

# GCSE Product Design at SWGS



### Research-7. Finishes

**Introduction:**  
I will research the main types of wood finishes, how they can be used and their advantages and disadvantages to help inform my decision over which should be used.

**Oil:** Oil based finishes provide a penetrating finish for wood. They soak into the grain and seal it, leaving the appearance of a natural wood. It is easy to apply and dries quickly. However, it is not as durable as other finishes and requires regular reapplication.

**Wax:** Wax finishes provide a natural, soft sheen to wood. They are easy to apply and can be buffed to a high shine. However, they are not as durable as other finishes and require regular reapplication.

**Water-based:** Water-based finishes are easy to apply and dry quickly. They provide a clear, natural finish to wood. However, they are not as durable as other finishes and require regular reapplication.

**UV:** UV finishes provide a clear, natural finish to wood. They are easy to apply and dry quickly. However, they are not as durable as other finishes and require regular reapplication.

**Conclusion:**  
After researching these finishes I have a clear idea of what the effect each will have on the wood. I have decided to use a water-based finish as it is easy to apply and dries quickly. I will also use a wax finish to provide a natural, soft sheen to the wood. This will provide a natural, soft sheen to the wood and will be easy to maintain.

### Initial ideas

**Introduction:**  
Using a combination of these principles to be included in the design from research, I identified 3 initial frame ideas.

**1.** The frame would have three on the back of the frame. It would be made of wood and have a decorative metal sculpture on the left side. The sculpture would be made of copper wire and have a central circular element with a blue and green pattern.

**2.** The frame would have a decorative metal sculpture on the left side. The sculpture would be made of copper wire and have a central circular element with a blue and green pattern.

**3.** The frame would have a decorative metal sculpture on the left side. The sculpture would be made of copper wire and have a central circular element with a blue and green pattern.

**Conclusion:**  
After researching these finishes I have a clear idea of what the effect each will have on the wood. I have decided to use a water-based finish as it is easy to apply and dries quickly. I will also use a wax finish to provide a natural, soft sheen to the wood. This will provide a natural, soft sheen to the wood and will be easy to maintain.

### Testing - routing wood

**Introduction:**  
In order to create a realistic model of the frame to confirm that my research method was an appropriate/efficient way to make it, I needed a piece of machinery to make the 'router' joints.

**Testing - routing wood:** I used a router to create the joints in the wood. The router is a hand tool used for shaping wood. It is used to create a variety of shapes and profiles in wood. I used it to create the joints in the wood for the frame.

**Testing - miter joint:** I used a miter joint to join the wood. A miter joint is a joint where two pieces of wood are joined at an angle. I used it to join the wood for the frame.

**Testing - glue:** I used glue to join the wood. Glue is a substance used to join two pieces of wood together. I used it to join the wood for the frame.

**Conclusion:**  
After testing these finishes I have a clear idea of what the effect each will have on the wood. I have decided to use a water-based finish as it is easy to apply and dries quickly. I will also use a wax finish to provide a natural, soft sheen to the wood. This will provide a natural, soft sheen to the wood and will be easy to maintain.

### Final design - Component A

**Final design - Component A:** The final design of the frame is a wooden frame with a decorative metal sculpture on the left side. The sculpture is made of copper wire and has a central circular element with a blue and green pattern.

**Component A.1:** The back of the frame will be made of wood and have a decorative metal sculpture on the left side. The sculpture will be made of copper wire and have a central circular element with a blue and green pattern.

**Component A.2:** The front of the frame will be made of wood and have a decorative metal sculpture on the left side. The sculpture will be made of copper wire and have a central circular element with a blue and green pattern.

**Component A.3:** The sides of the frame will be made of wood and have a decorative metal sculpture on the left side. The sculpture will be made of copper wire and have a central circular element with a blue and green pattern.

**Component A.4:** The top of the frame will be made of wood and have a decorative metal sculpture on the left side. The sculpture will be made of copper wire and have a central circular element with a blue and green pattern.

**Component A.5:** The bottom of the frame will be made of wood and have a decorative metal sculpture on the left side. The sculpture will be made of copper wire and have a central circular element with a blue and green pattern.