

LKS2 – Lesson Plan 5

How do forces and magnets affect objects?

Aim: To explore how different forces and magnets work and how they affect movement.	Key Words: Force, push, pull, magnet, attraction	Preparation: • Magnets of different sizes and strengths • Objects to test with magnets (e.g., paperclips, coins, rubber, plastic) • Balls or small toy cars (for push/pull experiments)
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Prior Learning: Basic understanding of movement and objects.

Warm-up:

Start with a class discussion about pushing and pulling. Ask children to think about examples in everyday life where they push or pull objects (e.g., opening a door, pushing a swing). Show a ball or toy car and ask children to predict what happens when it's pushed or pulled.

Main Teach:

1. **Forces Explained:** Explain that a force is a push or pull that can make things move, stop, or change direction. Demonstrate with a ball or toy car by pushing it across the floor and pulling it back.
2. **Magnets in Action:** Introduce magnets and explain that they can attract certain materials like metal. Show children how magnets work by testing them with different objects (e.g., paperclips, plastic, rubber). Discuss why some objects are attracted to magnets and others aren't.

Activity:

Magnet Investigation: Children use magnets to test various objects and sort them into two groups: magnetic and non-magnetic. They record their findings on a worksheet and discuss why certain materials (like metal) are magnetic while others are not.

Extension Challenge:

Magnet Maze: Children create a simple magnet maze. They draw a maze on paper, and using a magnet under the paper, guide a paperclip or small object through the maze by attracting it with the magnet.

Plenary:

Gather the children and ask them to share what they discovered during the magnet investigation. Discuss how magnets can be useful in everyday life (e.g., holding things together, in compasses). Review the idea of forces as pushes and pulls.

ART	Create a poster showing different examples of forces in action (e.g., pushing a swing, pulling a sled). Include both pushes and pulls in the artwork.
D.T.	Design and build a simple game or activity that uses magnets. For example, a fishing game where children use a magnet to "catch" paperclip fish.