



Year 3 - Structures

Design and Technology

How are effective photo frames designed and made?

Design Brief

Design, make and evaluate a picture frame to sell at the Christmas fair.

Key Vocabulary

durability	To describe how strong, tough, hard-wearing and resistant an item is.
frame	The structure that will hold together the finished product.
strengthen	Make or become stronger.
reinforce	Strengthen or support an object especially with additional material.
layering	The inside layer will be the structure and the outside layer will be the decoration.
stable	An object or structure that is not likely to give way or overturn; firmly fixed.

Key Skills

- Understand that different types of frames display photographs in different ways - 'windows' can be different shapes, although these are most commonly rectangular.
- Understand that materials are more stable than others. In terms of a photograph frame, wood would be more stable than paper/ card, however the paper/card can be strengthened in a variety of ways.
- Some products have a wide base, whereas some use the support of legs (e.g. tripod).
- To decide on the shape of the frame, i.e. square, rectangular, circular, and how materials can be manipulated to achieve their desired shape. It is important to make sensible decisions, i.e. using wood for a circular shaped frame would not be possible.

What I Should Already Know

- Printed photographs or pictures usually go inside a frame.
- Materials can be joined in different ways using glue, tape etc.
- How to use and carry scissors safely.
- Hold the saw by the handle and always face the blade to the ground.
- Ensure the piece of wood is secure in the clamp before cutting it.
- Keep fingers clear of where the saw is cutting.



Key Information

- A picture frame is a protective and decorative edging for a picture, such as a painting or photograph.
- A frame protects the edge of the picture as well as the front and back.
- Different types of frames display photographs in different ways - 'windows' can be different shapes, although these are most commonly rectangular.
- A picture frame should act as a compliment to the picture inside, so the frame becomes an extension of the artwork/photo. This can be done with colours and the frame style (whether it is plain or fancy, for example).

Links to other Learning

- Maths - measures
- Whole school enrichment - Christmas Fair
- Art and Design
- D & T - structures all year groups

Key Questions

- Appearance/aesthetics - how will it look? Can you say what you are making?
- Cost - how much will it cost to make?
- Customer - can you give your design a name?
- Environment - can it be recycled?
- Size - how big or small is it?
- Safety - how will you make it safe to use? Which way of making something with moving parts will you choose to use and why?
- Function/purpose - how will it work? How will your design involve a range of moving parts?
- Materials - what will you make it from? Have you planned your design and how you will create it?
- Manufacture - how will you make it? Do I like what I have made? Why or why not?

