

Engineering



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.
 - 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.
8. Read Genesis 6. Discuss the biblical context of this chapter drawing comparisons to the field of engineering .
9. Identify four specific biblical engineering marvels that illustrate the art and importance of engineering.
10. Define the following terms as it relates to the engineering discipline.
 - CAD (Computer Aided Design)
 - Simulation
 - Rendering
 - Steady state
 - Constraint
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

Skill Level 2

New in 2014

Vocational
North American Division
2014 Update