

The background is a dark blue and purple gradient space scene. It features a large planet with horizontal stripes in the top left, a ringed planet in the top center, a small astronaut floating in the bottom center with a tether, and a cratered moon in the bottom right. The scene is filled with numerous small white stars and larger four-pointed starbursts. Abstract, wavy shapes in shades of purple and teal are scattered throughout the background.

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I will Integrate...

- Sketching
- 3D printing
- 3D Scanner
- Preform Software

CURRICULUM PLAN

8TH GRADE MATH



How will I integrate?

- Students will be in groups and each group will have to design and create their own creative aliens with different arts and craft materials, they will then scan, and using software prepare an appropriate STL file following rubric provided and print!

When will I apply...

- I wish to apply after covering geometric shapes and properties, eg volume, dimensions, surface area. Students will be able to implement these concepts into project, which will help enhance understanding about all topics at work. Best time to apply would be after STAAR exam.



Materials & Budget..

Equipment (\$1069)

- 3D printer (Flashforge Dreamer 3D Printer Single-extruder Printer with Clear Door and Rear Fans) ; \$599
- 3D systems sense handheld high resolution 3D scanner; \$470
- Computers (class set/ computer lab) with TinkerCad; Free



Consumables per class (\$69.52)

- Sandpaper \$8
- Acrylic paint \$10
- Arts and craft materials (playdough, pipe cleaners, pompoms) \$20
- Engineering graphing paper for sketches; \$7
- Spool ; \$24.52 each

- Activity will be done once a year and will be a 5 day project.
- Estimate of 5 classes and 20 students per class; 100 students will be affected



*Prices from Amazon.com



Why?

- Students will get to have fun sketching and creating their imaginative work; they will also be working around numbers and dimensions, at the same time problem solving to fit the rubric.
- This project will lead to higher student engagement, confidence and interest in technology, and better collaborative group work skills.

How will I measure?

- Time frame 5 days from start to finish of project! I will have a set of constraints in a rubric that must be met, sketches will also be graded. Arts and crafts model will be reviewed before scanned and printed.
- Students will have successfully printed their model by following the rubric & schedule provided.