

Biology

10th Grade Intl. [3 periods per week]

Ms. Athelia Edwards

Course Description

Students' knowledge of human physiological systems, the mechanisms of inheritance, species adaptation, biodiversity and the dynamic interactions within an organisms, as well as between species and with their environment, will be explored.

The course focuses on the demonstration of skills, as discussed below, thereby enabling students to become critical thinkers and inquirers who understand the value of developing scientific inquiry skills and their applications of knowledge based on valid and reliable evidence in real life situations.

Reflection is a key component in the learning process & will be evident throughout the program to facilitate evaluation and progress as a learner. Metacognition empowers students to distinguish between opinion, beliefs and scientific facts and their interplay in the construction of knowledge.

Students will be introduced to the IB Command terms, ATLs and standards of practice.

The skills that will be cultivated in this course include:

Criterion A: Knowing and understanding: Students develop scientific knowledge (facts, ideas, concepts, processes, laws, principles, models and theories) and apply it to solve problems and express scientifically supported judgements.

Criterion B: Inquiring and designing: Students develop intellectual and practical skills through designing, analyzing and performing scientific investigations.

Criterion C: Processing and evaluating: Students collect, process and interpret qualitative and/or quantitative data, and explain conclusions that have been appropriately reached.

Criterion D: Reflecting on the impacts of science. Students evaluate the implications of scientific developments and their applications to a specific problem or issue. Varied scientific language is applied to demonstrate understanding. Students become aware of the importance of documenting the work of others when communicating in science.

Timeline

Semester 1 concentrates on physiological processes in humans and the factors affecting human health and inheritance of characteristics, variation and selection through the lens of biodiversity and adaptations to survival.

Semester 2 explores ecosystems, the interactions between species and their impact on the environment. Biological processes in plants, e.g. photosynthesis and respiration will be explored through experimentation.

Resource: *Davis, A., & Deo, P. (2018). Biology: MYP by concept 4 & 5. London: Hodder Education, An Hachette UK Company.*