

energy-forces

How do we make it go?

Lesson at a glance

Hold up a wind-up toy, let it run down, and ask how we make it go again. Show four objects (wind-up toy, sealed torch, plain push car, pinwheel) for thumbs guesses, then try the torch together on the carpet before free-flow stations for winding, push and blow. Sort the four real objects into hoop groups — winding with a key, battery, push, wind/blow — and children draw one or two things beside the matching hoop picture. Close with a short oral make-sense talk naming what each one needed.

Learning objectives

- Try different ways of making a toy or object go
- Sort objects by what makes them go: winding, battery, push or wind
- Say what makes at least one object go

Before the bell – prep

Night before: set three trays (chunky wind-ups, plain push cars only, pinwheels) and sketch four picture-and-word labels (key, battery shape, hand push, puff of air). Check torch covers are screwed shut; keep spare batteries with you. Have four hoops ready and plain paper for drawing.

Materials

Item	Qty	Per	Source	Low-cost substitute
chunky wind-up toys	4	class	school kit	one wind-up toy shared at a teacher-led station while other groups use a kitchen timer you wind
battery torch with sealed screwed-shut battery compartment	2	class	school kit	one teacher-held sealed torch the class takes turns switching on the carpet
plain push toy cars (no pull-back mechanism)	4	class	classroom	small balls children push along a taped lane
pinwheels	6	class	supermarket	paper fans children wave, or strips of tissue blown gently
sorting hoops or trays with picture-and-word labels (winding/key, battery, push, wind/blow)	4	class	classroom	four sheets of paper on the floor as group mats with the same sketched picture cues
masking tape for a short car lane	1	class	classroom	use the edge of a rug as the lane
plain paper for drawing	1	pupil	classroom	the back of scrap paper or a whiteboard and wipe after sharing at the hoop

Safety watch-point

Torches stay sealed and screwed shut; no button or coin cells; spare batteries stay with you. No running with pinwheel sticks near faces. Plain push cars only — no pull-back mechanisms.

Teaching moves

- **Getting Started:** Wind one toy once, let it stop, and take two or three ideas for how to make it go again. Do not name the four go-types yet. Keep the other station toys hidden.
- **Look and wonder:** Show the wind-up, sealed torch, push car and pinwheel one by one without letting children try them. Take thumbs guesses only. Lightly echo ideas but lock names in only at the sort.
- **Try making them go:** Part A: pass two sealed torches so every child presses the switch once — say the switch lets it go and a battery inside gives it the go; covers stay shut. Part B: model wind, push and gentle blow, then free-flow the three stations. Circulate asking ‘What did you do to make it go?’
- **Sort what makes them go:** Lay four labelled hoops. Say winding with a key versus the wind, a puff of air, so the pair does not blur. Hold the torch, point switch then closed battery end, and chorus battery as you place it — not a switch hoop. Class calls each object into its group.
- **Draw your sort:** Hand plain paper. Children draw one or two things they tried and place the paper beside the matching hoop picture. Scribe only if asked. Use the stem ‘This one goes by...’ If someone draws the torch, revoice battery once.
- **Make-sense talk:** Whole-class oral only. Revoice: we wind with a key; this needs a battery; we push this; our breath spins this. If anyone says only a switch makes things go, point back to the pinwheel and push car.

What it should show

Most Stage 1 children will sort wind-up to key, car to push, pinwheel to blow, and torch to battery after the lock-in line. Typical mix-up: torch into a ‘switch’ or ‘light’ idea — revoice that the switch lets it go and the battery inside gives it the go. Full four-group drawings are not required; one or two well-matched drawings is success.

Misconceptions & interventions

- **‘The switch makes the torch go’ or ‘it’s the light’ — children name what they touched, not the battery inside.** — Hold the sealed torch, point to the switch then tap the closed battery end: ‘Switch lets it go; battery inside gives it the go.’ Chorus battery as it goes in that hoop.
- **Children blur winding with a key and the wind (blow) because both sound like ‘wind’.** — Say the pair once while pointing at labels: ‘winding with a key’ versus ‘the wind, a puff of air we blow.’ Place the wind-up and pinwheel as you say each.
- **‘Batteries are magic’ or ‘big things always need more go.’** — Keep it simple: each thing needs the right kind of go. If size comes up: ‘Size is not the rule. A tiny pinwheel and a big push car can both go.’

**Differentiation**

Emerging	Developing	Proficient
• Stay with the teacher at one station and name the single action (wind, push or blow); guarantee a torch switch turn before the sort. • Draw one object only and walk it to the matching hoop picture with an adult stem: 'This one goes by...'	• Visit all three stations and tell a partner what each one needed before the carpet sort.	• After drawing, add one more classroom thing (a door you push, a fan) and place it by the hoop it would join — oral and drawn only.

Cross-curricular hook

Oral language: practise the stem 'This one goes by...' and the winding/wind pair so listeners hear the difference.

