



Year 6 Computing

CAD: Lesson 2. Exploring TinkerCAD
Table and chairs task.

What is CAD?

CAD (computer-aided design) is the use of computer-based software to aid in design processes.

CAD software is frequently used by different types of engineers and designers. CAD software can be used to create two-dimensional (2-D) drawings or three-dimensional (3-D) models.

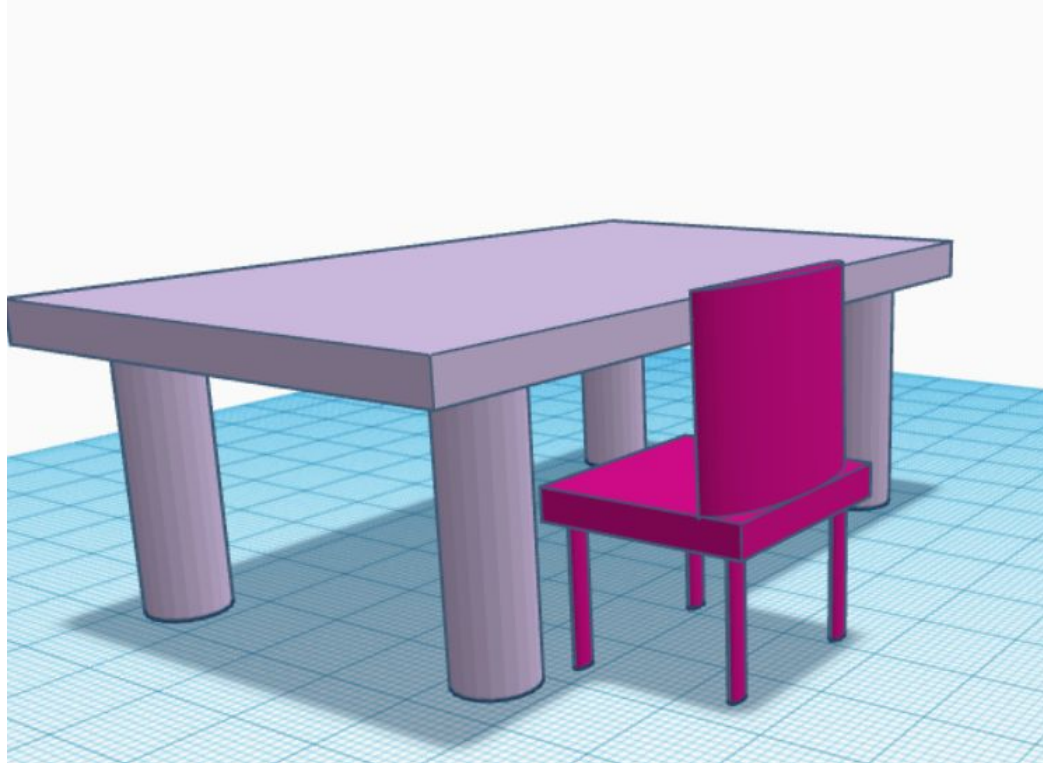
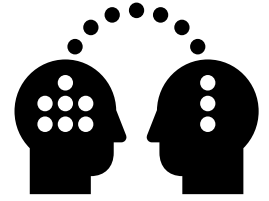


How to edit Screen names:

- Select your user avatar icon in the upper right corner of Tinkercad when logged in
- Select **Settings**
- On the **Edit profile** tab, change the **Screen name**
- Scroll down and select **Save changes**

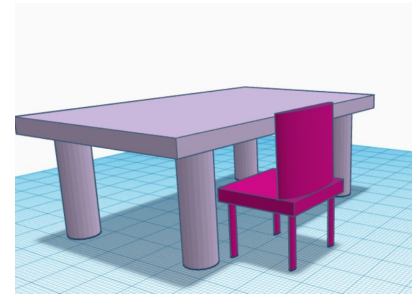


Today's Challenge




CAD skills we are practising.

- Patience, persistence and **problem solving!**
- **Manipulating** shapes on a 3D workplane.
- Using measuring tools and **grid** to place objects carefully.
- Using **grouping and locking** to fix our designs in place.
- **Copy and pasting** designs to quickly create duplicates.
- Using colour options to personalise our designs.



Let's get ready!

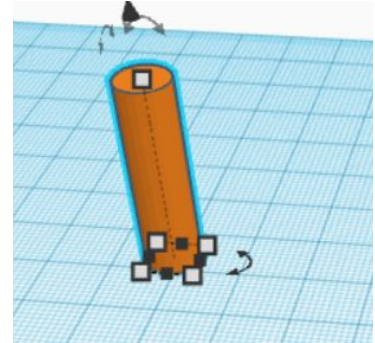
- Log onto your Google account.
 - Browse to Tinkercad.com
 - Select classrooms
 - Join a class
 - Type the code being displayed
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- Select the  to join the class.



Model and class follow steps to design a table.

Step 1

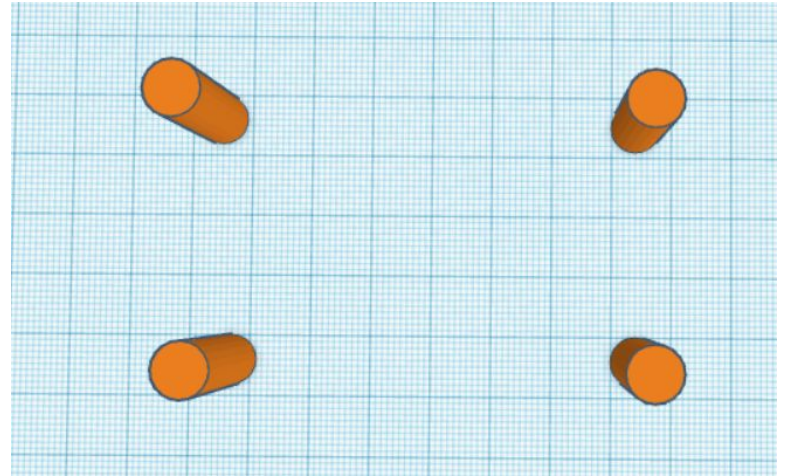
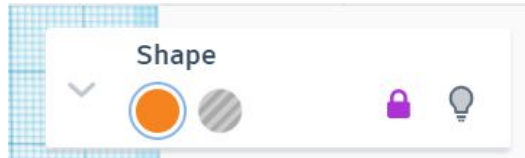
- Use a cylinder to create a leg (8x8x30)
- Use **copy and paste** to create 3 more identical legs



Model and class follow steps to design a table.

Step 2

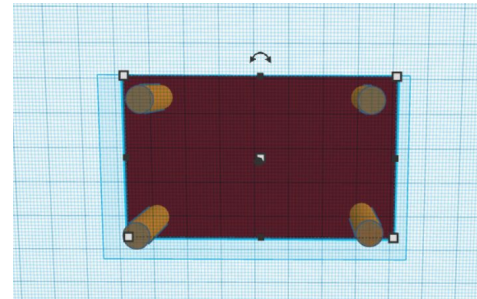
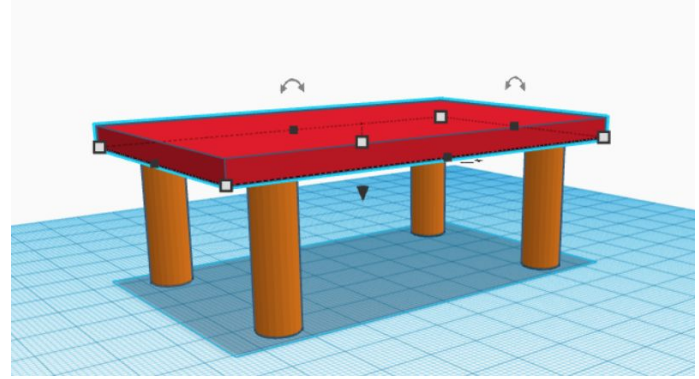
- Use the grid to place them at the four corners of a rectangle
- Use the '**lock**' on each cylinder to lock them into position.



Model and class follow steps to design a table.

Step 3

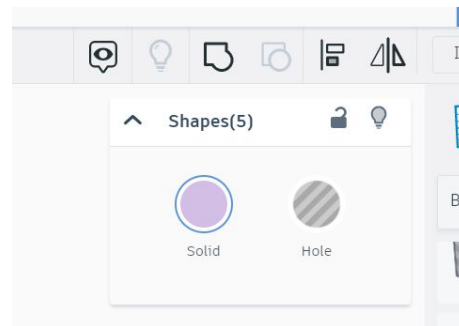
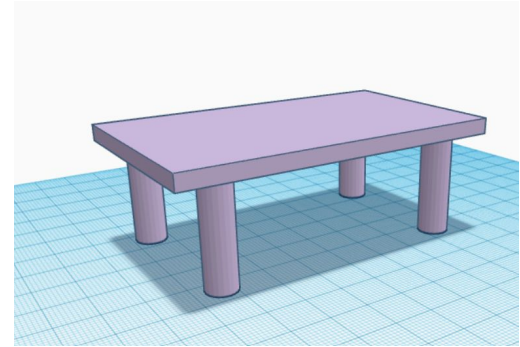
- Use the cube to create a table top.
- Use the **bottom view** to check it is position over the four table legs accurately
- **Lift the block** so it rests above the legs
- **Decrease the depth** of the block to make a thin table top.



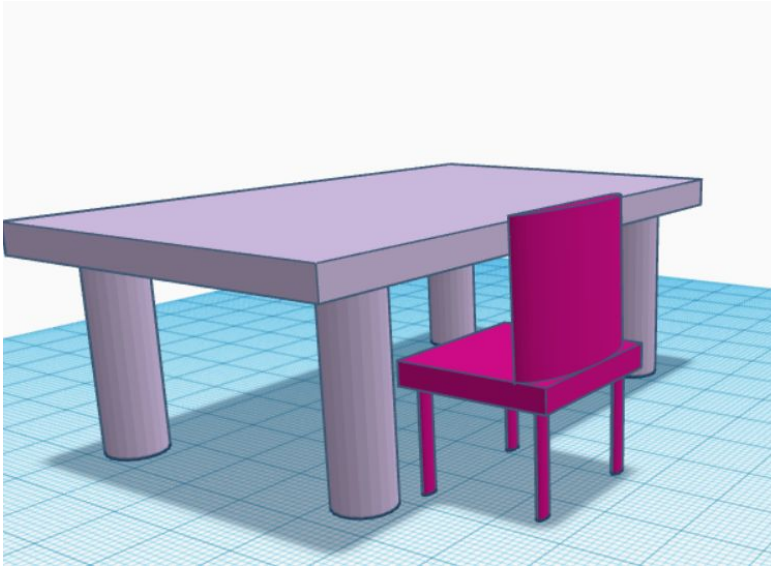
Model and class follow steps to design a table.

Step 4

- **Unlock the legs** and select a colour scheme for all 5 components.
- When done, select all 5 components and **group** them together.
- **Lock** the table.

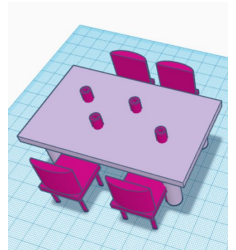


Now use these skills to create a chair that will tuck under the desk!



Extension:

- Can you make a different style of chair?
- Can you add 3 more chairs?
- Can you make some objects for the top of the table?



Use TinkerCAD to showcase some of the designs.

