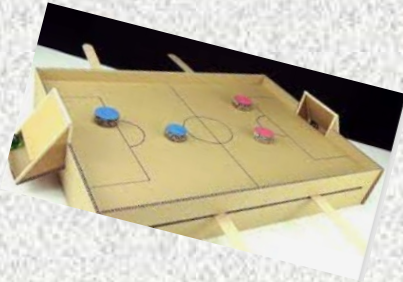


Design It, Make It, Test It! Knowledge Organiser

Elm Class (Year 3)



What should I already be able to do?

- Use simple prototypes, labelled sketches and detailed instructions in plans and designs .
- With support, attach a fixed axel to a chassis and add wheels ensuring they can move freely.
- Construct a simple pneumatic system with one moving part .
- Make a rectangular frame from strip wood .

Key Design and Technology Projects

Design, Create and Evaluate:

Pneumatic Toys!

The children will design and create a toy with a pneumatic system, learning how trapped air can be used to create a product with moving parts while also building on their design knowledge. They will be introduced to thumbnail sketches and exploded diagrams and complete the project with detailed evaluation of their product.

Design, Create and Evaluate:

Magnetic Games!

The children will explore how forces can make objects start to move, speed up, slow down or change direction. They will compare how things move on different surfaces and use their learning to design their own magnetic games.

A Hands-on Workshop with a Design

Technology Specialist!

We are thrilled to invite a secondary DT teacher from Hayesfield School to run a fantastic workshop with the children based on our learning around axels, pulleys and gears! This exciting event will take place in Term 4.

Design It, Make It, Test It!

Knowledge Organiser

Elm Class (Year 3)

This term we will be learning a range of new Design and Technology skills. We will enjoy designing, creating and evaluating purposeful and engaging projects linked with pneumatics, magnetism and mechanics. We look forward inviting a specialist DT teacher into our school in Term 4 to consolidate our learning and bring our exciting and hands-on topic to a memorable close. DT, here we come!

STEAM Day

Elm and Hazel Class will take part in mixed-class, group challenges linked with their learning in science, technology, engineering, art and mathematics!

Vocabulary	Definition
Net	A two-dimensional pattern that you can cut and fold to make a model of a solid shape.
Axle	A rod or spindle (either fixed or rotating) passing through the centre of a wheel.
Chassis	A frame upon which the main parts of an automobile are built.
Pulley	A wheel over which a belt, rope, or chain is pulled to lift or lower a heavy object.
Electrical circuit	An electrical device made up of different components that provides a path for electrical current to flow through it.
Pneumatic system	A system that uses compressed air to transmit and control energy, causing movement of part or parts.
Prototype	An original or first model of something from which other forms are copied or developed.
Annotation	Notes or comments added to a diagram or sketch to help with planning a design.
Evaluation	Making a judgement about something.
Component	A component is one of the parts of something (such as a system or mixture).