

Year 5 – Autumn 1

Science



Look around your home or school and list five examples of **forces in action**. For each one, write: What is happening? What type of force is being used? (e.g., push, pull, gravity, friction).

Complete the table and explain how we use mechanisms in the real world.

Mechanism	Description	Example
Lever	A bar that pivots on a point to lift or move	_____
Pulley	A wheel with a rope used to lift things	_____
Inclined Plane	A sloping surface used to move objects upward	_____
Wheel and Axle	A wheel attached to a rod that helps movement	_____

Technology



Write some rules or design a poster about **online safety**. You could consider: screen time use, online bullying, personal information, passwords, using technology for communication (social media, etc.) or privacy settings.

Engineering



Design and make a simple machine that uses a **lever, pulley or wheel and axle** to lift or move an object.

- Choose one mechanism: a lever, a pulley, or a wheel and axle.
- Build your machine using items from home.
- Test how well it lifts or moves a load, like a small toy or a bag of rice.
- Take a photo or draw a diagram of your design, and label the forces involved (push, pull, friction).

Arts

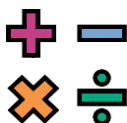


Building on your Engineering challenge, create a moving picture (an automaton) that uses a simple mechanism to bring a scene to life.

- Choose a simple scene or character, such as a bird flapping its wings, a boat bobbing on waves, or a rocket launching.
- Use card, split pins, straws or lolly sticks to build a simple lever or cam mechanism that makes part of your picture move.
- Decorate your scene using paints, pencils, felt tips or collage.
- Write one or two sentences explaining how your mechanism works.

Challenge: Can you add a second moving part to your picture?

Maths



To start the year, we are focusing on place value with numbers up to 1,000,000.

- Choose five large numbers up to 1,000,000.
- Write each number in words, and partition it into hundred thousands, ten thousands, thousands, hundreds, tens and ones.
- Order your five numbers from smallest to largest.

Challenge: Can you round each of your numbers to the nearest 10, 100 and 1,000?

Play some place value games at <https://www.topmarks.co.uk/maths-games/7-11-years/place-value>

Children in Year 5 can bring any STEAM Challenge work they complete into school or submit it on Seesaw.