



Unit #2 – Computer Aided Design – Sketchup Project

TDJ3M –Technological Design, Grade 11

Project Description:

- **Google Sketchup** is a 3D modeling program designed for architects, civil engineers, filmmakers, game developers, and related professions
- It is designed to be easier to use than other 3D CAD programs
- In this project students will use **Google Sketchup** to recreate the **Technological Design Classroom** (room 130)
- The overall room **length, width** and **height** dimensions as well as the door positions **must** represent the **actual** room dimensions **BUT...** you can (**if you choose**) reorganize the classroom furniture to make a more efficient classroom layout
- The classroom dimensions are **52' long x 25' wide x 9' high**, the walls of the room are **6" thick**
- You will use the **Google Sketchup model library** to insert all classroom furniture such as chairs, desks, tables, computers etc... (you may add non-existing furniture to the room if you choose)
- Each student will submit **their own Google Sketchup** classroom design
- If you finish early, feel free to model the green room, the lab rooms and my office and storage room

Materials:

You will be provided with the following materials:

- Google Sketchup 7 (free version)
- Tape measure (if needed)

Web Resources:

<http://www.jcarron.com/Site/Courses/TDJ3M/googlesketchup-TDJ3M.html>

<http://sketchup.google.com/>

Steps:

1.	Start by drawing the outer walls of the room by using the Rectangle Tool . You can draw a rectangle 52' long x 25' wide . This rectangle represents the floor of the room.	/3
2.	Next use the Offset Tool to offset the rectangle to the outside by 6" (the thickness of the walls).	/3
3.	Use the Pull Tool to extrude the outer wall footprint surface 9' high (you should now see the four classroom walls).	/3
4.	Next use the Rectangle Tool again to draw an 88" high x 30" wide rectangle to represent a door opening and then the Cut Tool to cut through the walls to create the four separate door openings in the classroom.	/3
5.	Reposition the doors by selecting their edges and using the Move Tool to match the existing positions of the doors as close as possible to where they are in our classroom.	/3
6.	Next browse the Google Sketchup model library for the various classroom furniture items and position them throughout the room using the Move and Rotate Tools .	/3
7.	Use the Paint Bucket Tool to create realistic surface textures for the walls and furniture.	/3
8.	Add the overall length, width and height dimensions of the room by using the Dimension Tool .	/3
9.	If you finish early, feel free to model the green room, the lab rooms, my office and the storage room.	
10.	Save the Google Sketchup file containing all of the elements of the design to your X:\ drive folder when completed.	/3
11.	Marks will be awarded for efficient classroom designs, functionality, accuracy, aesthetics, work ethic, creativity, difficulty level, skill, etc.	/8

Deliverables, Due Dates and Marking Scheme:

Deliverable	Description	Due Date	Marks
Completed Sketchup File (Knowledge)	Your Sketchup file is to be submitted in your student folder on the X:\ drive	Tuesday, Sept. 21	/35
			Total /35