



In partnership with



## **SHELL STREAM CLUBS**

### **LEARNING OUTCOMES**

By participating in the club for the term (April- June 2022), students will cover the following topics and objectives in the specified subject areas:

#### **Arts**

*Topic: Careerscraft*

Students will:

- Be inspired to identify their own skills, attributes and interests, how they impact on career choices.
- Explore jobs of the past and why they no longer exist - investigate and evaluate the factors that may influence and shape occupations in the future.
- Develop knowledge and awareness of local, national and international labour markets.

#### **Technology**

*Topic: Web Page Design*

Students should be able to:

- Use a web design software to create a simple website.
  - Plan the website- Reasons for the website; intended audience; content of page and layout of the web page.
  - Create a simple web page - Choosing appropriate designs, inserting and adjusting text, uploading images and graphics

## **Mathematics**

*Topics: Statistics and Probability*

Students should be able to:

- Take discrete data and organize them into frequency tables.
- Use those tables to create charts or graphs of that data.
- Find mean, mode and median of data sets.
- Find the probability of events occurring based off tabulated or graphical data sets.

## **Biology**

*Topics: Natural and Artificial Selection, Genetic Engineering*

Students should be able to:

- Clearly define what natural and artificial selection are and state the advantages and disadvantages of both.
- Describe how genetic engineering can be used to change the traits of organisms.
- Define how robotics in Biology help advance genetic engineering.

## **Chemistry**

*Topics: Organic Chemistry*

Students should be able to:

- Deduce the Homologous Series of displayed organic compounds.
- Illustrate displayed structures of organic compounds.
- Name unbranched and branched organic compounds.
- Write chemical formulae for organic compounds.
- Define structural isomerism.
- Describe the organic reactions involved in soap making: Esterification and Saponification.

## Physics

*Topics: Energy and the conservation of energy.*

Students should be able to:

- Define energy and different forms of energy.
- State the Law of Conservation of energy and explain how energy changes from one form to another.
- Know the unit used to measure energy.

*Topics: KE and PE*

Students should be able to:

- Define KE and PE.
- Understand how KE and PE change from one form to another.
- Apply equations to calculate KE and PE.

*Topics: Power*

Students should be able to:

- Define Power and unit of Power.
- Explain the term efficiency and how to calculate efficiency.

*Topics: Hydrostatics*

Students should be able to:

- Define pressure and apply equation to calculate pressure.
- Relate the pressure at a point in a fluid to its depth and density.
- Apply Archimedes' principle to predict whether a body would float or sink in a given fluid.