

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)
<p>Monday</p> <ul style="list-style-type: none"> ● Live session with students using Zoom or Meet ● Get more practice with essential Tinkercad functions by completing some slightly more advanced self-paced lessons. 	<p>The live lesson will be used to field questions about yesterday and today’s Tinkercad lesson.</p> <p>Tinkercad</p> <p>Students do the following activities:</p> <ul style="list-style-type: none"> ● Die from Scratch ● Chess Pawn 	<ul style="list-style-type: none"> ● Teacher can moderate student progress via Tinkercad dashboard.
<p>Tuesday</p> <ul style="list-style-type: none"> ● Model a detailed snowman with Tinkercad 	<ul style="list-style-type: none"> ● Watch teacher’s video that models different techniques for modeling a detailed snowman 	<ul style="list-style-type: none"> ● Teacher can moderate student progress via Tinkercad dashboard.
<p>Wednesday</p> <ul style="list-style-type: none"> ● Model a detailed snowman with Tinkercad 	<ul style="list-style-type: none"> ● Watch teacher’s video that models different techniques for modeling a detailed snowman 	<ul style="list-style-type: none"> ● Teacher can moderate student progress via Tinkercad dashboard.

<p>Thursday</p> <ol style="list-style-type: none"> 1. Reflect on what you've learned to do with Tinkercad, and answer the following question: <ul style="list-style-type: none"> ● 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? 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. 	<ul style="list-style-type: none"> ● Answer the Question on Google Classroom 	<ul style="list-style-type: none"> ● Google Classroom Question assignment completion. ● Teacher can view students' independent projects via Tinkercad dashboard.
<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"> ● 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? 	<ul style="list-style-type: none"> ● Answer the Question on Google Classroom 	<ul style="list-style-type: none"> ● Google Classroom Question assignment completion. ● Teacher can view students' independent projects via Tinkercad dashboard.

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 any time of the day.