

Pushes and pulls

describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape

Learning intention

- describe pushes and pulls in terms of strength and direction and predict the effect of these forces on objects' motion and shape

Teach and model

- observing and manipulating everyday objects such as playground equipment, toys, windows or doors and identifying the forces used to move these objects
- investigating how the design of age-appropriate sporting equipment such as paddles, plastic bats and racquets help to produce stronger pushes and pulls
- recognising that pushing or pulling on an object can start or stop its motion or change its direction of travel

Check understanding

- Explain the main idea in pushes and pulls using an example.
- Show the idea in a second way: with words, a model, a diagram or symbols.
- Apply the idea to a short unfamiliar situation and justify the result.

Teaching cautions

- Ask the student to explain their choice, not only state an answer.
- Check that key vocabulary is understood in a new example.
- Mix representations so the skill is transferred rather than copied.

Quick lesson sequence

- Connect to prior knowledge and introduce the key vocabulary.
- Model one clear example, then solve a second example together.
- Finish with an independent check and a short student explanation.