

What should I already know?

- General use of Purple Mash · Design: avatar creation · Paint Projects: use of the simple paint tools
- 2Create a Story: Painting tool · Animating images using built in effects · Concept of background (static) and foreground (can move)
- 2Paint a Picture: art effects, collage effects
- Create a stop motion animation using 2Animate · Use of art tools to create backgrounds and effects
- Themed art · Art in 3D · Animating 3D characters
- Use of 2Dos, saving, opening and editing work, sharing work, copying and pasting, mouse, keyboard and device skills.

What will I know by the end of the unit?

What is the 2Design and Make tool?

- You know what the 2Design and Make tool is for. You can explore the different viewpoints in 2Design and Make whilst designing a building.

What is the effect of moving points when designing?

- You can adapt one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form.

Can I design a 3D model to fit certain criteria?

- You can explore how to edit the polygon 3D models to design a 3D model for a purpose

Can I refine and print a model?

- You can refine one of their designs to prepare it for printing. You can print their design as a 2D net and then created a 3D model. You can explore the possibilities of 3D printing.



2D Image



3D Image



Net View



Colour Palette



Clear, Undo and Redo



Fill Options



Magnify

Key Vocabulary

- **CAD** – Computer aided Design A CAD computer program or app allows you to design a 3D object or environment in 2D and visualise it in 3D on the screen from many angles.
- **2D&M Net** What a 3D shape would look like if it was unfolded and opened out flat.
- **Design Brief** A document for a design project, defining the core details, including the goal and strategy.
- **Pattern Fill** A tool where you can add a customised repeating pattern to the surface of the net.
- **3D Printing** The action or process of making a physical object from a three dimensional digital model, typically by laying down many thin layers of a material in succession.
- **Points** The points on a 3D net which create the corners of the 3D shape.
- **Template** Something that serves as a model for others to copy and edit.
- **2D** Something that has only two dimensions; height and width.
- **3D** Something that has three dimensions; height, width and depth.

Key Questions

- What are the different view of an object available in 2Design and Make?
Net, Points and 3D.
- How can the objects designed in 2Design and Make be turned into 3D objects?
You can print the net and then cut and fold this into shape or you can convert the file into a format recognised by 3D printers.
- How is CAD software used in industry? Give some examples.
It is used to design 3D objects in a 2D environment. Some examples are; Architectural plans for buildings; designing layouts for interiors; designing objects such as packaging and designing mechanical components; designing shoes and clothing

Purple Mash Resources

- 2D&M



2D&M