

BEEP Virtual Content: 3D Printing- Medtronic

Name: _____

Date: _____



Content Overview

3D printing is a process by which an object or design is fabricated from a three dimensional computer file, typically from a computer aided design (CAD) program. The printing will then deposit, join, or solidify material depending on the type of printing and its application. Fused deposition modeling (FDM) is among the most common types of printing and has a low cost of materials and low price of entry. Go [here](#) to learn more!

Activity Questions

1. Where are Sammi's designs used in medicine?

- a) Operating rooms
- b) Research laboratories
- c) Outpatient clinics
- d) All of the above

2. List the steps of the design process Sammi explained

- _____
- _____
- _____
- _____

3. What are the two CAD programs that Samy mentioned and where has she used them?

4. **True / False:** The size of the triangles within a STL (STereoLithography) file dictates the resolution of a modeled object.

5. **True / False:** The assembly that Sammi describes is based around a bone anchor for the spine.

6. The two types of printers that Samy showed are FDM (fused deposition modeling) and SLA (stereolithography). The large first one and small third one are the FDM type while the second one is SLA. What was Samy's reason for using the SLA printer for the parts that had just finished printing?

7. What does Sammi use to clean the SLA printed parts before the final curing process?

8. What do you think was the most interesting part of Sammi's walkthrough of 3D design and printing? Explain below.

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