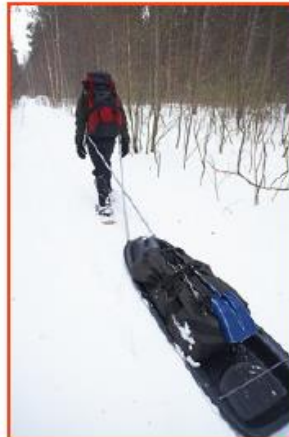


A force is a push or a pull on an object. A force needs two objects where one pushes or pulls the other to make it move. We use forces all the time to move things and to make ourselves move.



Have a look at the pictures on the next slides. Which show pushes and which show pulls? Which two things are touching in each picture to create a movement?

Which pictures are showing pushes and which are showing pulls?




Which two things are touching in each picture to create movement?



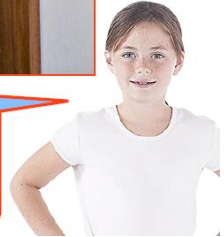
Can you explain how pushes and pulls work to make a swing move? Which direction do the forces act in?



Can you explain why this cart is moving? What forces are there? What is in contact to create a movement?



What forces are in action when you open a can of drink? What is in contact to create movement? Which direction are the forces acting in?



Which forces would you use to open and close a door? What needs to be in contact to create movement?

Activity:

Draw a table with two columns, labelled 'pushes' and 'pulls'. Sort the images from all the slides into these two columns, by describing each with a simple phrase (pushing lawnmower; pulling cart...) or by drawing them.

Challenge: choose one or more question cards [see below] and answer the questions, as well as drawing and labelling a diagram to match.

How can you make a chair move?

- ★ Can you push it?
- ★ Can you pull it?
- ★ Which direction do the forces act in?
- ★ What needs to be in contact in order for the chair to move?

How can you open a book?

- ★ What force do you need to open it?
- ★ What force do you need to close it?
- ★ Which direction do the forces act in?
- ★ What needs to be in contact in order for the pages to move?

How can you make a door move?

- ★ Can you push it?
- ★ Can you pull it?
- ★ Which direction do the forces act in?
- ★ What needs to be in contact in order for the door to move?

How can you make a pencil move?

- ★ Can you push it?
- ★ Can you pull it?
- ★ Which direction do the forces act in?
- ★ What needs to be in contact in order for the pencil to move?

What forces do you need to write your name?

- ★ What will you use to write?
- ★ What will move?
- ★ Which direction do the forces act in?
- ★ What needs to be in contact in order for you to write your name?

What forces do you need to clap your hands?

- ★ Do you push or pull or both?
- ★ What will move?
- ★ Which direction do the forces act in?
- ★ What do you need to move in order to clap?

What forces do you need to jump up and down?

- ★ Do you push or pull or both?
- ★ What will move?
- ★ Which direction do the forces act in?
- ★ What do you need to move in order to jump?

What forces do you need to open a window?

- ★ Do you push or pull or both?
- ★ What will move?
- ★ Which direction do the forces act in?
- ★ What needs to be in contact in order for the window to open?