

ICT

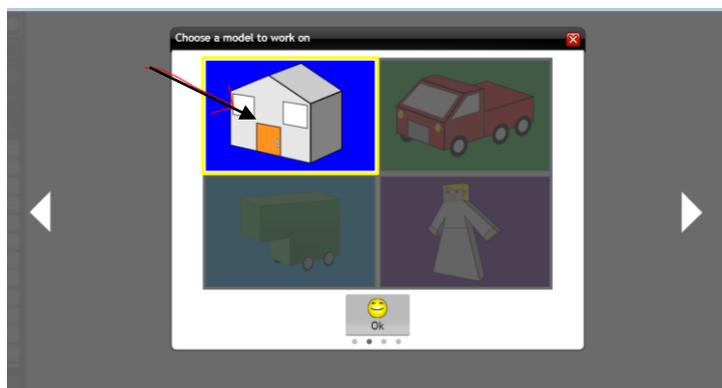
As a change, I am setting some ICT work for you to have a go at. We will be looking at 3d Modelling using 2Design and Make. This is what we will be covering:

Lesson	Aims	Success Criteria
<u>1</u>	To be introduced to 2Design and Make.	<ul style="list-style-type: none">• Children know what the 2Design and Make tool is for.• Children have explored the different viewpoints in 2Design and Make whilst designing a building.
<u>2</u>	To explore the effect of moving points when designing.	<ul style="list-style-type: none">• Children have adapted one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form.
<u>3</u>	To understand designing for a purpose.	<ul style="list-style-type: none">• Children have explored how to edit the polygon 3D models to design a 3D model for a purpose.
<u>4</u>	To understand printing and making.	<ul style="list-style-type: none">• Children have refined one of their designs to prepare it for printing.• Children have printed their design as a 2D net and then created a 3D model.• Children have explored the possibilities of 3D printing.

LO: To be introduced to 2Design and Make

Open up 2Design and Make. This can be found in the Art section from the home page of Purple Mash.

Use the right arrow to open the house template (we will be looking at other templates in later lessons.)



Select the house and click OK.

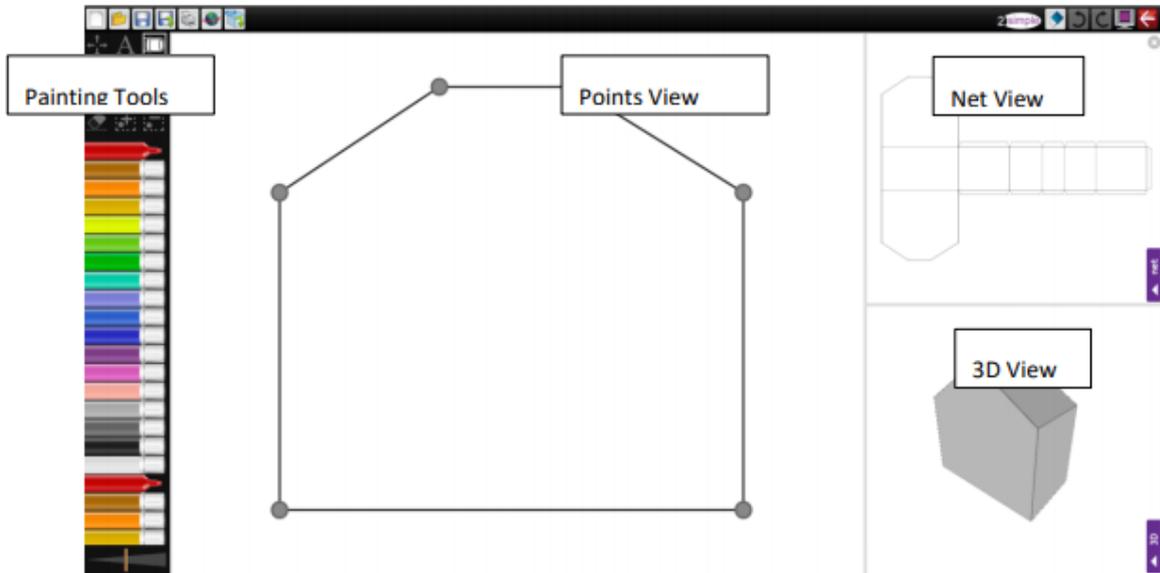
Draw the children's attention to the four screen areas:

Painting Tools

Points View (the default large view)

Net View

3D View



Use the purple tab to choose your view and try out the zoom tool, which can be useful for adding more detail.



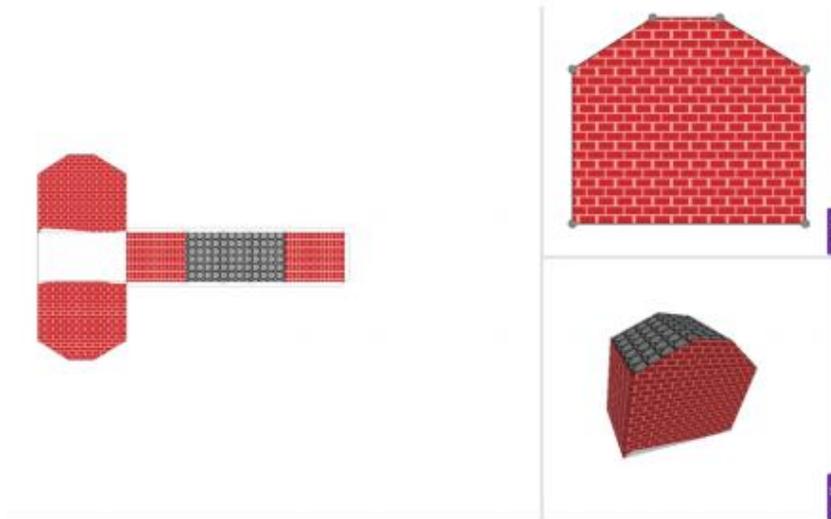
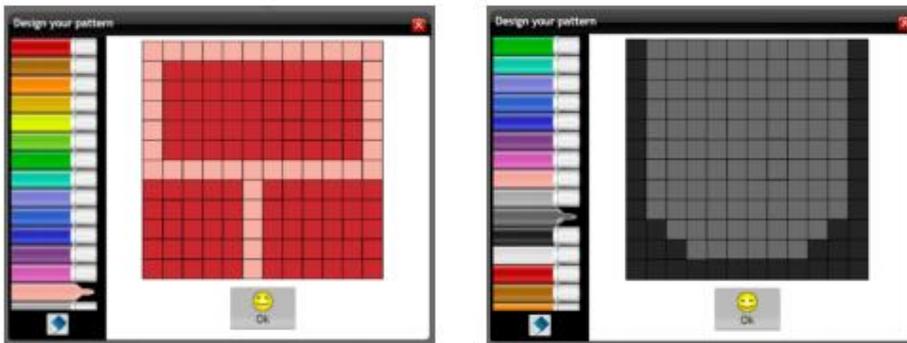
Make the 3D View the main view and show the children how to spin the model in different directions by dragging the mouse or swiping. You can also alter the speed and stop the model moving temporarily by clicking without dragging.

Explore how the Net View relates to the 3D model by making the net the main view and using the Drawing tool to draw on one of the surfaces. You will see the 3D View change as well.

Next, demonstrate how the children could add repeating patterns to their design by using the Pattern Fill tool.

Click on the Pattern Fill tool icon . Click OK to accept the default image of red, green, yellow and blue squares and then click somewhere on the net. The area should be filled with the pattern.

You could show children how to create a brick or tile pattern, or challenge them to work it out for themselves. First clear the default pattern by using the  button on the Pattern Fill tool, then make a pattern like these for bricks and tiles:



Give children the chance to make their own building.

This week we are not focusing on moving the points in the Points View, but if the children do try this, they will find that it removes any drawing they have done. Points need to be set before adding the design. We will be exploring points next lesson.

Make sure that the children save their work to their Work folder.

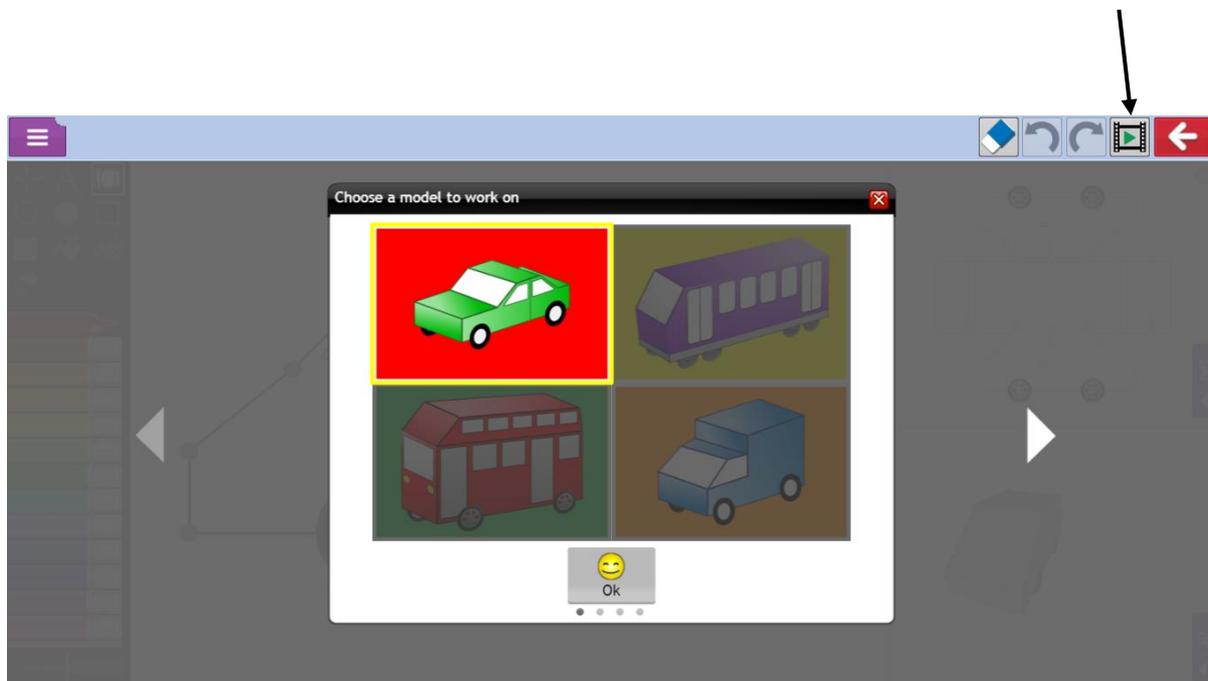
I have saved a folder in your class file for you to save your work. It is called 2Build Week 1.

LO: To explore the effect of moving points when designing

Watch the help video

'Make a 3D model'

This can be found in 2Design and Make by clicking on the film emblem along the top bar.



Emphasise that in some templates, the points can only be moved within the pale blue boxes. This is to maintain the shape as a truck, pyramid, etc. In other templates, such as the house, there are no such restrictions.

If the children struggle to work out which surface to draw on in the Net View, encourage them to try drawing a dot on the surface and then check the 3D View. They can then use the Undo control in the top right to remove the dot.



In the 3D View, the slider at the top will alter the width of the vehicle.



Ask the children to select a vehicle template from the choice of vehicles: van, car, bus, train, truck cab and end. They should try adapting the points to make their vehicle shape unique.

Can they make a triple-decker bus or a monster truck? What about a train for giants or a racing car? Perhaps they can think of a different creative vehicle to design.

When you have had a go at this, you can save your work in the 2Build folder for your class under Week 2.

LO: To design a 3D Model to fit a certain design criteria

In this lesson, you are going to be designing some packaging for a garden toy (as the weather is hopefully getting better).

You could select one of the following to design for or think of your own toy.



It is up to you which template you use, however it needs to be suited to the toy and by appropriate for who you are hoping will choose to buy the item.

Watch the help video:

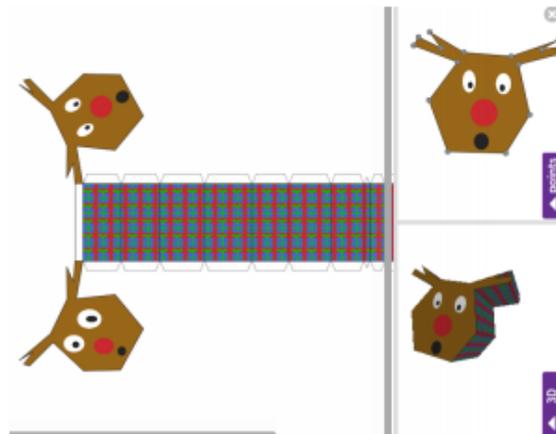
'Adding and removing points'

This can be found in the same place as last lessons video.

Watch the help video called 'Adding and removing points'. This demonstrates that the polygon templates can be adapted to making alternative shapes. Ensure that the children understand how to add and remove points:

- Have the Points View on the main screen
- Click on the Add Points button
- Click on the line where the new point should be added
- The point will appear halfway along the line but can be dragged to a new position
- There can be a maximum of 16 points (nodes)

In this example, points have been added to a hexagonal prism to make a surprised reindeer covered in a repeating pattern of presents!



Ask the children to fill in the design brief activity file as they go along. To have both 2Design and Make and the activity file open together, children should open a new tab on their browser and open Purple Mash on this tab as well. They should complete the sections about the design before they start using 2Design and Make. They can then insert screen prints from their finished design afterwards.

Show the children the Zoom tool icon at the top of the template. This will help them to be able to see the

text in the template more clearly.



To insert images of the item use some of the included clipart if it is appropriate, draw a picture using the drawing tools or import a picture by searching the Internet. First, save the image on your computer. In the

design leaflet, click on the green arrow on an image box . Locate the file on your device and click Open. There are controls to rotate and zoom in on parts of an image on this screen. When you are happy with the image, click Choose.

How to create screenshots will depend upon which platform you are using 2Design and Make on. One way to do so is to use the Windows Snipping tool (type 'snipping tool' in the search bar on your computer to locate this). This enables you to capture a section of the screen and save this as an image file which you can then upload to the design. On an iPad, press the Home button and the Off button at the same time. Other devices will have different methods of creating a screenshot.

Make sure that children save both the 2Design and Make model and their design brief information sheet.

LO: To refine and print your model

If you have access to a printer at home you can try this activity.

Children should get their design ready for printing and save it. When they are ready to print, they should click on the Print button. This creates a pdf file of the Net View, which they then need to open and print on the printer.

They then need to cut out the net, fold it along the lines and stick their model together.