ONE VISION EXAMINATION CENTRE

(OVEC)

(A Credible Private Examinations Consortium)

SCIENCE

2026/27 ACADEMIC YEAR

SCHEME OF LEARNING

FOR BASIC 7, 8 & 9

BASIC EDUCATION TERMINAL EXAMINATIONS

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OVEC PRINT

NOTE THE FOLLOWING

1. The Scheme of Learning has been prepared from the new GES Curriculum for Basic Schools. It is therefore advisable for teachers to be guided by the details given by the revised curriculum for effective teaching and learning.

2. Details of the sub-strands (previously called topics) have been expanded under indicators (previously called sub-topics) in the new curriculum.

3. The Scheme of Learning has been divided into three terms which ensures teachers complete the curriculum by the end of the academic year.

4. Pupils shall be examined based on the Scheme of Learning for that particular term. Therefore, teachers are advised to follow the Scheme of Learning provided.

5. At the JHS level it shall include questions from previous classes.

6. Teachers should make sure that the general aims of teaching the various subjects outlined in the curriculum are achieved at the end of the academic year.

BASIC 9 (SCIENCE) TERM TWO cont'd

SUB – STRAND	INDICATORS
AGRICULTURAL TOOLS	♦ Identify materials used in making simple agricultural tools ♦ Discuss and write activities involved in making simple agricultural tools ♦ Manufacture simple agricultural tools
WASTE MANAGEMENT	♦ Investigate the scientific methods used in waste management
HUMAN HEALTH	♦ Explain the symptoms, effects and prevention of some non-communicable diseases and analyse the risk factors associated with them ♦ Explain the nature of fungal diseases with special emphasis on ringworm/ candidiasis/ fingernail and toe nail infection their causes, symptoms, effects on humans and its prevention
SCIENCE AND INDUSTRY	♦ Investigate the scientific concepts, principles and processes involved in industries in their environment
CLIMATE CHANGE AND GREEN ECONOMY	♦ Examine various natural and human factors that influence climate change and green economy in their localities ♦ Assess data on climate change and green economy actions/ activities globally including Ghana and other countries.
UNDERSTANDING THE ENVIRONMENT	♦ Show and list the uses of different plant parts for agricultural and non- agricultural purposes ♦ Demonstrate the use of different plant parts for agricultural purposes and non-agricultural purposes

BASIC 9 (SCIENCE) TERM THREE

REVISION AND MOCK EXAMINATIONS

BASIC 9 (SCIENCE) TERM ONE cont'd

SUB – STRAND	INDICATORS
THE SOLAR SYSTEM	♦ Understanding the movement of non-planetary bodies in the solar system
ECOSYSTEM	♦ Conduct research into the composition of an ecosystem and discuss how the components depend on each other for survival
FARMING SYSTEMS	♦ List and explain the different plant and animal waste used in preparing different types of manure ♦ Demonstrate the preparation of different types of manure ♦ Prepare different types of manure

BASIC 9 (SCIENCE) TERM TWO

SUB – STRAND	INDICATORS
ENERGY	♦ List the ways to conserve energy. Examples: ironing in bulk, using efficient appliances and switching off appliances when not in use ♦ Explain the importance of energy conversation in daily life ♦ Demonstrate that light changes path when it travels from one medium to a different medium ♦ Describe how images are formed in camera ♦ Describe the formation of shadows ♦ Demonstrate the formation of an eclipse
ELECTRICITY AND ELECTRONICS	♦ Demonstrate forward bias and reverse and explain the relationship among the components, such as LEDs, Diodes, Resistors and Capacitors in a electronic circuit
CONVERSION AND CONSERVATION OF ENERGY	♦ Describe how energy can be converted from one form to another and how conversation of energy occurs ♦ Describe how conversion and conservation of energy are applied in life
FORCE AND MOTION	♦ Explain the concept of pressure and show how pressure relates to force: perform activities that work on the principle of pressure in the daily lives of humans ♦ Explain the humans importance of Newton's Third Law of Motion in life ♦ Demonstrate the application of Newton's Thirds Law of motion in life

BASIC 7 (SCIENCE) TERM ONE

STRAND: DIVERSITY OF MATTER	INDICATORS
Sub-strand 1: **Materials**	♦ Classifying materials in to liquids, solids and gas ♦ Importance of liquids in the life of humans ♦ Importance of specific solids to life ♦ Orderly arrangement of metals, non – metals and noble gases in the Periodic Table
Sub-strand 2: **Living cells**	♦ Structure and function of living cells of an animal ♦ Functions of each organelle in a plant cell.
STRAND: CYCLES	
Sub-strand 3: **Earth Science**	♦ How water cycle occurs as a repeated pattern in nature ♦ Importance of water cycle in nature
Sub-strand 4: **Life cycle of organisms**	♦ The life cycle of a housefly ♦ Activities of the housefly as a menace to humans and show how to reduce the activities eg. feeding, reproduction and any other
Sub-strand 5: **Crop Production**	♦ Plant nutrient sources available in a community and categorize them into organic and inorganic nutrient sources ♦ Physical characteristics of different plant nutrients (organic and inorganic) and how each is applied to plants in the field
Sub-strand 6: **Animal Production**	♦ Domestic animals in the community ♦ Differences and similarities among domestic animals ♦ Domestic and commercial uses of different types of animals ♦ Comparing the uses of different types of animals
STRAND: SYSTEMS	
Sub-strand 7: **The Human Body System**	♦ The concept of food and the need for humans to eat ♦ What happens to food at the stages of digestion in humans ♦ The end product od digestion of starchy, protein and oily foods and explain how absorption of the digested food occurs in humans

BASIC 7 (SCIENCE) TERM TWO

STRAND: SYSTEMS	INDICATORS
Sub-strand 8: **The Solar System**	♦ The inner planets of the solar system and describe their properties ♦ The properties and the relative motion of the planets Mercury and Venus
Sub-strand 9: **The Ecosystem**	♦ The components of ecosystems and identity the interactions within
Sub-strand 10: **Farming Systems**	♦ The differences among the various farming systems ♦ Different farming systems ♦ The usefulness of different farming systems
STRAND: FORCES AND ENERGY	
Sub-strand 1: **Energy**	♦ Various forms of energy and how they are related ♦ Daily application of forms of energy ♦ How heat is transferred in various media ♦ How light travels in a straight line
Sub-strand 2: **Electricity and electronics**	♦ Various forms of electricity generation ♦ The impact of electricity generation on the environment ♦ How to assemble basic electronic components in an electronic circuit ♦ Function of each electronic component and their interdependence with each other ♦ Function of each electronic component such as resistor, diode and inductor and their interdependence for the functioning of an electronic gadget
Sub-strand 3: **Conversion and conservation of energy**	♦ The principle underlying conservation and conversion of energy ♦ Conversion of energy into useable forms ♦ How energy could be conserved for future use in life
Sub-strand 4: **Force and motion**	♦ Understand that unbalanced forces acting on an object cause it to move ♦ Newton's First Law of motion ♦ Application of Newton's First Law of motion in life ♦ Demonstrate the behaviour of magnet and its use to life. ♦ Simple machines ♦ Types and function of levers ♦ Work input and output and efficiency as they apply to machines

BASIC 9 (SCIENCE) TERM ONE

SUB – STRAND	INDICATORS
MATERIALS	♦ Identify by name binary chemical compounds and discuss their uses ♦ Discuss the formation of binary chemical compounds ♦ Describe the characteristics of common acids, bases and salts ♦ Recognize that chemical bond results from the attraction between atoms in a compound
LIVING CELLS	♦ Discuss the concepts of specialized cells how they are formed in dicotyledonous plants and humans ♦ Examine the functions of specialized cells in dicotyledonous plants such as epidermal, guard cells, cambium, xylem in relation to the existence of the plants ♦ Examine the functions of specialized animal cells such as (nerve, blood cells and sperm cells) in relation to the existence of humans
EEARTH SCIENCES	♦ Explain the process of the nitrogen cycle as a repeated pattern in nature ♦ Describe the importance of the nitrogen to the environment
LIFE CYCLE OF ORGANISMS	♦ Describe the life cycle of the grasshopper as a form of incomplete metamorphosis ♦ Examine how the activities of the grasshopper effect humans
CROP PRODUCTION	♦ Observe and describe differences in maturation of crops grown in different soils and on different seed beds ♦ Observe and record the uses of different crops at different maturity stages ♦ Evaluate the importance of knowledge of maturity stages of different crops to human beings ♦ Observe and record the uses of different crops at different maturity stages ♦ Evaluate the importance of knowledge of the maturity stages of different crops to human beings
ANIMAL PRODUCTION	♦ List the ingredients and the method of preparation of different feed domestic and commercial animals ♦ Describe and select appropriate feed for different domestic and commercial animals ♦ Differentiate between different types of feed for different of domestic and commercial animals ♦ Perform the feeding of domestic and commercial animals
THE HUMAN BODY SYSTEM	♦ Explain the concept of the circulatory system, state the function of each part of the systems and the health challenges associated with it ♦ Explain the concept the concept of respiration and show how the respiratory and circulatory systems complement each other.

BAISC 8 (SCIENCE) TERM THREE

SUB – STRAND	INDICATORS
AGRICLCUTURAL TOOLS	♦ Show and discuss the use of basic and simple agricultural tools for basic on-farm activities ♦ Engage in the use of basic simple agricultural tools for basic farm activities
WASTE MANAGEMENT	♦ Explain sustainable waste management practices ♦ Apply knowledge of waste management practices to manage waste in a community
HUMAN HEALTH	♦ Explain the symptoms, effects and prevention of common communicate diseases ♦ Analyze the risk factors of communicable diseases ♦ Explain the nature bacterial diseases with special emphasis on food poisoning/ gonorrhoea/ meningitis their causes, symptoms, effects on humans and prevention
SCIENCE AND INDUSTRY	♦ Examine the relationship among science, technology, innovation and society
CLIMATE CHANGE AND GREEN ECONOMY	♦ Explain the concept of climate change and its effect on the environment ♦ Describe climate change and green economy actions
UNDERSTANING THE ENVIRONMENT	♦ Discuss physical properties of soils ♦ Analyse the physical properties of soils and soil water content and demonstrate their importance in crop production ♦ Observe and describe different types of rocks as origins of soils.

BASIC 7 (SCIENCE) TERM THREE

	INDICATORS
Sub-strand 5: **Agricultural tools**	♦ Basic rules in handling and maintaining simple agricultural tools ♦ Handling and maintenance of basic and simple agricultural tools in their community
STRAND: HUMANS AND THE ENVIRONMENT	
Sub-strand 6: **Waste management**	♦ Applying information from research on good management practices of waste to make to make the environment clean
Sub-strand 7: **Human health**	♦ Relationship between food nutrients and common deficiency diseases and how they affect humans ♦ Explain the nature of viral diseases with special emphasis on corona virus (COVID-19) /Ebola/H1N1 disease its causes, symptoms, effects on humans and its prevention
Sub-strand 8: **Science and Industry**	♦ How careers in science can improve human conditions and relate these careers to the work of great national and international scientist and science educators
Sub-strand 9: **Climate change and green economy**	♦ Information on ways sustainable energy choices and scientific ideas are to protect the environment
Sub-strand 10: **Understanding the environment**	♦ Different types of plants and animals that live in different land forms such as plateau plain, mountain valley and others (with emphasis on land forms in Ghana) ♦ Nature of associations that exist among plants in different landforms and their mechanisms for survival

BASIC 8 (SCIENCE) TERM ONE

SUB – STRAND	INDICATORS
MATERIALS	♦ Identify types of mixtures by name and characteristics ♦ Design and perform processes for separating kinds of mixtures ♦ Describe atoms as composed of sub-atomic particles ♦ Explain the arrangement of elements in terms of the number of protons in the nuclei of atoms of each element
LIVING CELLS	♦ Examine and describe the structure of prokaryotic and eukaryotic cells ♦ Classify organisms (plants or animals) as prokaryotic or eukaryotic based on the type of cells they are made of
EARTH SCIENCE	♦ Explain the process of carbon cycle ♦ Describe the role of the carbon cycle to the environment
LIFE CYCLE OF ORGANISMS	♦ Describe the life cycle and economic importance of the Anopheles mosquito ♦ Discus the impact of the Anopheles mosquito on humans and how it can be controlled
CROP PRODUCTION	♦ Explore the different seed beds for planting crops in your community ♦ Plant different types of crops on different seed beds ♦ Compare and contrast the differences in height, size and flowering of crops grown in different seed beds
ANIMAL PRODUCTION	♦ Compare and contrast the different types of feed for different types of animals ♦ Explain the importance of water and animal feed to the growth of animals
THE HUMAN BODY SYSTEM	♦ Identify parts of a mammalian tooth ♦ Discuss the functions of the different types of teeth as incisors, canines, premolars and molars ♦ Explain the causes and prevention of tooth and gum decay

BASIC 8 (SCIENCE) TERM TWO

SUB – STRAND	INDICATORS
THE SOLAR SYSTEM	♦ Identify the outer planets of the solar system and describe their properties
ECOSYSTEM	♦ Explore the feeding relationships within an ecosystem
FARMING SYSTEMS	♦ Identify and describe the types of crops, animals and land combinations for the different farming systems ♦ Discuss the usefulness of the different crops and animals involved in the different farming systems
ENERGY	♦ Describe energy conversion ♦ Discuss the importance of conversion of energy ♦ Describe renewable and non-renewable forms of energy ♦ Demonstrate how to manage sources of renewable energy sustainably ♦ Discuss the differences and the relationship between heat and temperature in the environment
ELECTRICITY AND ELECTRONICS	♦ Explain how electricity transmission occurs ♦ Demonstrate the charging and discharging action of a capacitor in a DC electric circuit
CONVERSION AND CONSERVATION OF ENERGY	♦ Explain the importance of conversion of energy and energy conversion in daily life
FORCE AND MOTION	♦ Demonstrate simple ways of making magnets and show magnetic force can be applied in domestic and industrial activities ♦ Explain the relationship between magnetic force and Newton 2nd Law of motion: and show Laws application of life ♦ Identify complex machines and describe their functions in life