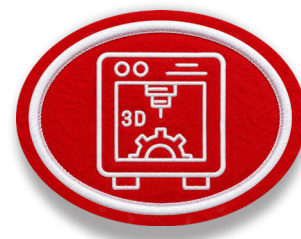


# 3D Printing

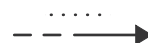
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1. Learn about the history of 3D printing and answer the following questions:
  - a. Who is considered the founder of 3D printing, in what year did they invent the process, where were they from, and what was the intended purpose?
  - b. Know the full names for the acronyms SLA, SLS, and FDM and describe the development of curing filaments.
  - c. Describe Dr. Adrian Bowyer's contribution to the first commercially available SLS printers sold in 2006.
2. Understand and be able to describe the following terms:
  - a. 3D modeling/Additive manufacturing
  - b. 3D printer
  - c. Trimming (leveling)
  - d. CAD/CAM
  - e. Cartesian
  - f. CNC
  - g. Extruder
  - h. Layer
  - i. Raft
  - j. Supports
3. Name at least four types of 3D printers and know the benefits of each type.
4. 3D printing technology is advancing each year. Research a current application where 3D printing has changed how something is done or expanded previous limitations. Provide a short presentation on this topic to explain the technology and why it is a beneficial advancement.
5. Complete the following projects on software and a printer of your choosing.
  - a. Download a file of your choosing and print it.
  - b. Take an object from your home, such as a drawer pull, machine part, etc. Create a file and print a duplicate part.
6. Do at least two of the following spiritual applications:
  - a. Prepare a devotional/essay on Genesis 2 when God formed a man and compare/ contrast to how one creates an object for 3D printing.
  - b. Use 3D printing skills for a benefit at church, such as printing sculptures to illustrate Daniel and Revelation stories, articles in the tabernacle, etc.
  - c. Use 3D printing skills as a witnessing project, such as inviting the community to the church for a class on 3D printing.
  - d. Use 3D printing skills to create useful objects and deliver them to those that need to know you and God cares about them, such as ergonomic or adaptive household replacement door handles.
  - e. Use 3D printing skills to create a prosthetic limb for a disabled animal.

## Skill Level 2

Vocational  
North American Division  
Original Honor 2026



**VOCATIONAL**

North American Division  
2026 Edition