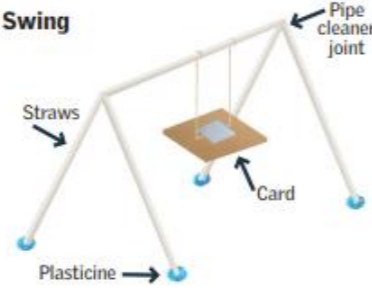
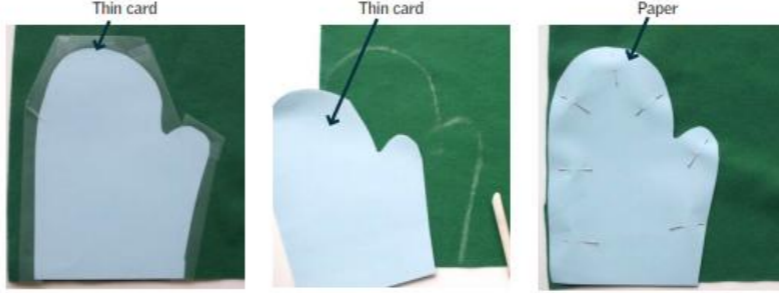

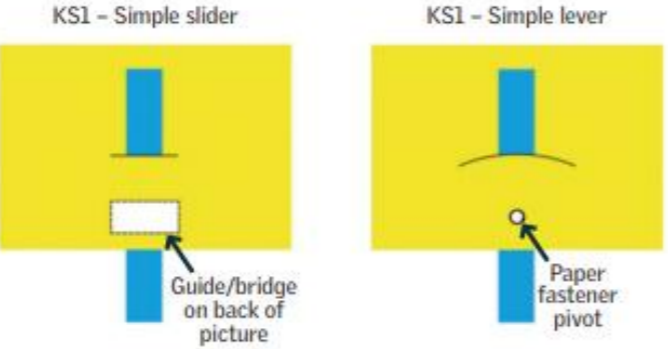
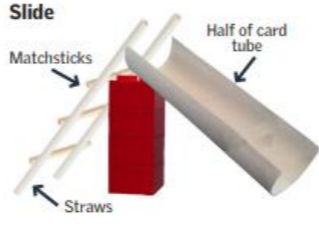
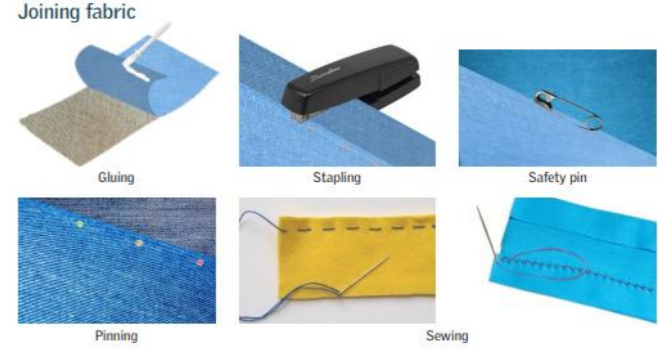
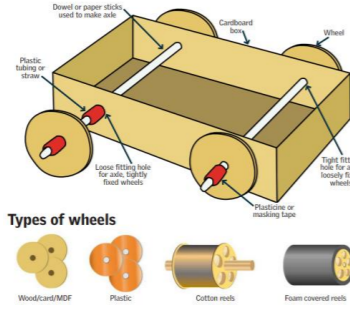
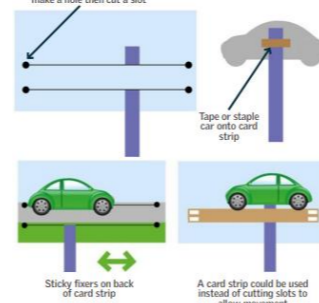
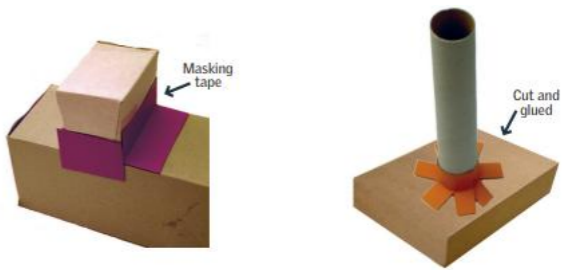
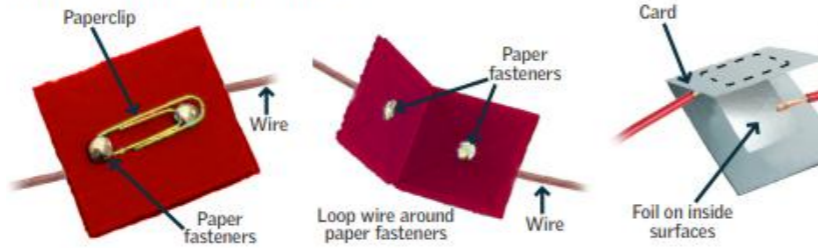
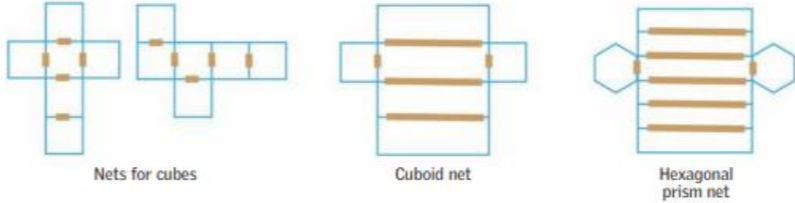
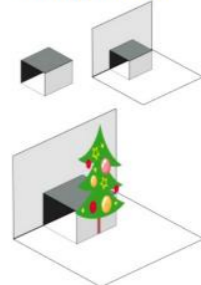
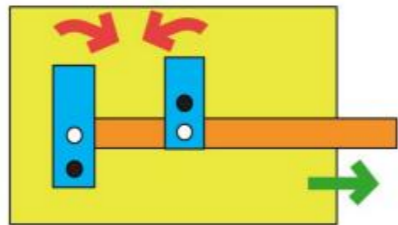
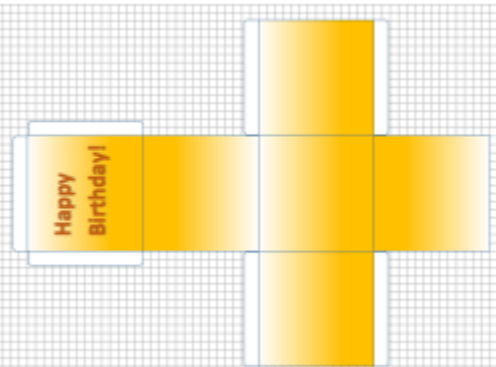
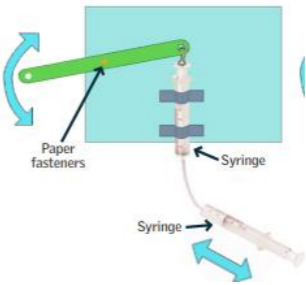
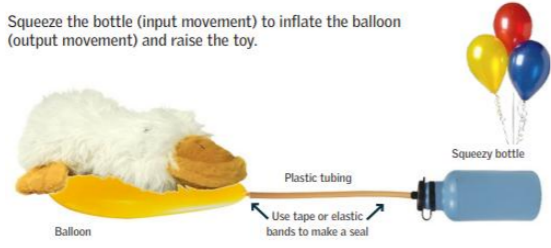
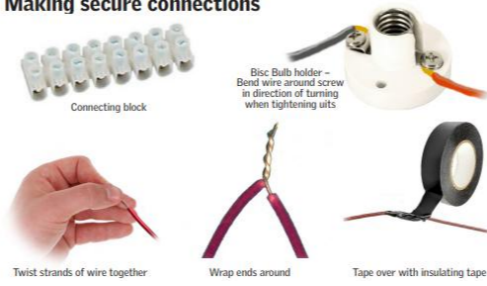
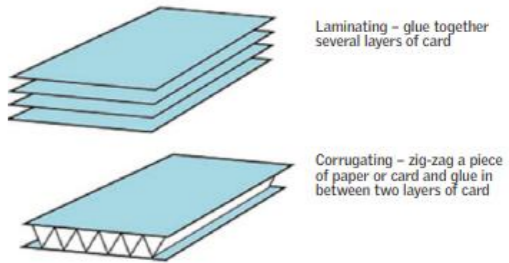


Curriculum  
Design and Technology Long Term Scheme of Work

| Phase 2 - Core and Extended | 2023/24  | 2024/25   | 2025/26  |
|-----------------------------|--|---|--|
| Autumn                      | <b>Free Standing Structures</b>           | <b>Textiles</b>  <p>Use clear sticky tape to position pattern on fabric. Cut around the pattern.</p> <p>Use soft chalk pastel or soft white crayon to draw around the pattern prior to cutting out.</p> <p>Use pins to secure the pattern on the fabric. Cut around the pattern.</p> | <b>Mechanisms – Wheels and Axels</b>  |
| Spring                      | <b>Mechanisms – Slides and Levers</b>  | <b>Free Standing Structures</b>    | <b>Textiles</b>                     |
| Summer                      | <b>Mechanisms – Wheels and Axels</b>    | <b>Mechanisms – Slides and Levers</b>    | <b>Free Standing Structures</b>     |

**Curriculum**  
**Design and Technology Long Term Scheme of Work**

| Phase 3 - Core and Extended | 2023/24  | 2024/25   | 2025/26   |
|-----------------------------|--|---|---|
| Autumn                      | <b>Electrical – Simple Circuits and Switches</b><br><br><b>Handmade switches</b><br>  | <b>Shell Structures</b><br><br>   | <b>Mechanisms – Levers and Linkages</b><br><br><b>Making a pop-up from a small section of a recycled box:</b><br> |
| Spring                      | <b>Mechanisms – Levers and Linkages</b><br>● Fixed pivot<br>○ Loose pivot<br><br>  | <b>Shell Structures - CAD</b><br><br>  | <b>Mechanisms - Pneumatics</b><br><br><b>Using syringes</b><br>  |
| Summer                      | <b>Mechanisms – Pneumatics</b><br><br><b>Teaching aids to demonstrate pneumatic systems</b><br>Squeeze the bottle (input movement) to inflate the balloon (output movement) and raise the toy.<br> | <b>Electrical – Simple Circuits and Switches</b><br><br><b>Making secure connections</b><br> | <b>Shell Structures</b><br><br><b>Stiffening and strengthening sheet materials:</b><br>                          |

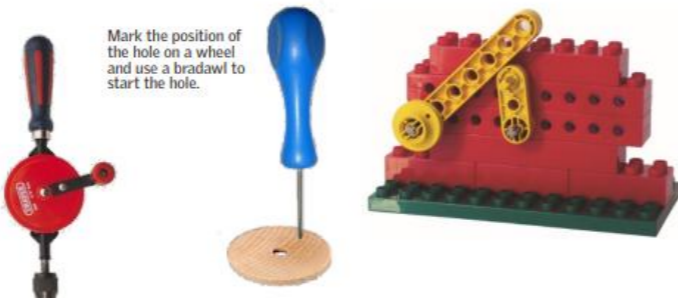
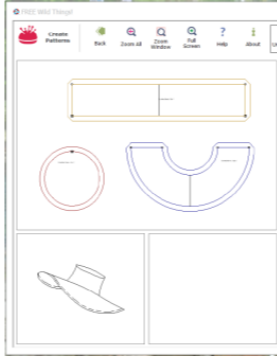

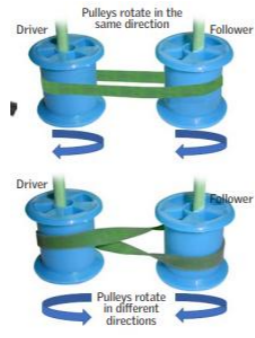
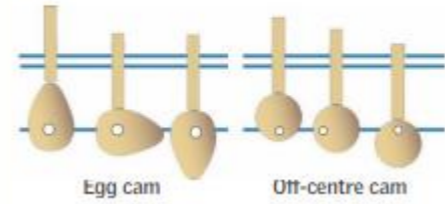
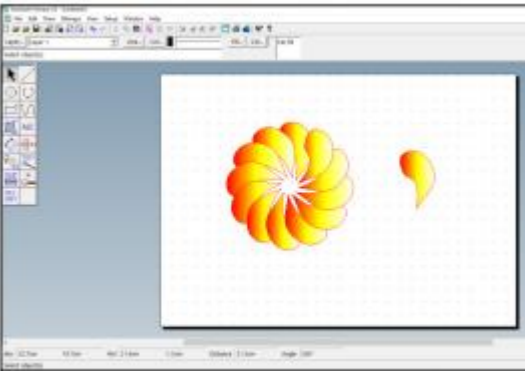


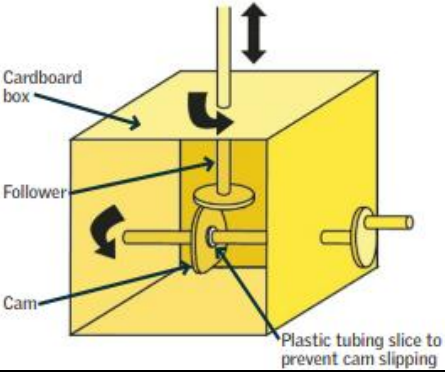
The screenshot shows the Arduino IDE interface. At the top, there are three tabs: 'Sketch', 'Input/Output', and 'Serial Monitor'. Below the tabs are three buttons: 'Compile', 'Upload', and 'Serial Monitor'. The main area displays a C++ program for blinking an LED. The code is as follows:

```



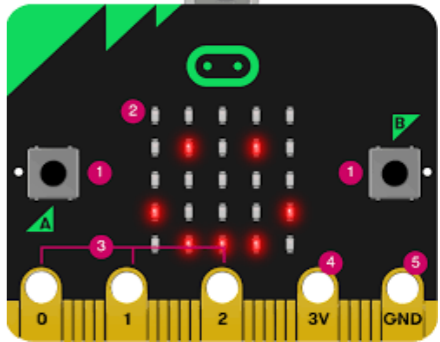




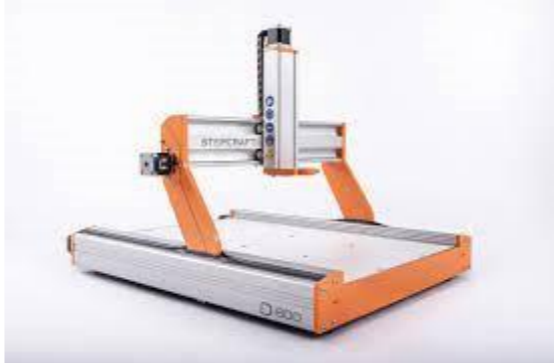

pinMode(13, OUTPUT);
digitalWrite(13, HIGH);
delay(1000);
digitalWrite(13, LOW);
delay(1000);
loop();

```

Curriculum  
Design and Technology Long Term Scheme of Work

| Phase 5 - Core and Extended | 2023/24   | 2024/25   | 2025/26  |
|-----------------------------|---|---|--|
| Autumn                      | <b>Mechanisms – Cams</b><br><br><b>Making teaching aids to demonstrate cams</b><br><br> <p>Mark the position of the hole on a wheel and use a bradawl to start the hole.</p> | <b>Textiles – CAD</b><br><br>   | <b>Textiles – Combining Different Fabric Shapes</b><br><br> <p>Toggles Ties Buttons Press studs</p>              |
| Spring                      | <b>Mechanisms – Pulleys or Gears</b><br><br> <p>Driver Pulleys rotate in the same direction Follower<br/>Driver Pulleys rotate in different directions Follower</p>        | <b>Mechanisms – Cams</b><br><br><b>Types of cams</b><br><br> <p>Egg cam Off-centre cam</p> | <b>Textiles – CAD</b><br><br>   |
| Summer                      | <b>Textiles – Combining Different Fabric Shapes</b><br><br> <p>Zip Velcro Clasp</p>   | <b>Mechanisms – Pulleys or Gears</b><br><br> <p>Pu</p>                                     | <b>Mechanisms – Cams</b><br><br> <p>Cardboard box Follower Cam Plastic tubing slice to prevent cam slipping</p> |

**Curriculum**  
**Design and Technology Long Term Scheme of Work**

| Phase 5AC - Core and Extended | 2023/24   | 2024/25  | 2025/26  |
|-------------------------------|---|--|--|
| Autumn                        | Digital World – Programmable Applications<br>         | Digital World – Programmable Applications<br>         | Digital World – Programmable Applications<br>         |
| Spring                        | Textiles<br>   | Textiles<br>  | Textiles<br>  |
| Summer                        | Technical Knowledge – Programmable Applications<br> | Technical Knowledge – Programmable Applications<br> | Technical Knowledge – Programmable Applications<br> |