

**Edward Peake Church of England Middle School**

**Design Technology**

**Topic: Pencil Box**

**Year: 8**

What should I already know?

- How to produce design ideas.
- How to work safely in the workshop.
- What plywood is and the properties that make it suitable.
- How to use a tenon saw to cut straight lines in timber.
- How to use files and glass paper to smooth the edges of timber
- How to evaluate design ideas and a finished design.

What will know by the end of the unit?

- About Memphis design and how to design in the style of it.
- The difference between softwoods, hardwoods and manufactured boards
- What HIPS is and the properties that make it suitable for vacuum forming.
- What plywood is and the properties that make it suitable to make a pencil box from
- How to make a wooden pencil box.
- What a comb joint and lap joint are and how to make them.
- What surface treatments and finishes are available for timber, what they are used for and which is most suitable for the pencil box.

**Vocabulary**

Memphis design	An Italian design style that originates in the 1980's that produced bright, colourful, innovative designs.
Softwood	Wood that comes from coniferous, cone bearing trees.
Hardwood	Wood that comes from deciduous, broad leaved trees.
Manufactured board	Timber sheets that are made by gluing layers of wood or wood fibres together.
Veneer	A thin layer of real wood.
Lap joint	Made from 2 pieces of timber by halving the thickness of a piece to fit the other piece in.
Comb joint	Made from 2 pieces of timber by cutting rectangular pieces from either piece and then slotting them together.
Grain	The texture in wood that is made by the way a tree grows.
Accuracy	The degree to which something is correct.

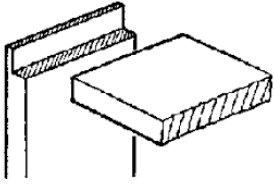
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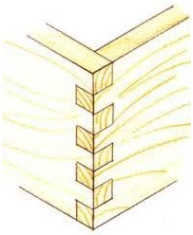
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### Wood Joints



Lap joint



Comb joint

### Key information

- There are design movements through history, we are looking at Memphis design as the starting point for the box.
- There are 3 categories of timber softwoods, hardwoods and manufactured boards.
- Pine is a softwood which is easy to work and has a natural grain finish.
- There are different surface treatments and finishes for wood, wax is the one being used for the box, it protects it and makes it water resistant.

### Memphis Design



- **Memphis design** is an Italian design movement from the 1980's.
- Other names for the design aesthetic include, pop art, art deco and 80s retro.
- The key characteristics of it's style are:
  - ⇒ Bright colours
  - ⇒ Geometric shapes
  - ⇒ Strokes and squiggles lines
  - ⇒ Black and white as a main colour

### Investigation tasks

1. Find out about everyday objects made from timber. Are they made from softwoods, hardwoods or manufactures boards? What type of timber are they made from and why is it suitable?
2. Research into another design movement e.g. Bauhaus, Art deco, Art Nouveau and produce a presentation sheet to educate people about it.
3. Look into the work of existing designers e.g. Walter Gropius, Charles Rennie Mackintosh, Philippe Stark. Produce a fact file about their work and the work of other designers from the same design movement.