Year 3 – Autumn 1 – Science – Pupil Knowledge Organiser

What do I already know?	What am I learning now?
• Objects are made from everyday materials based on their properties, which make them suitable for different jobs. • The same material can be used for many purposes, for example, metal can be used for: coins, cars, tins and table legs. • Some objects can be made from different materials, for example a spoon can be made from wood, plastic and metal.	1. What are forces? 2. What are some common forces? 3. How does friction affect how objects move on different surfaces? 4. How can we see how friction changes on different surfaces? 5. What are magnetic materials? 6. How can we predict it two magnets will attract or repel each other?

Key Knowledge: Forces

Contact forces include: Friction, air resistance, upthrust, and tension.

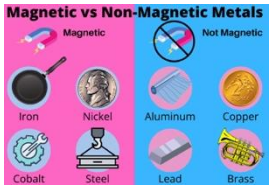
Non-contact forces include: gravity, and magnetic.

Slippery/smooth surfaces such as ice or a slide, have low friction.

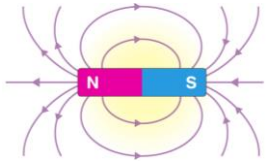
Rough surfaces, like carpet, sandpaper or rubber tyres, have high friction.

We can test if materials are magnetic by seeing if they are attracted to magnets.

Non-metals, e.g. wood, plastic and glass, are not magnetic.



SOME metals (Iron/Steel, Nickel and Cobalt) are magnetic.

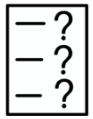


All magnets have two poles. A north pole and a south pole.

Opposite poles attract and like poles repel.

Key Skills: Working Scientifically

Ask Questions



Enquiry

Observe

Record/ Present

Conclusions

Evaluation

Communicate

Key Vocabulary

force	A push, pull or a twist, that makes an object move, stop, or change direction.
contact force	A force that needs two objects to be touching.
non-contact force	A force that does not need two objects to be touching.
force meter	An instrument used to measure the size of a force.
Newtons	The unit of measurement we use to measure force. It is shortened to N.
magnet	An object that attracts magnetic materials.
magnetic	A material that is attracted to magnets.
attract	To pull an object towards you. The verb form of attraction.
repel	To push an object away from you. The verb form of repulsion.
poles	The opposite sides of a magnet.