_____
Pathfinder's Name

Engineering

❑ **1.** What is engineering?

_____

_____

_____

❑ **2.** Define the following four branches of engineering.

- Chemical engineering

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_____

_____

- Electrical engineering

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_____

- Civil engineering

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_____

_____

- Mechanical engineering

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_____

❑ **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 com parisons 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

_____

_____

_____

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

Date completed _____

Date completed _____ Instructor's Signature _____