# Year 3
# Spring Term 1: Forces and Magnets
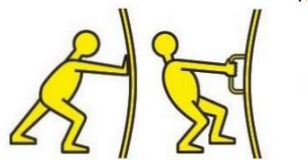
## Key Questions we will investigate

- What are magnetic materials? How can we find out?
- Can I make a magnetic material non-magnetic?
- How far away does a magnet have to be before it attracts a magnetic material?
- How far away can the magnetic attraction between two magnets be experiences?
- Is the repulsive force the same size?
- How is the magnetic attraction of repulsion force affected by putting materials between the magnets?
- Are bigger magnets stronger?
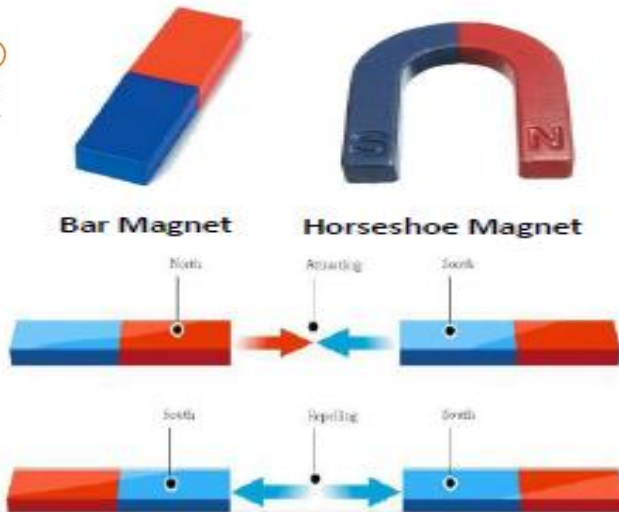- How could you use magnets to measure the number of pages in a book?

**William Gilbert**
(born May 24, 1544, Colchester, Essex, England—died November 30, 1603) observed that magnetic forces often produced circular motions. He began to connect magnetism with the rotation of the earth. This led to his discovery of the earth's own magnetism.

PUSH        PULL

**André-Marie Ampère,**
(born January 20, 1775, Lyon, France—died June 10, 1836, Marseille), French physicist who founded and named the science of electrodynamics, now known as electromagnetism. His name continues in everyday life in the ampere, the unit for measuring electric current.

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Bar Magnet        Horseshoe Magnet

## Vocabulary Dozen

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| **attract** | To pull towards. Opposite of repel. |
| **pull** | A force used to pull an object towards another. |
| **repel** | To push away. Opposite of attract. |
| **push** | A force used to push an object away. |
| **pole** | Ends of a magnet. One is North and the other is South. |
| **magnet** | Object that pulls or pushes things with an invisible force called magnetism. |
| **force** | The push or pull on an object |
| **compass** | An instrument to help follow directions using a magnetic needle that always points North. |
| **magnetic** | The force of attraction and repelling caused by a magnet. |
| **friction** | The rubbing of one object against another. |
| **gravity** | A force that causes things to drop to the ground. |
| **surface** | The outside edge of an object. |