

## Backwards Design Template

### Identify Problem and Desired Transformation

**What content-based problem do you see in your students that you would you like to address?**

Students just want to use fun, new “toys” (3D Printing) but are not seeing content connection other than use of fun thing.

**What is the transformation in understanding that you would like to see in your students?**

I want students to see that these fun, new “toys” (3D Printing) can be used to further their understanding and concepts/ knowledge.



**What skills or understandings do you want your students to have as a result of the technology integration you propose?**

Math and Science and interconnected. Concepts should be understood that they not separate, but connect together to provide large picture.

**What questions will be used to frame this area of content (unit questions or big ideas)?**

How does 3D printing help you understand this Math Concept better than if you didn't use a 3D printer?  
How could a 3D printer help you understand this science/ math concept even more?

### Determine Acceptable Evidence

**What pedagogies do you think will work best given your choice of content and technologies? Why this choice over others?**

Students need to be involved in learning.  
Manipulations and hands-on tasks helps the students recall more as it targets other senses.  
Relating various disciplines will help make connections (technology and science, technology and math).

**What technology seems best suited for your problem? Why is this the best as opposed to other options?**

3D Printers, Blogs, Internet for research, 3Doodlers, 3D printing software such as TinkerCad and Blender.  
Thingiverse where students can find ideas to create or customize idea already created to make it their own.  
Kidblog for Blogs and Weebly for creating own website where students will develop own digital portfolio and classroom portfolio.

**How will you measure the impact of your technology integration on student learning (Surveys, interviews, observations, assessments, etc.)**

Create of projects/ designs using 3D printer that relates to content knowledge.  
3D printing Blogs on what they learned and how a 3D printer helped them experience learning better than without 3D printers.