

Episode 1

Health, Safety and Using the Workshop



Episode 2

Norman Foster

Norman Foster (Baron of Thames Bank) is an English architect and engineer. He is notable for his role within British modernist architecture. He founded his architectural practice, Foster and Partners in 1967 and is the president of the Norman Foster Foundation.



His most famous design is a building in London known as the 'Gherkin' due to its uncanny likeness.

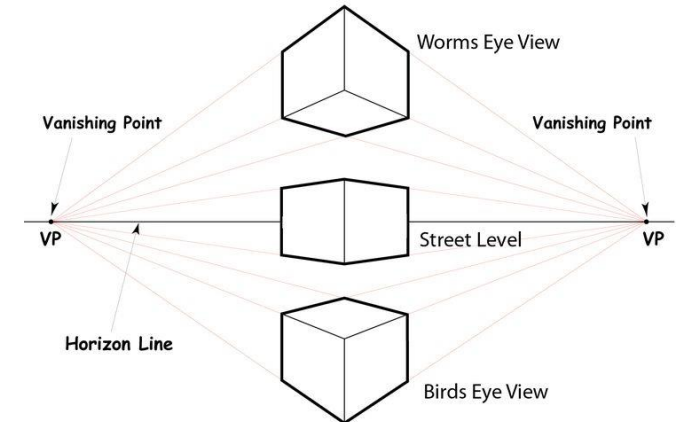
More recently Foster, has agreed to support with rebuilding Ukraine following the recent war with Russia.



Episode 3

Two-Point Perspective

Two-point perspective shows an object from the side with two vanishing points. It gives the most realistic view of a product as it shows the item edge on. It is often used to produce realistic drawings of an object.



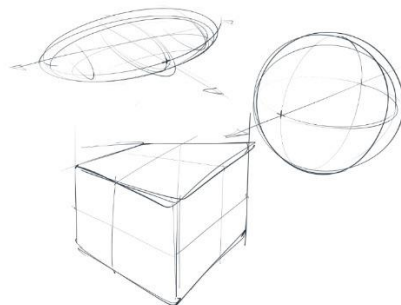
Year 7 Subject: Technology

Episode 4

Design Ideas

The iterative design process helps to develop designs, focusing on improving them and making them more successful. It is important at this stage for the designer to consider the design as a whole, rather than the separate components.

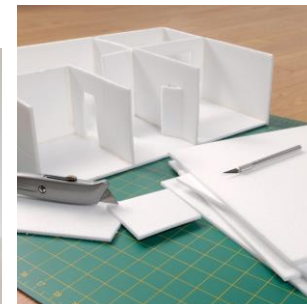
Following the design process, designers will use this process to support in creating models, prototypes or simulations, to further evaluate the effectiveness of the design.



Episode 5

Using Foam Board

A physical model of your design allows a person to see and handle a product, unlike being on a screen through computer-aided design (CAD). Computer-aided manufacture (CAM) such as 3D printing can create really effective models from designs, but is often expensive. Foamboard provides a cheaper alternative.

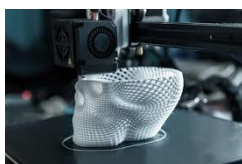
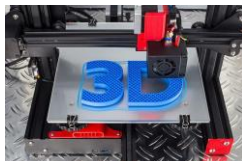


Episode 6

3D Printing

3D printing is the construction of a 3D object from computer-aided design (CAD). It involves depositing a material layer-by-layer to form a model using computer control.

3D printing was first discussed as a concept in 1945 by Murray Leinster, but it wasn't until 1971 that a process of 3D printing was first patented by Johannes F Gottwald. Until the 2000s 3D printing was largely used for manufacturing only, due to the cost and larger-scale set up required. However since the 2020s, this process has now become more affordable for most people.



Episode 1

Question	Answer
Who is responsible for the safety of everyone in the workshop?	Everybody is.
Are all accidents preventable?	Yes, if everyone follows the rules.
Should you be trained on machinery before using it?	Yes, so that you use it correctly.
What could happen if you wear the wrong clothing/footwear?	Loose clothing could get trapped in machines and improper footwear could cause a fall.
What is PPE?	Personal, Protective, Equipment.

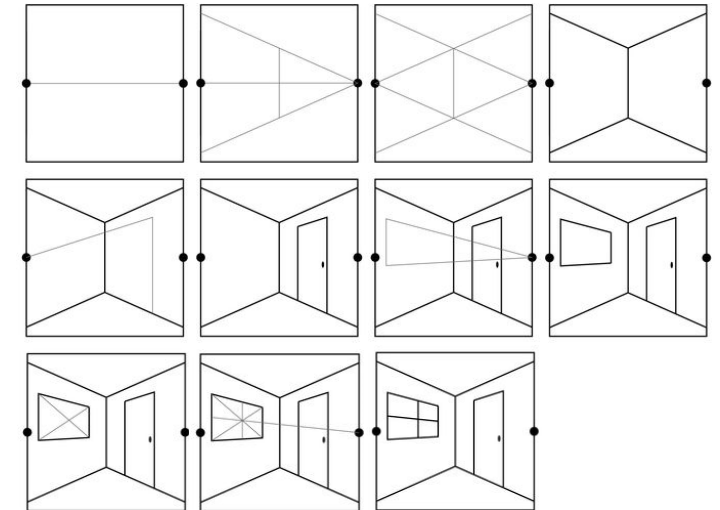
Episode 2

Question	Answer
What title does Norman Foster have?	Baron of Thames Bank.
What is Norman Foster famous for?	Being an architect and engineer.
What movement is Norman Foster associated with?	British modernist architecture.
When did Norman Foster start Foster and Partners?	1967
Which is Foster's most notable design?	The 'Gherkin' in London

Skills Practice

Two-Point Perspective

Use the steps below to practice using two-point perspective using the corner of a room at home.

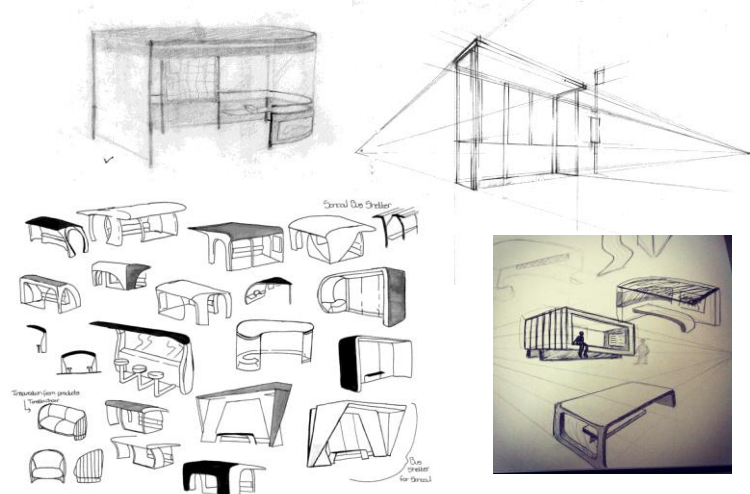


Year 7 Subject: Technology

Skills Practice

Designing a Product

Use your knowledge of two-point perspective to make rough sketches of your bus shelter design at home.



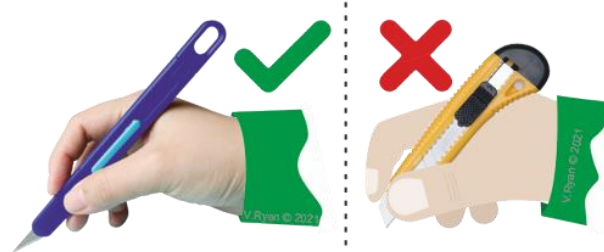
Skills Check

Cutting Foam Board

Ready for your practical lessons, consider the following skills needed for cutting foam board.

- Always use a cutting mat to stop slippage.
- Always use a metal ruler when using a knife.
- Never cut with your hand in front of the direction of the knife.
- Place pressure on the knife to get a precise cut.

HOLDING A CRAFT KNIFE



Episode 6

Question	Answer
What type of manufacture is 3D printing?	CAM, computer-aided manufacture.
What type of design is needed for 3D printing?	CAD, computer-aided design.
How does 3D printing work?	The design is transferred to the printer layer by layer, digitally. The printer deposits the material layer by layer until the 3D form is built.
When was the concept of 3D printing first discussed?	1945
When did 3D printing become more common place?	2020s