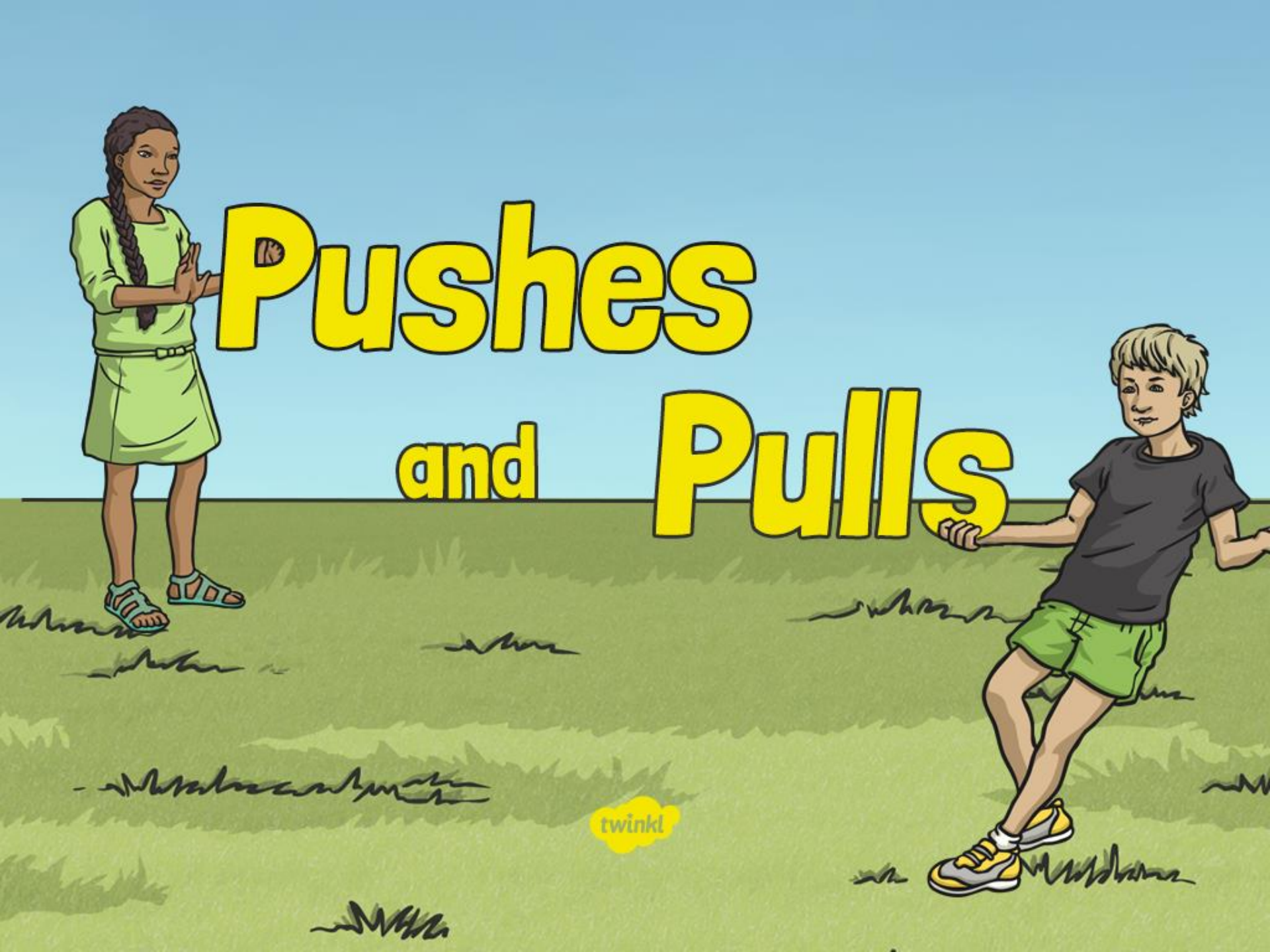
Science

Forces and Magnets


Pushes
and
Pulls
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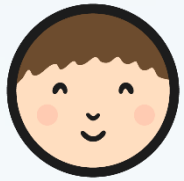
Aim

- I can identify the forces acting on objects.

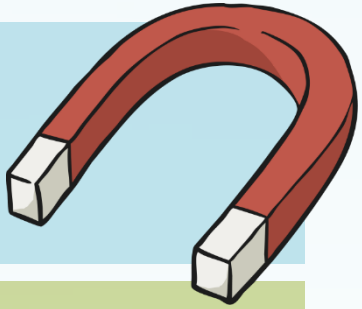
Success Criteria

- I can name different types of force.
- I can say when there is a push or a pull acting on an object.

What Do You Know about Forces?

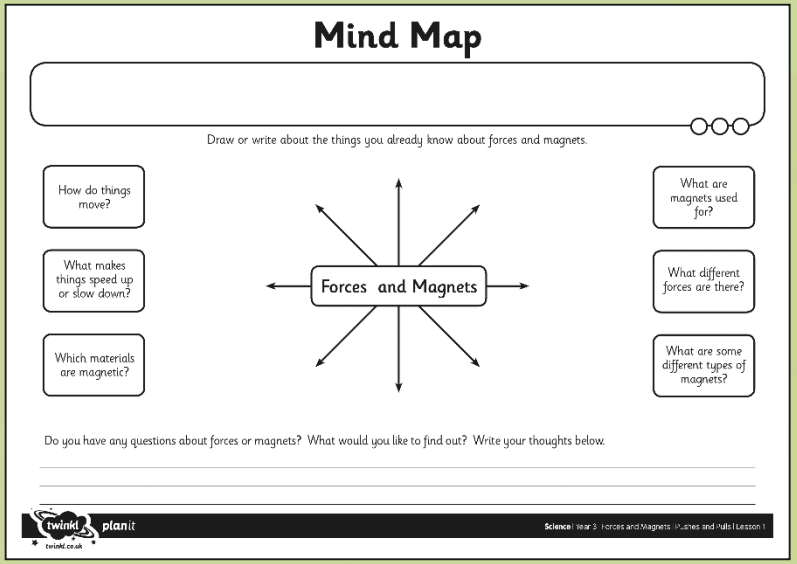


What do you already know about forces?
Do you know anything about magnets?



This unit of work is all about forces and magnets.

Complete your **Forces and Magnets Mind Map** to show what you already know, and to ask questions about what you want to find out.



Mind Map

Draw or write about the things you already know about forces and magnets.

How do things move?

What makes things speed up or slow down?

Which materials are magnetic?

Forces and Magnets

What are magnets used for?

What different forces are there?

What are some different types of magnets?

Do you have any questions about forces or magnets? What would you like to find out? Write your thoughts below.

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What Is a Force?

A force is a push or pull acting on an object as a result of the object's interaction with another object.

Forces can make objects stop or start moving.

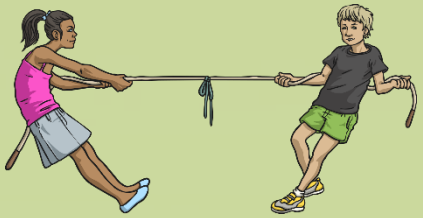
Click the hockey player to watch a clip showing the effects of forces on different objects.

While you are watching, note down any examples of pushes or pulls that you see.

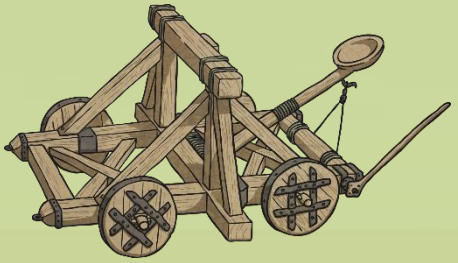
Pushes and Pulls

Did you spot these examples of **pulling** forces?

The rower **pulls** the oar.

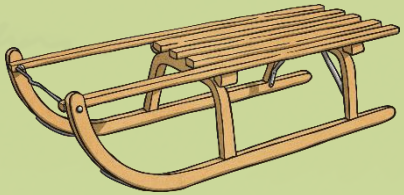


The tug of war teams **pull** the rope.



A catapult is **pulled** back.

The string of the bow is **pulled** back.



Pulling the sledge.

The bell ringers **pull** the ropes.

Pushes and Pulls

Did you notice these examples of **pushing** forces?

The runner's feet **push** off the ground.

A person **pushes** the piano keys down.

The hockey stick **pushes** the ball.

The golf club **pushes** the golf ball.

The bat **pushes** the ball.

The woman **pushes** the pram.

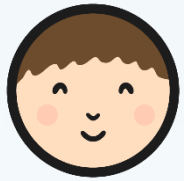
Forces in Action

Think of an action that shows how forces move objects. You could choose an action from the clips you watched earlier or think of your own.

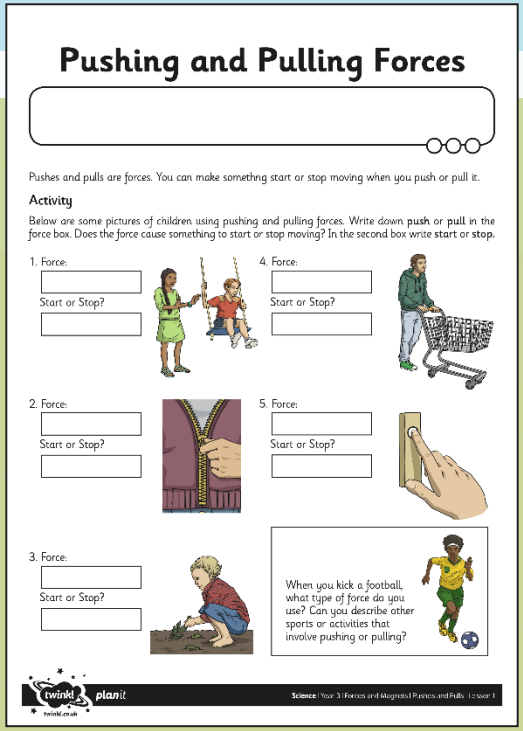
Work with a partner to create a freeze frame of the action you have chosen.

Show your freeze frames to the rest of your class. Can your classmates decide if you are demonstrating a pushing force or a pulling force?

Identifying Forces



Complete your **Pushing and Pulling Activity Sheet** to identify the pushing and pulling forces acting on the different objects.



Pushing and Pulling Forces

Pushes and pulls are forces. You can make something start or stop moving when you push or pull it.

Activity

Below are some pictures of children using pushing and pulling forces. Write down **push** or **pull** in the force box. Does the force cause something to start or stop moving? In the second box write **start** or **stop**.

1. Force:
Start or Stop?

2. Force:
Start or Stop?

3. Force:
Start or Stop?

4. Force:
Start or Stop?

5. Force:
Start or Stop?

When you kick a football, what type of force do you use? Can you describe other sports or activities that involve pushing or pulling?

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