

## Grade 8 Computer Science - *Modified from* [Unit 1 - 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:** CAD = computer aided design, workplane, 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:**

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday <ul style="list-style-type: none"><li>● <b>Live session with students using Zoom or Meet</b></li><li>● Get more practice with essential Tinkercad functions by completing some slightly more advanced self-paced lessons.</li></ul>	The live lesson will be used to field questions about yesterday and today's Tinkercad lesson.  Tinkercad  Students do the following activities: <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>
Tuesday <ul style="list-style-type: none"><li>● Model a detailed snowman with Tinkercad</li></ul>	<ul style="list-style-type: none"><li>● Watch teacher's video that models different techniques for modeling a detailed snowman</li></ul>	<ul style="list-style-type: none"><li>● Teacher can moderate student progress via Tinkercad dashboard.</li></ul>
Wednesday <ul style="list-style-type: none"><li>● Model a detailed snowman with Tinkercad</li></ul>	<ul style="list-style-type: none"><li>● Watch teacher's video that models different techniques for modeling a detailed snowman</li></ul>	<ul style="list-style-type: none"><li>● Teacher can moderate student progress via Tinkercad dashboard.</li></ul>

<p>Thursday</p> <ol style="list-style-type: none"> <li>1. Reflect on what you've learned to do with Tinkercad, and answer the following question: <ul style="list-style-type: none"> <li>• Now that you have been practicing your 3D modeling skills for the past 5 classes, which part of using Tinkercad do you find the most challenging? What do you want to get better at going forward?</li> </ul> </li> <li>2. Create a Tinkercad project for experimentation and play. This will be a space where you can create whatever you want to work on your modeling skills.</li> </ol>	<ul style="list-style-type: none"> <li>• Answer the Question on Google Classroom</li> </ul>	<ul style="list-style-type: none"> <li>• Google Classroom Question assignment completion.</li> <li>• Teacher can view students' independent projects via Tinkercad dashboard.</li> </ul>
<p>Friday</p> <p>Reflect on what you've learned to do with Tinkercad, and answer the following question:</p> <ul style="list-style-type: none"> <li>• Now that you have been practicing your 3D modeling skills for the past 5 classes, which part of using Tinkercad do you find the most challenging? What do you want to get better at going forward?</li> </ul>	<ul style="list-style-type: none"> <li>• Answer the Question on Google Classroom</li> </ul>	<ul style="list-style-type: none"> <li>• Google Classroom Question assignment completion.</li> <li>• Teacher can view students' independent projects via Tinkercad dashboard.</li> </ul>

**Week criteria for success** (attach student checklists or rubrics):

- Ss will complete some basic 3D modeling functions AND synthesize them to create well-designed models.
- Ss will consider the impact 3D printing has on our society by responding to a Question in Google Classroom.

**Supportive resources and tutorials for the week** (plans for re-teaching):

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.