



Computing Department Knowledge Organiser: Year 9 Tinkercad

Introduction to Tinkercad

Tinkercad is an online application (software) used for Computer Aided Design. Just take a look around you. Almost everything you see started off as a 3D model in CAD software. Using specialist tools and techniques, you can design just about anything in CAD software, then using specialist machinery, you can make it. 3D models designed in CAD software can be printed using a 3D printer.



What is CAD?

CAD stands for Computer Aided Design. Computer software is used to design 3D models and these 3D models can be made into physical objects. Furniture, cars and buildings are just some examples of what can be designed using CAD?

Tinkercad Keywords

Align	to place or arrange (things) in a straight line. To use the Align tool, select at least two objects by Shift left-clicking on them or by dragging a box around them. Once selected, click on the Align icon at the top. Simply move your mouse over a node (the black dots) to preview the move.	Group	to combine two or more shapes into a part. Do this by selecting them and then choosing the Group icon at the top.
Dimensions	a measurable extent of some kind, such as length, width, or height. In its simplest form: a line describes one dimension, a plane describes two dimensions, and a cube describes three dimensions.	Handle	the little squares that appear on the shape when you select it that allow you to resize it by pulling and pushing them.
Duplicate	to make or be an exact copy of. To duplicate an object, use Ctrl + D and then drag it out or use the arrow keys.	Scale	to change the size of an object so that its dimensions are proportional to the original size. You can do this by holding down the Shift key while pushing and pulling the handles to resize.
		Workplane	the large, blue grid where you create your designs. You can drag out new workplanes onto the surfaces of your shapes for easier stacking and more precise measuring.



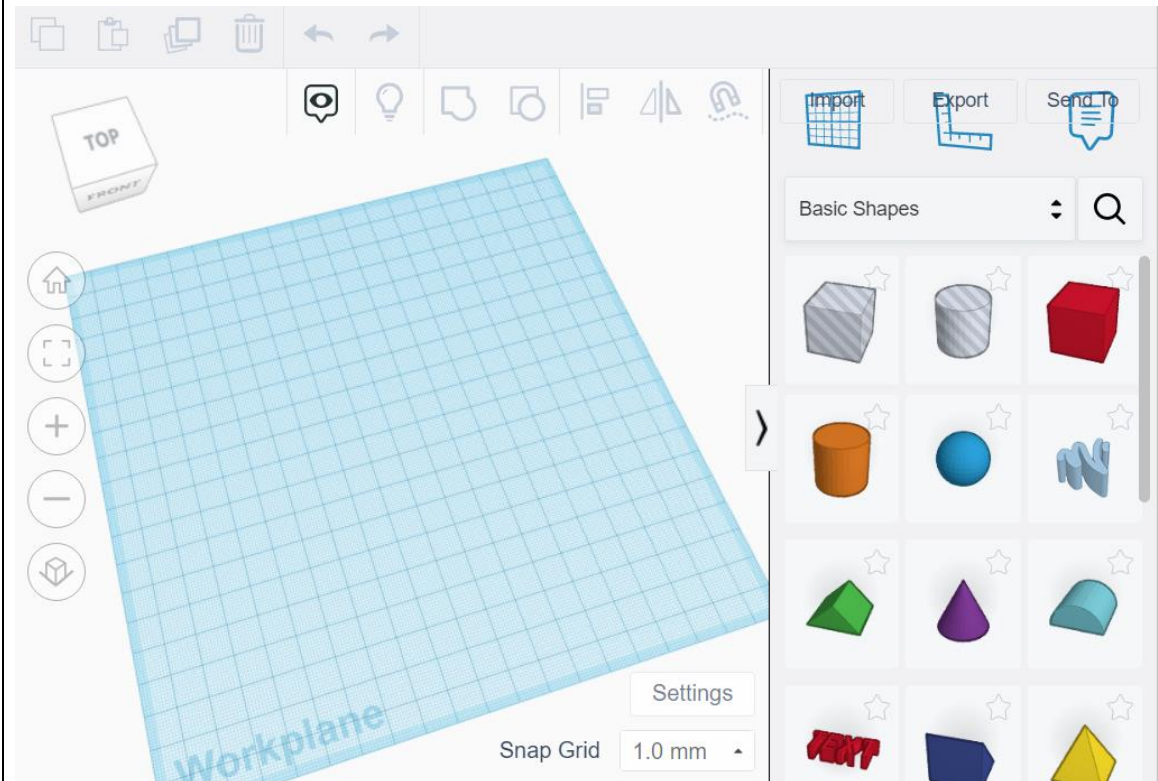
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Tinkercad Workplane

This is what the Tinkercad workplane looks like.

You can access Tinkercad at home for free by visiting this website:

<https://www.tinkercad.com/>



Task 1: Tinkercad Tools

Draw these Tinkercad tool symbols into your home learning book and describe what they do:





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Task 2 Key Word Definitions

Read the Tinkercad keywords, cover them and try to write an accurate definition into your home learning book, check your definition against the definition in the knowledge organiser.

Task 3 Design Task

In your home learning book, design a keyring that contains your name that could be made in Tinkercad. Think about the 3D shapes that you could use to create the keyring and any decorations that you would like to add. Colour in or label your keyring.



ABCDEFGHIJKLMNOPQRSTUVWXYZ



KATIE

