DT Long Term Plan

Year A	Autumn	Spring	Summer
Year R/1 Nightingales	Food – Preparing Fruit and Vegetables 1. To identify fresh fruits and vegetables commonly found in tropical salads. 2. To understand the importance of a balance of different food groups. 3. To practise basic food preparation skills such as washing, peeling and cutting. 4. To express creativity by arranging salad ingredients in an appealing way.	Sliders and Levers 1. To identify simple sliders and levers in the world. 2. To explain that sliders and levers are mechanisms that provide movement. 3. To know and use technical vocabulary relating to sliders and levers. 4. To create simple levers and slides to demonstrate how they work. 5. To evaluate how effective a slider or lever is and explain why it is good and or how it can be better.	Freestanding Structures 1. To identify free standing structures and explain how they know they are freestanding.. 2. To identify similarities and differences in f/s structures. 3. To know and use technical vocabulary relating to sliders and levers. 4. To experiment with different assembly techniques for strength and stability. 5. To create a free standing structure to meet a brief. 6. To evaluate how effective their f/s structure was and explain why it is good and or how it can be better.
Year 1/2/3 Penguins	Preparing Fruit and Vegetables 1. To identify fresh fruits and vegetables commonly found in tropical salads. 2. To understand the importance of a balance of different food groups. 3. To practise basic food preparation skills such as washing, peeling and cutting. 4. To express creativity by arranging salad ingredients in an appealing way.	Sliders and Levers 1. To identify simple sliders and levers in the world. 2. To explain that sliders and levers are mechanisms that provide movement. 3. To know and use technical vocabulary relating to sliders and levers. 4. To create simple levers and slides to demonstrate how they work. 5. To evaluate how effective a slider or lever is and explain why it is good and or how it can be better.	Freestanding Structures 1. To identify free standing structures and explain how they know they are freestanding.. 2. To identify similarities and differences in f/s structures. 3. To know and use technical vocabulary relating to sliders and levers. 4. To experiment with different assembly techniques for strength and stability. 5. To create a free standing structure to meet a brief. 6. To evaluate how effective their f/s structure was and explain why it is good and or how it can be better.
Year 3&4 Flamingos	1. To identify different ways textiles are used. 2. To identify different fabric fasteners and say how they work. 3. To explain what a template is and demonstrate how to use one.	Preparing Food 1. Develop understanding of food grown in the UK and Europe. 2. Identify foods grown in the UK and why these may thrive in our climate.	Electrical Systems 1. To identify what uses an electrical system. 2. To explain how an electrical system works and how it provides power to make the components work.

	4. To know and use technical vocabulary relating to textiles joining and fastening. 5. To create a simple product relating closely to the brief that was given. 6. To evaluate how effective their product is and explain why it is good and how it could be improved further.	3. Prepare hygienically savoury food. 4. Carry out safe and hygiene food preparation and begin to understand what could happen that food poisoning can occur if not followed. 5. Exploring different breads and the skills needed for making these including- kneading, baking, the use of yeast for rising.	3. To create handmade switches and explain how and why they work. 4. To create electrical circuits to provide power to a product prototype. 5. To design a product in line with the brief. 6. To evaluate the effectiveness of the product by referring to the specification.
Year 4/5	Arch Structures 1. To identify arch structures in the world and explain why they are used. 2. Learn techniques for providing greater stability and structure including triangulation by exploring engineering works e.g. Brunel's bridges. 3. Explain how arch structures are created and what gives them strength. 4. Create arch structures from different materials and test their strength. 5. Design and make an arch structure suitable for the brief and specification given. 6. To carefully measure, cut, saw to ensure the dimensions are correct and use appropriate joining techniques. 7. Evaluate the effectiveness of the product by referring to the specification and including testing and consumer feedback.	Electric Motors 1. To identify how control programs may be used to control electrical systems. 2. To explain what the steps to a control program may be. 3. To explore parallel circuits and contrast to those in series. 4. Use ICT to program a set of instructions to control a device and represent this with a flowchart. 5. To design and make a product that includes control technology and produce a programmed sequence of steps. 6. To use appropriate techniques for cutting, securing, joining and finishing. 7. To evaluate the effectiveness of the product by referring to the specification and include consumer feedback in the evaluation.	Mechanisms 1. To research and compare a range of pop-up books. 2. To design sliders for a pop-up mechanism. 3. To create a prototype pop-book page 4. To evaluate the pop-up mechanism 5. To test my project with the intended user. 6. To evaluate my project.
Year 6	Frame Structures	Artificial Intelligence	Cams

	1. To identify frame structures in the world and explain why they are used 2. To explain how frame structures are created and what gives them strength. 3. To create frame structures from different materials and test their strength. 4. To design and make a frame structure suitable for the brief and specification given. 5. To carefully measure, cut, saw to ensure the dimensions are correct and use appropriate joining techniques. 6. To evaluate the effectiveness of the product by referring to the specification.	1. To develop an understanding of what acceleration is, how it relates to motion and its measurements using accelerometers. 2. To explore the principles of accelerometer technology, including use of sensors and motion detection. 3. To design a build a simple accelerometer using materials. 4. To investigate sensitivity of accelerometers and how to calibrate them. 5. To interpret accelerometer data and analyse. 6. To explore real-world scenarios of accelerometers including sports and transportation.	1. To understand the concept of cams and how they are used to convert rotational motion into linear motion. 2. To explore various types of cams such as disc cams, plate cams and cylindrical cams. 3. To construct cam mechanisms using simple materials. 4. To experiment with different cam profiles such as sinusoidal and dwell. 5. To know real like applications such as toys or devices.