

Pathfinder Engineering Honour

Presenter: Pam Catchpole



Name:-.....

Club:-

Completed:-

Engineering

Honour requirements



Presenter: Pam Catchpole Area Co-ordinator SEC

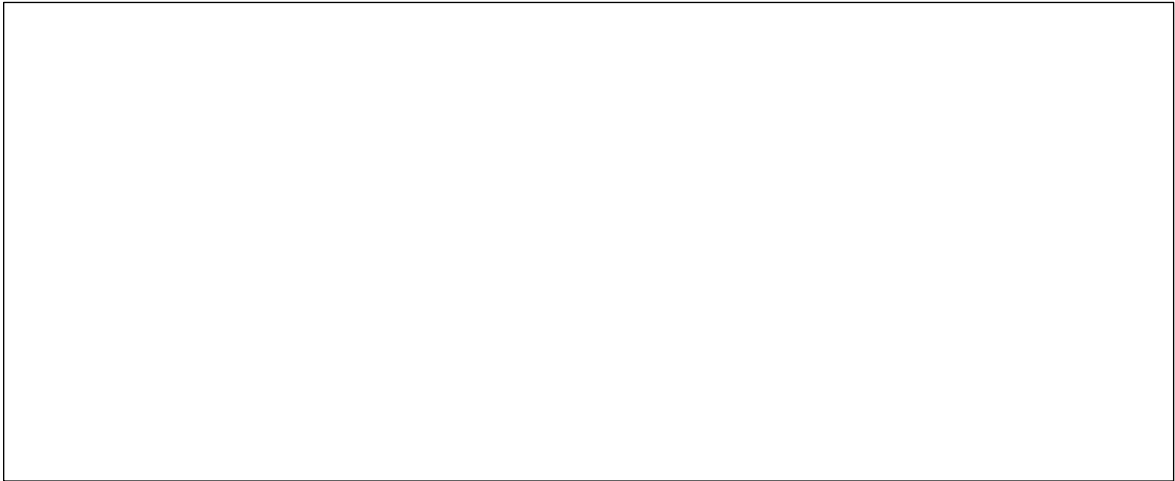
Theoretical

1. What is engineering?

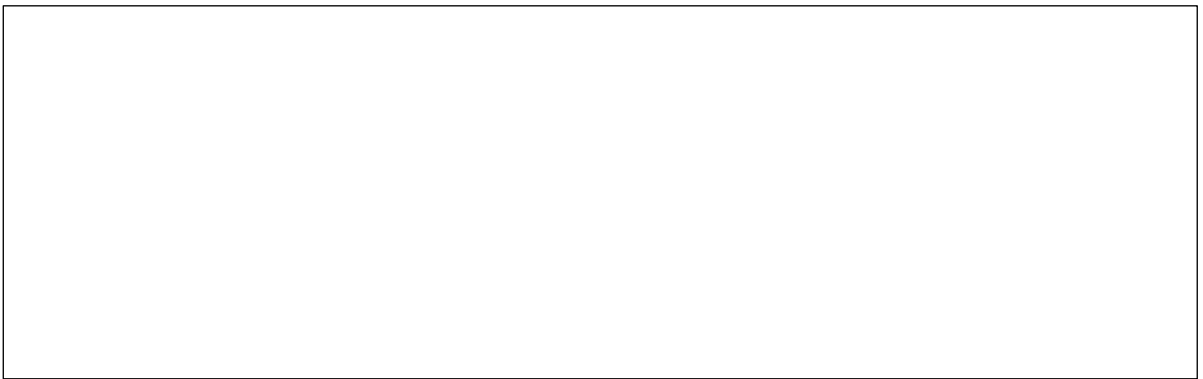
2. Define the following four branches of engineering.

Chemical engineering

Electrical engineering



Civil engineering



Mechanical engineering



3. Identify and define at least 15 additional disciplines of engineering

1. _____

2. _____

3. _____

7.

8.

12. _____

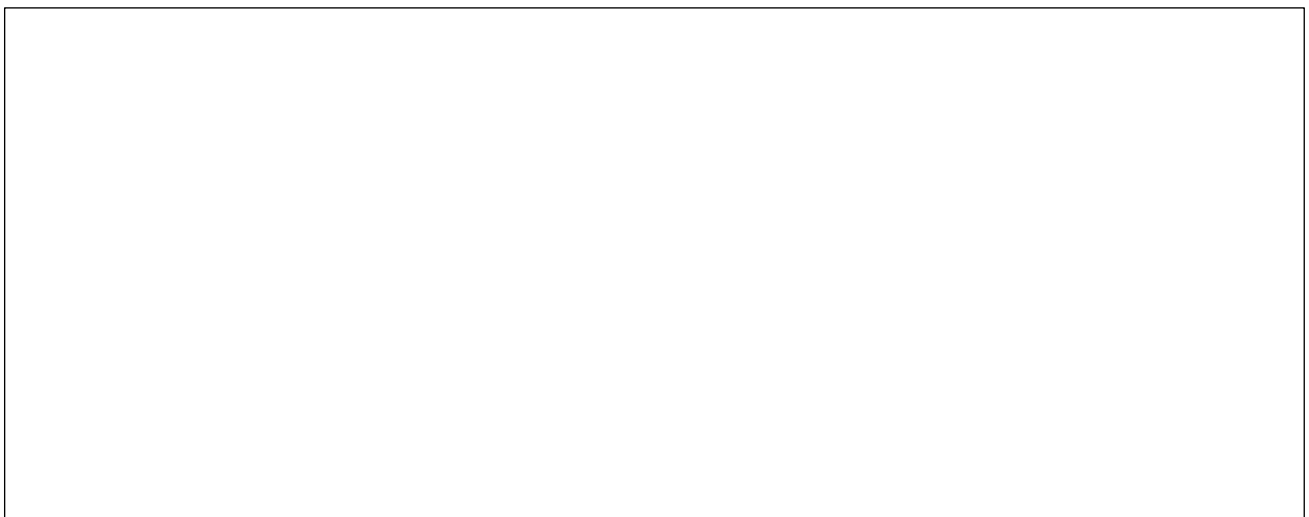
13. _____

14. _____

4. Explain the general responsibilities of an engineer



a career in engineering



6. How has the discipline of engineering contributed to society?



7. On your own or with a group, develop a chart board that outlines a brief history of a famous engineer, highlighting their contributions to society. Prepare and give an oral presentation on your findings (suggestion:- video on mobile and send to BUC)

You will need to add your chart board as an appendix this workbook.

8. Read Genesis 6. Discuss the biblical context of this chapter drawing comparisons to the field of engineering.

9. Identify 4 specific biblical engineering marvels that illustrate the art and importance of engineering

1. _____

2.

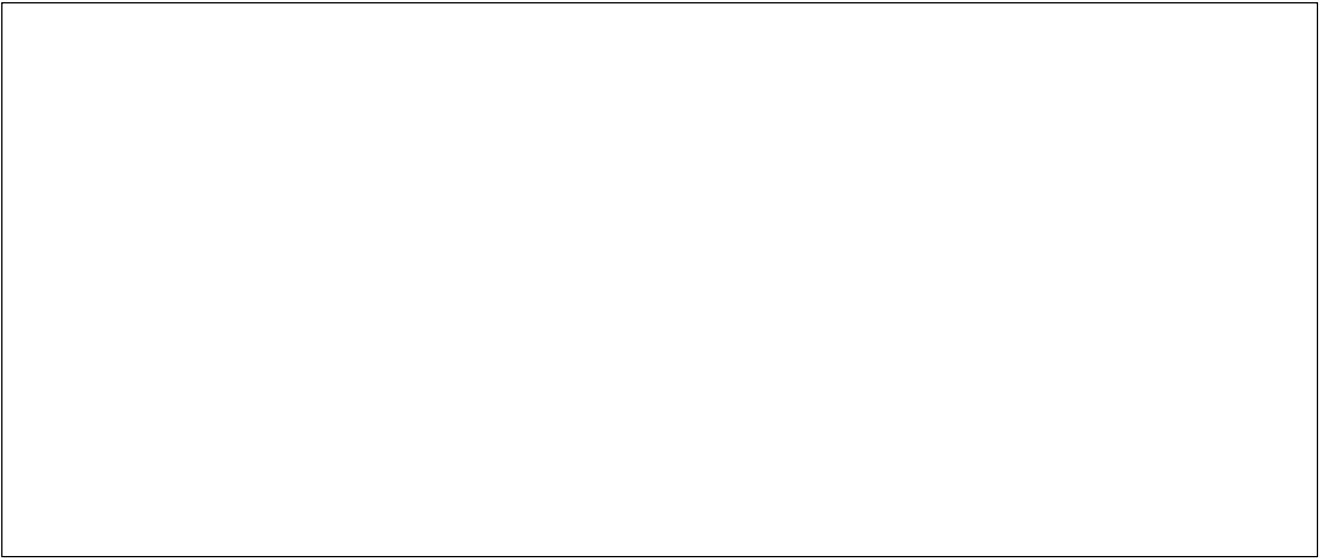
3.

4.

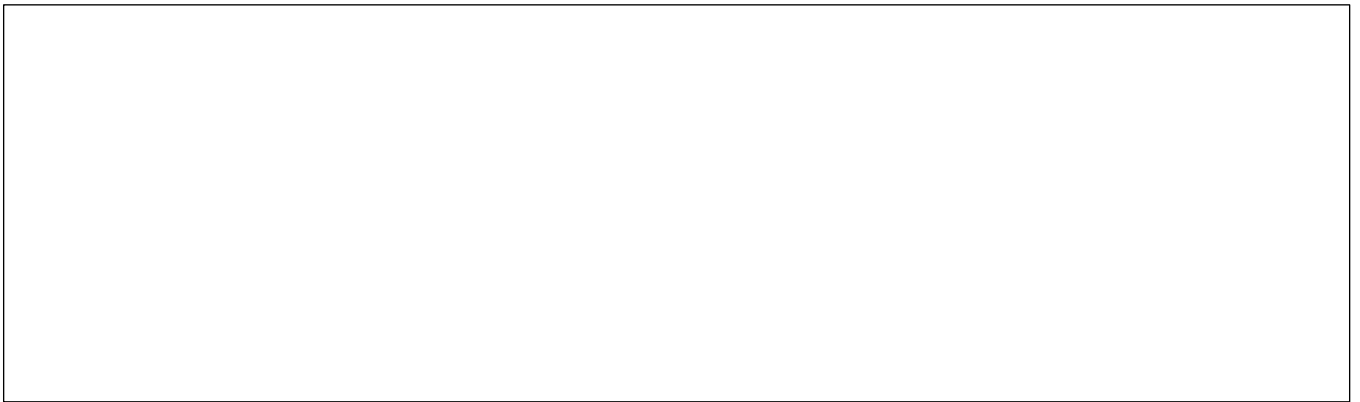
10. Define the following terms as it relates to the engineering discipline:-

CAD (computer aided design)

SIMULATION



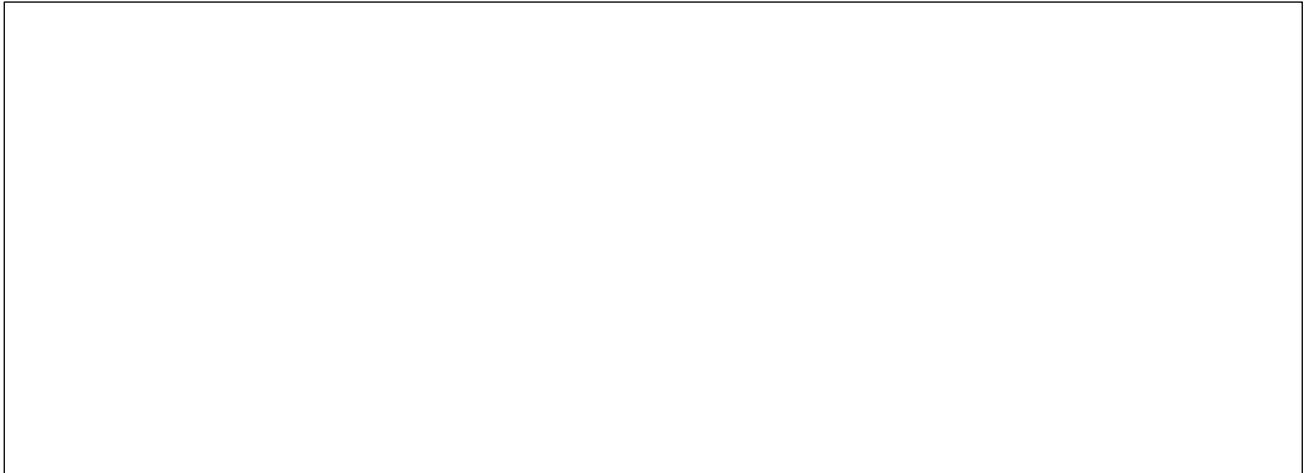
RENDERING



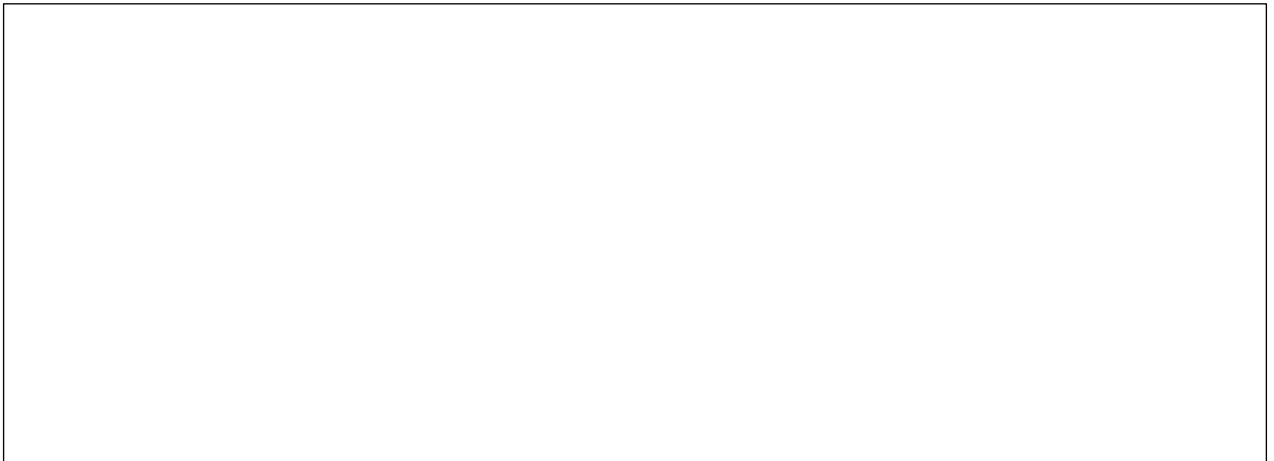
STEADY STATE



ELECTRICAL ENGINEERING



MECHANICAL ENGINEERING



CONSTRAINT



11. What is reverse engineering?

12. Give a real-world example of where reverse engineering is useful:

13. On your own or with a group, complete one of the following engineering projects, OR a project at your skill level.

- Build a paper plane – trimming and making adjustments for better flight.
- Build a compass using a box, nail and a magnet.
- Build a miniature dam using craft sticks and rocks.

My personal challenge is to build a bridge which will take the weight of a bag of sugar!