonise meaningful signs for communication purposes. ● In groups, learners are guided to discuss with peers and identify forms of energy found in nature. *(light, heat,*	1. What are the sources of energy in the environment? 2. How is energy transformation applied in day-to-day life?

	● *appreciate the applications of energy transformation in day- to- day life.*	transformation in day-to- day life.	*potential, kinetic, gravitational, electrical energy, sound energy, chemical energy, nuclear or atomic energy).* ● In groups, learners are guided to prepare charts and make a class presentation on forms of energy found in nature. *(light, heat, potential, kinetic, gravitational, electrical energy, sound energy, chemical energy, nuclear or atomic energy).* ● In groups, learners are guided to observe a simulated demonstration on the process of energy transformation in day-to-day life. ● In pairs, learners demonstrate the processes of energy transformation in day-to-day life. (*electrical to heat, chemical to electrical, mechanical to electrical, electrical to light, electrical to*	

			sound and potential to kinetic). Ensure the learners are guided to use personal protective equipment to avoid injuries. ● In groups, learners use digital or print media to search for, discuss and classify energy sources in nature *(renewable/clean/green energy, non-renewable sources).* ● In groups, learners prepare charts and make presentations on classification of sources of energy in nature. *(renewable/clean/green energy, non-renewable sources).* ● In groups, learners engage a resource person on examples and applications of energy transformation processes in day-to-day life. (*Electric heaters, steam engines, fuel cells, burning of wood, electric lamps, piezoelectric,*	

			photosynthesis in plants, microphones, windmills, electric generators, hydroelectric dams, thermocouples, geothermal power plants, a falling object and rubbing both hands, bulbs, diodes, microphone, solar panel, dynamo, motor). Ensure learners are provided with sign language interpretation during the visit. ● In pairs, the learners use magazine cut-outs to prepare a portfolio on common energy transformation processes and display them in class for peer review. ● In groups, learners take a school excursion to identify and observe common energy transformation processes as they occur. ● In groups, learners use digital or print media to search for information on safety measures	

			associated with energy transformation and strategies of mitigating them. (*Relate to road accidents*; *K.E to P.E; action and reaction, accidents caused by fire, electricity, and health hazard from bright light, loud sound*). Ensure learners observe cyber ethics as they do the search. **HINT:** For experiments, guide the learner to: ● Identify and assemble apparatus to be used in the experiment. ● Observe a demonstration, signed video, video with captions, or animations on how to conduct the experiment. ● Conduct the experiment, making observations and recording them. ● In pairs or groups, discuss the	

			observations and draw inferences from them.	

Core competencies to be developed:

- Digital literacy: The learner develops the skill of interacting with technology while searching for and discussing examples and applications of energy transformations processes in day-to-day life
- Critical thinking and problem solving: The learner explores problems and creates different solutions as they discuss examples and applications of energy transformations processes in day-to-day life using solar energy.
- Creativity and imagination: The learner develops the skills of open-mindedness and creativity while experimenting with ideas to test workability as they demonstrate the processes of energy transformation in day-to-day life (use of biomass).

Pertinent and Contemporary Issues (PCIs):

- Internet safety and security: The learner develops awareness of online safety as they search for and discuss examples and applications of energy transformation processes in day-to-day life.

Values:

- Social justice: The learner exercises cooperation as they use digital or print media to search for, discuss, and classify energy sources in nature.
- Unity: The learner cooperates and takes turns as they demonstrate the processes of energy transformation in day-to-day life in groups.

Link to other subjects:

- English: The learner applies effective communication as they discuss with peers and identify forms of energy found in nature.
- Agriculture and Nutrition: The learner relates the concept of energy transformation to cooking processes in day-to-day life.

Suggested Learning Resources:

- Resource person
- Digital Devices
- Science-specific signs dictionary

- Print media (charts, pictures, journals, magazines)
- Laboratory Apparatus and Equipment
- Coursebooks

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
3.0 Force and Energy	**3.2 Pressure (14 lessons)** ● pressure in solids and liquids, ● applications of pressure in solids and liquids, ● applications of pressure in solids and liquids	By the end of the sub strand, the learner should be able to: a) sign words related to pressure in solid and liquid, b) describe pressure in solids and liquids, c) demonstrate pressure in solids and liquids, d) identify applications of pressure in solids and liquids, e) appreciate the applications of pressure in solids and liquids.	● In groups, learners are guided to search for the meaning and sign of the words related to pressure in solid and liquid from digital and print media. (*Pressure, force, area, depth, Pascal, Nm^2)* Ensure that learners observe proper cyber ethics while conducting online searches. ● In pairs, learners practise fingerspelling and signing words related to pressure in solid and liquid. In the absence of conventional signs, learners are guided to create and harmonise meaningful signs for communication purposes. ● In groups, learners are guided to discuss with peers the meaning of pressure and make summarised notes. Ensure proper seating arrangement that allows learners to have a face-to-face conversation.	1. How is the knowledge of pressure used in day-to-day activities? 2. How does describing pressure in solids and liquids facilitate its application in various real-world scenarios?

			● In groups, learners are guided to carry out activities to demonstrate pressure exerted by solids with different surface areas. *(Sharp and blunt cutting surfaces, stiletto shoes, fl*at *soled shoes, bricks on different surfaces, construction of water dams).* ● In groups, learners are guided to prepare charts and make a class presentation on pressure exerted by solids with different surface areas. Ensure that learners with hearing difficulties are seated at the front to Speak clearly and audibly while explaining information. ● In groups, learners are guided to observe a demonstration on pressure in liquids using appropriate material *(tin with vertical holes at different heights filled with water, water finding its own level in a container, the syringe, drinking straw).*	

			● In groups, learners are guided to use appropriate materials to demonstrate pressure in liquids *(tin with vertical holes at different heights filled with water, water finding its own level in a container, the syringe, drinking straw).* ● In groups, learners are guided to watch a captioned video on the relationship between pressure, area of contact and weight of objects in solids and height of liquid column. *(Qualitative treatment only).* Ensure learners do not sit more than 3 metres from the screen. Pause the video to allow learners to make summarised notes and to provide more explanations to support the video. ● In groups, learners are guided to use observations made on materials with different surface areas and liquid columns to discuss the relationship between	

			pressure, area of contact and weight of objects in solids and height of liquid column. *(qualitative treatment only).* ● In groups, learners are guided to prepare charts and make a class presentation on the relationship between pressure, area of contact and weight of objects in solids, and height of liquid column. *(qualitative treatment only).* ● In groups, learners are guided to use digital or print media to find applications of pressure in solids and liquids *(axle load capacity, syringe, high-heeled shoes, cutting tools, car brakes, siphons, bicycle pumps, drinking straws).* ● In groups, learners are guided to discuss applications of pressure in solids and liquids and make summarised notes. *(Axle load capacity, syringe, high-heeled shoes, cutting tools, car brakes, siphons, bicycle pumps, drinking*	

			straw). ● In purposive groups, learners are guided to prepare charts and make a classroom presentation on applications of pressure in solids and liquids and make summarised notes. *(Axle load capacity, syringe, high-heeled shoes, cutting tools, car brakes, siphons, bicycle pumps, drinking straw).* **NOTE:** For experiments, guide the learner to: ● Identify and assemble the apparatus to be used in the experiment. ● Observe a demonstration, signed video, video with captions, or animations on how to experiment. ● Experiment, making observations and recording them. ● In pairs or groups, discuss the observations and draw inferences	

			from them.	

Core competencies to be developed:

- Digital literacy: The learner interacts with technology while using digital or print media to search, identify and discuss the applications of pressure in solids and liquids.
- Creativity and imagination: The learner finds hidden patterns as they discuss the relationship between pressure, area of contact and weight of objects in solids and height of liquid column.

Pertinent and Contemporary Issues (PCIs):

Disaster risk reduction: The learner carries out activities to demonstrate pressure exerted by solids with different surface areas (*sharp and blunt cutting surfaces, stiletto shoes, fl*at *soled shoes, bricks on different surfaces)*

Values:

- Unity: The learner cooperates in using print and digital media to search for and discuss with peers the meaning of pressure.
- Integrity: The learner follows laid down procedures in using appropriate materials in groups to demonstrate pressure in liquids give fair results.

Link to other subjects:

Pre-Technical Studies: The learner relates concepts of pressure in construction.

Suggested Learning Resources:

- Digital Devices
- Print media (charts, pictures, journals, magazines)
- Laboratory Apparatus and Equipment
- Coursebooks
- Science specific signs dictionary

Assessment Rubric				
Level / **Indicator**	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Ability to sign terms related to transformation of energy and pressure.	The learner signs terms related to transformation of energy and pressure with exceptional accuracy demonstrating signing proficiency.	The learner signs terms related to transformation of energy and pressure accurately conveying the intended meaning clearly.	The learner signs terms related to transformation of energy and pressure with noticeable errors and inconsistencies in articulation.	The learner signs terms related to transformation of energy and pressure inaccurately and lack clarity in articulation.
Ability to classify energy sources into renewable or non-renewable.	The learner classifies energy sources into renewable or non-renewable exhaustively.	The learner classifies energy sources into renewable or non-renewable.	The learner classifies most energy sources into renewable or non-renewable.	The learner classifies a few energy sources into renewable or non-renewable.
Ability to demonstrate simple energy transformations.	The learner demonstrates simple energy transformations in details comprehensively.	The learner demonstrates simple energy transformations.	The learner partially demonstrates simple energy transformations.	The learner partially demonstrates simple energy transformations leaving some key points.
Ability to describe safety measures associated with energy	The learner describes safety measures associated with energy transformation	The learner describes all safety measures associated with energy transformation correctly.	The learner describes most of the safety measures associated with energy transformation	The learner describes a few safety measures associated with energy transformation correctly.

transformation.	comprehensively.		correctly.	
Ability to demonstrate pressure in solids and liquids.	The learner demonstrates pressure in solids and liquids consistently.	The learner demonstrates pressure in solids and liquids.	The learner partially demonstrates pressure in solids and liquids.	The learner partially demonstrates pressure in solids or liquids.
Ability to identify applications of pressure in solids and liquids.	The learner identifies applications of pressure in solids and liquids exhaustively.	The learner identifies applications of pressure in solids and liquids sufficiently.	The learner identifies most of the applications of pressure in solids and liquids.	The learner identifies few applications of pressure in solids or liquids.

APPENDIX 1: GUIDELINES FOR INTEGRATING COMMUNITY SERVICE LEARNING (CSL) PROJECT

Introduction

Community Service Learning (CSL) is an experiential learning strategy that integrates classroom learning and community service to enable learners reflect, experience and learn from the community. The CSL activity is hosted as a strand in Social Studies. The Social Studies teacher will be expected to coordinate teachers from other learning areas to carry out the integrated CSL class activity. Learners will be expected to apply knowledge, skills, attitudes and values from the different Learning Areas to undertake the integrated CSL class activity. Learners will undertake **one common** integrated class CSL activity following a 6-step milestone approach that is:

Milestone	**Description**
Milestone 1	**Problem Identification** Learners study their community to understand the challenges faced and their effects on community members.
Milestone 2	**Designing a solution** Learners create an intervention to address the challenge identified.
Milestone 3	**Planning for the Project** Learners share roles, create a list of activities to be undertaken, mobilise resources needed to create their intervention and set timelines for execution

Milestone 4	**Implementation** The learners execute the project and keep evidence of work done.
Milestone 5	Showcasing /Exhibition and Report Writing Exhibitions involve showcasing learners' project items to the community and reflecting on the feedback Learners write a report detailing their project activities and learnings from feedback
Milestone 6	**Reflection** Learners review all project work to learn from the challenges faced. They link project work with academic concepts, noting how the concepts enabled them to do their project as well as how the project helped to deepen learning of the academic concepts.

Assessment of CSL integrated Activity

Assessment for the integrated CSL activity will be conducted formatively. The assessment will consider both the process and end product. This entails assessing each of the milestone stages of the integrated CSL class activity. It will focus on 3 components namely: skills from various learning areas applied in carrying out the activity, core competencies developed and values nurtured.

APPENDIX II: LIST OF ASSESSMENT METHODS AND NON-FORMAL ACTIVITIES

Assessment Methods in Science	Non-Formal Activities
● Reflections ● Game Playing ● Pre-Post Testing ● Model Making ● Explorations ● Experiments ● Investigations ● Conventions, Conferences, and Debates ● Applications ● Teacher Observations ● Project ● Journals ● Portfolio ● Oral /signed Questions ● Learner's Profile ● Written Tests ● Anecdotal Records	● Visit the science historical sites. ● Use digital devices to conduct scientific research. ● Organising walks to have live learning experiences. ● Developing simple guidelines on how to identify and solve some community problems. ● Conducting science document analysis. ● Participating in talks on science concepts. ● Participating in science clubs and societies ● Attending and participating science and engineering fairs ● Organising and participating in exchange programmes. ● Making oral presentations and demonstrations on science issues.