

# 3DU Curricula



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# Lesson #1

## Introduction Week: What are your 3D passions?

Suggested meeting time:

- 30-60min (may be combined with Lesson #2)

Before the meeting:

- Prepare 3D printed parts from a variety of systems that showcase the capabilities of 3D printing
- Start a print and have the 3D printer running during the start of the meeting.
- Watch videos of other (non-consumer) 3D printers in action

Guiding questions:

- What is your name? How would you describe yourself? What are three things you're passionate about?
- What do you and your 3DU club members hope to get out of the 3DU experience?

Materials:

- A device to take pictures
- Index cards
- Pens
- Copies of guidebook
- 3D printer
- 3D printed parts
- Flash drive w/ 3D print file(s)
- 3D printer footage
- **Featured 3D printed part: TBD**

Meeting Activities:

- Take a few minutes to create a name badge on an index card. Write your name and 3 things you are passionate about

- Gather in small groups and introduce yourself to your fellow club members. Learn each other's names and get to know each other.
- Share your reasons for joining 3DU with the group. Let people know what you're interested in and what you're passionate about

What will you have created by the end of your meeting?

- Name badge that lists 3 things you are passionate about
  - Bring this to future meetings so that everyone in the club knows your name and interests

After Lesson #1:

- Browse through 3D files repositories and/or 3D printing blogs to find designs that spark your passions/creativity/you would like to print

## **Lesson #2:**

### What makes a great print... great?

Suggested meeting time:

- 60-90 minutes (may be combined with Lesson #1)

Before the meeting:

- Review some 3D prints/files using a design-hosting website. Pick a favorite and spend some time considering what is was about the print/file that resonated with you.
- Does the print/file you picked have a great design or is it a “print worth sharing”? Why or why not? Be prepared to share your thoughts.

Guiding questions:

- What is your 3DU club’s definition of a “print worth sharing”? What are the qualities of good prints? Are good prints created by individuals or groups?

Materials:

- Poster paper to draw a concept map or visual that lists and connects the qualities that make a print worth sharing
- Pens, markers, tape
- (Feel free to use a computer or come up with another creative way to show this as well.)
- Computer and screen to show design-hosting websites
- 3D printer printing your design picked before the meeting
- Completed 3D print of your design you picked before the meeting

Meeting activities:

- Share which 3D files you thought were worth sharing and explain how and why the designs inspired you
- Discuss and list (as a group) the qualities that make a design worth sharing

- Translate your co-created list into a visual (infographic, picture, concept map) that conveys your club's shared definition of a "print worth sharing." This visual will serve as a guiding document for your club
- Find "great prints" by showcasing websites that host 3D designs (Cubify, Thingiverse, Youmagine etc.)

What will you have created at the end of your meeting?

- A visual that outlines and connects the qualities of prints worth sharing

After Lesson #2:

- Begin considering and prioritizing the prints/designs you hope to pursue/present/print in the remaining 3DU club meetings

## **Lesson #3:**

### Explore and declare your idea!

Suggested meeting time:

- 60 minutes

Before the meeting:

- Begin filling out your idea book. It's okay if you don't finish.

Guiding questions:

- Where can you look to find great ideas/designs/prints? Can you communicate the gist of your ideas to your fellow club members in one minute or less?
- How can you both give and receive meaningful feedback?
- If you have more than one idea/design/print, how will you prioritize your list?

Materials:

- Idea book(s)
- Stopwatch
- Computer and screen (to show 3D designs)

Meeting activities:

- Review your club's definition of a "print worth sharing"
- Present your ideas/designs/prints to fellow club members (and be conscientious of time)
  - Meet in groups and take turns showing designs/prints and getting feedback
  - Use your idea book to take notes on the feedback you get from your club members

What will you have created at the end of your meeting?

- One or more completed idea books
  - A list of 3D designs you would like to print

After Lesson #3:

- Show your idea/design/print to people outside of 3DU. Try presenting to a friend, parent, sibling or teacher

*From here on forward, the 3DU lesson plan will take a consumer-printer focus*

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