1. What is engineering?

2. Define the following four branches of engineering.
   • Chemical engineering

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

• Computer engineering

• Material engineering

• Process engineering

• Environmental engineering

• Structural engineering

• Power engineering
• Acoustical engineering

• Transport engineering

• Nuclear engineering

• Industrial engineering

• Biological engineering

• Textile engineering

• Energy engineering
4. Explain the general responsibilities of an engineer.

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

5. Discuss what type education is required for 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.

   Date completed _____________________________________________

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

   Date completed _____________________________________________

9. Identify four 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

    _________________________________________________________
    _________________________________________________________
    _________________________________________________________
11. What is reverse engineering?

12. Give a real world example 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, a nail and a magnet.
   - Build a miniature dam using popsicle sticks and rocks

Date completed __________________  Instructor’s Signature __________________