

Grade 7

Distance Learning Module 4: Week of: 4/20/2020-4/24/2020

## CTE: Technology Explorations - 3D Modeling

### Targeted Goals from Stage 1: Desired Results

**Content Knowledge:** Design requires a great deal of precision and accuracy in creating a prototype, which means being able to fluently manipulate 3d modeling software and work in virtual 3D spaces.

**Vocabulary:** Placing, viewing, moving, rotating, sizing, grouping and aligning of objects.

**Skills:**

- Insert shapes on a new geometric plane while creating an object, using 3D modeling software.
- Create an object with a variety of features, using 3D modeling software.
- Group several shapes together while creating your object.
- Manipulate the orientation options of any given object, as needed.

**Expectation:** Students will continue their podcasting unit by making a podcast that expresses gratitude to someone.

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: Get more practice with essential Tinkercad functions by completing some slightly more advanced self-paced lessons.	Tinkercad  Students do the following activities: <ul style="list-style-type: none"><li>● Creating Holes</li><li>● Scale, Copy &amp; Paste</li><li>● Key Ring, Letters!</li><li>● Die on the Workplane</li></ul>	Teacher can moderate student progress via Tinkercad dashboard.
Tuesday: Get more practice with essential Tinkercad functions by completing some slightly more advanced self-paced lessons.	Tinkercad  Students do the following activities: <ul style="list-style-type: none"><li>● Creating Holes</li></ul>	Teacher can moderate student progress via Tinkercad dashboard.

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
	<ul style="list-style-type: none"> <li>• Scale, Copy &amp; Paste</li> <li>• Key Ring, Letters!</li> <li>• Die on the Workplane</li> </ul>	
<p>Wednesday</p> <ul style="list-style-type: none"> <li>• Watch videos posted to Google Classroom and respond to the question on the Classroom assignment.</li> </ul>	<p>How 3D printing is helping fight COVID-19</p> <p>World's First 3D Printed Heart</p> <p>Tortoise Gets New Lease on Life</p> <p>ICON 3D Printed Homes</p> <p>Google Classroom Question: Now that you have watched four short videos about current uses of 3D printing technology, answer the following questions:</p> <ol style="list-style-type: none"> <li>1) How can 3D printing technology help with solutions to some of the problems we face in our world.</li> <li>2) While 3D printing can help solve problems, what negative effects could 3D printing have on job availability and the economy.</li> </ol>	<ul style="list-style-type: none"> <li>• Google Classroom Question assignment completion.</li> </ul>
<p>Thursday</p> <ul style="list-style-type: none"> <li>• <b>Live Zoom Class discussion 9:30-10:00</b></li> <li>• Watch videos posted to Google Classroom and respond to the question on the Classroom assignment.</li> </ul>	<p>See Classroom Wednesday for Zoom URL.</p> <p>How 3D printing is helping fight COVID-19</p> <p>World's First 3D Printed Heart</p> <p>Tortoise Gets New Lease on Life</p> <p>ICON 3D Printed Homes</p> <p>Google Classroom Question: Now that you</p>	<ul style="list-style-type: none"> <li>• Zoom live attendance.</li> <li>• </li> <li>• Google Classroom Question assignment completion.</li> </ul>

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
	<p>have watched four short videos about current uses of 3D printing technology, answer the following questions:</p> <ul style="list-style-type: none"> <li>• How can 3D printing technology help with solutions to some of the problems we face in our world.</li> <li>• While 3D printing can help solve problems, what negative effects could 3D printing have on job availability and the economy.</li> </ul>	
<p>Friday</p> <ul style="list-style-type: none"> <li>• Get more practice with essential Tinkercad functions by completing some slightly more advanced self-paced lessons.</li> </ul>	<p>Tinkercad</p> <p>Students do the following activities:</p> <ul style="list-style-type: none"> <li>• Die from Scratch</li> <li>• Chess Pawn</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher can moderate student progress via Tinkercad dashboard.</li> </ul>

**Week criteria for success** (attach student checklists or rubrics): Completion of Google docs in Classroom. Rubrics will be available in Google Classroom.

- Students will successfully export and turn in their Gratitude podcasts.
- Ss will join Google Classroom and imagine the possibilities of 3D printing.
- Ss will create a TinkerCAD account and complete some basic 3D modeling functions.
- Ss will share their online learning experience, how things are going so far.

**Supportive resources and tutorials for the week** (plans for re-teaching): I will have my official office hours every day 1:00-2:00, when I will respond to student emails ASAP. But you can contact me at [kiefer.michael@madisonps.org](mailto:kiefer.michael@madisonps.org) any time of the day.

My video tutorials above can be viewed multiple times for students to re-teach themselves. I will have my official office hours every day 1:00-2:00, when I will respond to student emails ASAP. But you can contact me at [kiefer.michael@madisonps.org](mailto:kiefer.michael@madisonps.org) any time of the day.