

Big push, little push

Lesson at a glance

Open with a quick hands-up vote: will a little push or a big push send a ball further? Model a gentle then a strong hand-push of the same soft ball or toy car along a taped floor lane, marking each stop. Pairs rotate through two lanes while watchers call little or big push and notice the marks. The class points to which mark went further, then draws both pushes on the Investigation Journal page. Close with a make-sense talk: a bigger push can make something go further.

Learning objectives

- Roll a ball or car with a little push and a big push and watch which goes further
- Say that a bigger push can make something go further

Before the bell – prep

Before the bell, tape two clear floor lanes (3–4 m each) with masking tape and push desks back so feet stay clear of both paths. Put one soft ball or toy car and two stop markers (beanbags or scrap tape) at each lane. Soft balls work if cars are short.

Materials

Item	Qty	Per	Source	Low-cost substitute
soft ball or toy car	2	class	classroom	a tennis ball or a small cardboard roll car
masking tape for floor lanes and start lines	1	class	classroom	chalk lines on a hard floor, or long skipping ropes laid straight
beanbag or scrap of tape to mark stop points	4	class	classroom	a shoe, a peg, or a sticky note on the floor
Investigation Journal page	1	pupil	provided printable	a blank A4 sheet for a simple drawing
chunky crayons	1	pupil	classroom	colouring pencils

Safety watch-point

Roll only along the taped lane and away from feet. No throwing. Stop play if a lane gets crowded or anyone steps into the path.



Teaching moves

- **Getting Started:** Stand where all can see. Ask which makes a ball go a long way: little push or big push. Mime a tiny finger-tap then a bigger arm swing. Count hands for each guess so every child is heard; say guesses are never wrong and you will find out with your own hands next.
- **What do you think?:** Keep the board almost empty. Say and show with gestures only: a push moves something away from you; a little push is gentle; a big push is strong. Ask children to show a little push then a big push with their hands and point how far each might go. Head off talk about colour or size of the toy — keep it on how hard we push.
- **Push along the lane:** Model one full cycle live on one lane first: wonder, guess, little fingertip roll and mark the stop, big two-handed roll from the same start and mark, then notice the big push went further. Split the class into two lane groups; pairs rotate one little and one big push each while watchers kneel beside the lane and join your call. Leave the model marks on one lane. Circulate asking: Was that little or big? Which went further?
- **Which went further?:** Gather everyone at the lane that still has both stop marks. Point to each mark and keep it fully oral: Where did the little push stop? Where did the big push stop? Which is further? If a pair's big push was not clearly further earlier, re-run one careful pair so the class sees the difference, then revoice: a bigger push can make something go further.
- **One more clear go:** Stay on the real floor — no screen. Do one slow final pair of runs yourself (or one confident pair): little push, class whispers little push; big push, class whispers big push. Both marks stay visible. Ask everyone to point to the further mark, then say the finding together.
- **Draw what you saw:** Hand out the Investigation Journal page in class. Every child draws the class finding from the lane marks — little push shorter, big push further — whether they pushed or only watched. Offer stems aloud: My little push went... My big push went... The big push went further. Celebrate clear little-versus-big pairs, not neat artwork.
- **Make-sense talk:** Whole-class oral circle, no writing. Lead with Did the big push go further? then draw out together: a bigger push can make something go further. Offer the footballer kick as your quick teacher example of a big push with the foot. If someone blames the toy's colour, return to same car, same start — only the push changed. Invite two children to hold up drawings and point to the further run.

What it should show

On a smooth floor the big-push stop should clearly pass the little-push mark. Children typically notice, point to and name that the big push went further. If both stops look the same, the little push was still too strong — model an even softer fingertip tap from the same start so the difference shows.



Misconceptions & interventions

- **Some children think the colour, size or shininess of the ball or car is what makes it go far.** — Point back to the lane marks and revoice: same ball or car, same start — only the push changed. Ask them to point again to which push went further.
- **A child gives two pushes that look about the same strength, so both stops land near each other.** — Kneel beside them and model an even softer little tap, then a clearly stronger big push. Ask the pair and watchers: Was that really bigger, or about the same?

Differentiation

Emerging	Developing	Proficient
• Pair with a confident partner or stay in the watcher role first; invite them to place the stop marker and join the little/big call. • At drawing time, sit at the teacher table and have them point to the further class mark before they mark it on the journal page.	• After their go, ask one more oral prompt: Which mark is further down the lane — show me with your finger.	• Fast finishers add themselves as the pusher on the same journal page, or draw a footballer giving a big kick (a big push with the foot), still showing the further run.

Cross-curricular hook

Link to PE ball skills — a soft roll versus a strong kick is the same little-push / big-push idea on the yard.