

TERM: Sept – Dec 2020

DEPARTMENT: Science

SUBJECT/ FORM : Biology / Form 5S

TEACHER: S. Ogeerally

Topics aligned with CSEC Syllabus objectives . Syllabus can be downloaded for free from CXC website .

<b>WEEK</b>	<b>TOPICS</b>
<b>1</b>	<b>GROWTH</b>  -Growth curves of different organisms  -Ways of measuring growth - Changes in length, mass or surface area of roots, leaves, or other suitable material or counting the number of leaves in a named plant from seedling to fruiting plant.  - Advantages and disadvantages of methods of measuring growth  -Cell division in meristems of shoots and roots . Process of growth to include cell division, cell elongation  -Comparison of growth in plants and animals
<b>WEEK</b>	<b>TOPICS</b>
<b>2</b>	<b>SENSITIVITY AND CO ORDINATION</b> -Definitions of stimulus, response, receptors, effectors . -Sense organs in animals and plants -The response of green plants to unilateral stimuli of light, touch and gravity -The response of invertebrates to variations in light intensities, temperature and moisture -Use of choice chambers to determine effect of stimuli on invertebrates -Importance of stimuli for the survival of organisms

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<b>WEEK</b>	<b>TOPICS</b>
<b>3</b>	<b>SENSITIVITY AND CO ORDINATION</b> -Components of the human nervous system ( CNS and PNS) -Relationship between the receptor, the central nervous system and the effector -Structure of sensory ,motor and relay neurones -Simple reflex action - Use of simple flow diagrams to show the pathway along which the impulse travels in the reflex. - Describe the knee jerk reflex and the pupil reflex pathways  -Functions of the main regions of the brain -Effect of alcohol on the brain  -The physiological, social and economic effects of drug abuse (eg: alcohol, illegal drugs and prescription drugs)
<b>WEEK</b>	<b>TOPICS</b>
<b>4</b>	<b>SENSITIVITY AND CO ORDINATION</b> -Structure and functions of parts of the human eye  - Function of rods and cones as specialized receptor cells  - Effect of bright light and dim light  - Accommodation  - Cataracts and glaucoma
<b>WEEK</b>	<b>TOPICS</b>

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<b>5</b>	<b>SENSITIVITY AND CO ORDINATION</b> -Sight defects and their corrections -Cataracts and glaucoma  -Endocrine and exocrine glands -The location of endocrine glands in the body -Roles of the hormones that these glands produce
<b>WEEK</b>	<b>TOPICS</b>
<b>6</b>	<b>SENSITIVITY AND CO ORDINATION</b> -Differences between nervous and chemical messages  -Structure of the human skin and it's function in temperature regulation and protection.  -Skin care and the effect of chemicals. The importance of melanin and SPF (simple treatment only). The skin bleaching phenomenon.
<b>7</b>	<b>REPRODUCTION</b>  -Comparison of asexual and sexual reproduction  -Structure and function of the human male and female reproductive systems  -The menstrual cycle

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	-The role of hormones in the menstrual cycle
<b>8</b>	<b>REPRODUCTION</b>  -The roles of oestrogen and progesterone and their effect on pregnancy  -Mechanism for bringing gametes together and their fusion  -Implantation  -Development of the embryo (functions of the placenta, amnion and umbilical cord)
<b>WEEK</b>	<b>TOPICS</b>
<b>9</b>	<b>REPRODUCTION</b>  -Advantages and disadvantages of methods of birth control  -The transmission and control of Acquired Immune Deficiency Syndrome (AIDS) and Gonorrhoea  -Implications of sexually transmitted infections (STI's). Causative agents, prevention, treatment and control.  <b>REPRODUCTION IN PLANTS</b>  - The parts of a flower to their functions  - The structure of insect pollinated and wind pollinated flower and pollinating agents

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<b>WEEK</b>	<b>TOPICS</b>
<b>10</b>	<b>REPRODUCTION IN PLANTS</b>  -Distinguish between the processes of pollination and fertilisation;  -Pollination  - Cross and self pollination.  - Growth of pollen tube and fertilization  - Fruit and seed formation after fertilization  - Fruit structure and adaptations for fruit and seed dispersal. -Water, wind, mechanical and animal dispersal methods.  -The importance of dispersal.
<b>WEEK</b>	<b>TOPICS</b>
<b>11</b>	<b>DISEASE AND ITS IMPACT ON HUMANS</b>  - Definition of disease -Distinguish among pathogenic, deficiency, hereditary and physiological diseases (include examples of each)

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	<ul style="list-style-type: none"><li>- The treatment and control of the four main groups of disease ; malaria, dengue, yellow fever required.</li><li>- The role of diet and exercise in controlling physiological diseases: hypertension and diabetes to be included. Function of insulin and glucagon.</li></ul>
<b>12</b>	<b>DISEASE AND ITS IMPACT ON HUMANS</b> <ul style="list-style-type: none"><li>-Role of vectors in the transmission of pathogenic diseases</li><li>-The stages in the life cycle of a mosquito or housefly</li><li>-Appropriate methods of control of a named vector at each stage of their life cycle.</li></ul>
<b>13</b>	<b>DISEASE AND ITS IMPACT ON HUMANS</b> <ul style="list-style-type: none"><li>-The social, environmental and economic implications of plant and animal diseases</li></ul>