Year 2/3 – Woodpeckers **Summer 2B**

Design Technology - Mechanisms

What I should already know - Explored sliders to make a moving picture, be able to explain that wheels move because they are attached to an axle, that wheels and axles are used in everyday life.

Enquiry Questions

1) Can we look at objects and understand how they move?

2) Can we look at objects and understand how they move?

3) Can we explore different design options?

4) Can we make a moving monster?

Key Vocabulary

Axle - A rod or spindle (either fixed or rotating) passing through the centre of a wheel or group of wheels
Design Criteria - A set of rules to help designers focus their ideas and test the success of them.
Evaluation - When you look at the good and bad points about something, then think about how you could improve it.
Input -The energy that is used to start something working.
Linkage - Lengths of material (for example, metal or card) that are joined together by pivots, so that the links can move as part of a mechanism.
Mechanical - Something that can move because several pieces work together like a machine.
Mechanism - A collection of parts that work together to create a movement, eg: a bicycle.
Output - Output is the motion that happens as a result of starting the input.
Pivot -The central point, pin, or shaft on which a mechanism turns or swings.
Survey -To ask a group of people questions about something and to use their answers to make improvements.
Wheel - A circular object that revolves on an axle and is fixed below a vehicle or other object to enable it to move easily over the ground.

Pupils will (Yr2/Yr3):

Design

Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.
Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

Make

Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].
Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

Evaluate

Explore and evaluate a range of existing products.
Evaluate their ideas and products against design criteria.
Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
Understand how key events and individuals in design and technology have helped shape the world.

Technical Knowledge

Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].

The four types of motion:

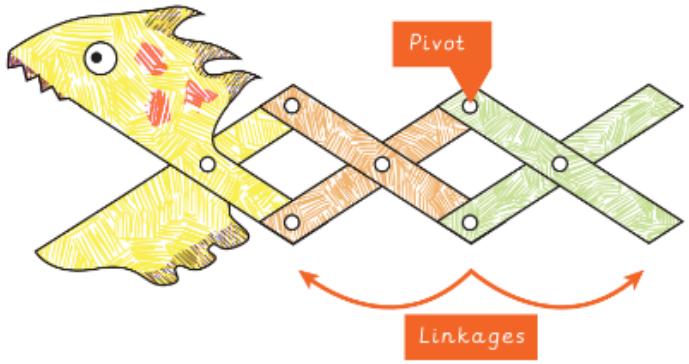
Linear motion
Movement in a straight line in any one direction.

Reciprocating motion
Movement in a straight line, back and forth, in any direction.

Rotary motion
Movement in a circular motion.

Oscillating motion
Movement in a curve, back and forth.

Moving monster



What materials could you use to represent fur, scales and claws?

Links to other areas of the Curriculum: