

ESSENCE STATEMENT

Biology is a branch of Science that deals with the study of life as manifested in life forms such as viruses, bacteria, fungi and complex organisms such as plants and animals. The interrelationships within, among them and with their environments ensure continuity of life. This depends on the working of this broad spectrum of organisms in relation to that of the humans.

The achievement of Vision 2030 greatly depends on Science, Technology and Innovation. For a breakthrough towards industrialisation, achievement of the desired economic growth targets, social and human capital development through education and training should be prioritised (Sessional Paper No.1 of 2005). This can be achieved by promoting the teaching of science and technology. Sessional paper No. 1 of 2019 also underscores the need for sustainable basic and higher education with emphasis on Science, Technology and Innovation (ST&I). This makes it necessary for Biology as a subject to be taught in Senior School as its content is needed for developing technologies that support humans and other life forms.

The Biology content presents basic knowledge for the learner to understand how the human body and other life systems work. The content provided empowers the learners to make informed decisions in promoting positive attitude towards their individual health, community and the environment for sustainable development.

Biology is a foundational subject for careers in Medicine, Agriculture, Marine Science, Anthropology, Environmental Studies and other related fields. The subject also enables learners to build relevant knowledge, skills and attitudes necessary for further education and training in the related careers.

Suggested pedagogical approaches include Inquiry Based Learning, Project Based Learning and Problem Based Learning as advocated by constructivist theory. The theory emphasizes that the learner is given an opportunity to learn through hands-on activities which develop practical life skills.

BIOLOGY GENERAL LEARNING OUTCOMES

By the end of the course the learner should be able to:

1. Develop relevant knowledge, skills and attitudes for further education and for training in biology related scientific fields;
2. Demonstrate an understanding of interrelationships among humans, other organisms and their environment and apply the knowledge to conserve nature;
3. Describe features of various groups of living organisms and identify unknown organisms using simple biological keys;
4. Apply the knowledge gained on human body systems and functions to improve the quality of life for self and the community while enhancing healthy living;
5. Design and carry out practical activities and projects that will enable them to understand biological concepts;
6. Demonstrate relevant technical skills and scientific knowledge necessary for socio-economic development;
7. Demonstrate resourcefulness in designing projects necessary for community service learning;
8. Communicate biological information in a precise, clear and logical manner;
9. Apply knowledge on plant and animal structure and functions to industrialization, innovation and sustainability of life;
10. Use knowledge gained to make informed decisions about scientifically-based personal and societal issues to solve emerging issues in health and environment.