

Magnets: what do they pull?

Lesson at a glance

Open by holding a chunky magnet just above a paperclip so it jumps — ask how it moved without being touched. Name magnet and pull, model one wonder-guess-try cycle, then let Junior Infants point-guess for two or three tray objects. In pairs they hold the magnet over paperclips, steel lids, pegs and lolly sticks across short station bursts with carpet regroup. Each child draws one thing the magnet pulled on the Investigation Journal drawing page. Close with a carpet talk on which things jumped and what they were like.

Learning objectives

- Guess then try which everyday objects a chunky magnet will pull
- Draw one thing the magnet pulled

Before the bell – prep

Pre-test every tray object with the lesson magnet the day before. For about 12 pairs, set one chunky magnet and one mixed tray each: paperclip, steel bottle lid or washer, wooden peg, lolly stick, plus a steel spoon or key only if it pulls. Cover trays until Look and wonder. Store magnets away from tablets and devices.

Materials

Item	Qty	Per	Source	Low-cost substitute
strong chunky magnets	1	group	school kit	large fridge magnets only if strong enough to lift a paperclip from about 1 cm above the table; if it will not jump, use the school kit magnet
mixed objects tray (paperclip; steel bottle lid, washer or screw; wooden peg; lolly stick; steel spoon or key only if pre-tested)	1	group	classroom	any mix of safe steel and non-metal classroom objects (e.g. scissors stay with the teacher; use a steel bottle lid instead of a key)
shallow sorting or sharing tray	1	group	classroom	a lunchbox lid or shallow cardboard box lid
Investigation Journal page	1	pupil	provided printable	a blank A4 page for drawing

**Safety watch-point**

Chunky magnets only; keep away from mouths, faces, tablets and classroom devices. No objects in mouths. Count magnets back into the box first at tidy time.

**Teaching moves**

- **Getting Started:** Have one chunky magnet and one paperclip ready in hand; keep the full tray covered. Hold the magnet just above the paperclip so it jumps, then ask once how it moved without you touching it. Take two or three ideas only — do not name magnet or metal yet.
- **Look and wonder:** Uncover the tray and name magnet and pull. Model one full cycle aloud: I wonder, I think yes, I try, I noticed the jump and tug. Children then point-guess pull or not pull for two or three objects only. Guesses are never wrong — accept wonder, steer magic or sucks gently toward pull.
- **Magnet station play:** Run 2–3 short bursts (~4 min each) with a clear stop signal so magnets go down at once. Between bursts, 1-minute carpet: Who saw a jump? Which ones stayed still? Circulate with Did it jump? Can you feel a pull? Partners swap: one holds, one watches.
- **Show and draw:** Hold up the Investigation Journal page and call it the drawing page. Children draw one thing their magnet pulled; they may point to the real object while drawing. Ask pairs: Show me the one you will draw. Did you feel a pull? Scribe a single word only if a child asks and time allows.
- **Make-sense talk:** Carpet circle: invite three or four children to hold up their drawing or point to the real object. Revoice — the magnet pulled the paperclip, the lid... Gather that many jumping things were metal (steel); pegs and sticks did not. If a fridge magnet is to hand, hold it up as the same pull at home. Oral only — no writing.

What it should show

Paperclips almost always jump strongly; steel bottle lids, washers and screws usually pull; wooden pegs and lolly sticks stay still. Keys and spoons only pull if they are steel. A modern euro coin may pull weakly or not at all — treat as a discovery, not a mistake. A good drawing is any clear attempt at one pulled object the child can point to or name.

Misconceptions & interventions

- **Children say the magnet sucks or is magic.** — Accept the wonder, then revoice with pull: It jumped and stuck — the magnet pulled it. Have them try the paperclip again and ask if they felt a little tug.
- **Children think the magnet will pull everything on the tray.** — After they try the peg or lolly stick, ask Did it jump? Hold both a pulled and a still object side by side and say some things pull, some stay still.
- **Children think every metal thing will pull the same.** — If a key, spoon or euro coin stays still or pulls weakly, wonder aloud together: not every metal thing pulls the same — that is a real finding.

Differentiation

Emerging	Developing	Proficient
• Limit the pair to three pre-tested objects (one clear pull, one clear not-pull, one either) and stay nearby to model hold-above, not poke. • Let the child point to the pulled object while you scribe a single word label on the drawing page if they ask.	• Before each try, prompt a whispered guess: pull or not pull? then check together. • On the carpet return, invite them to name one that jumped and one that stayed still.	• After the tray, offer one teacher-approved extra item to test, still with the same magnet. • Fast finishers draw a second pulled object on the back, or point to one thing that did not pull and tell their partner.

Cross-curricular hook

Oral language: children revoice what jumped or stuck using the words magnet and pull.