

# Oughterside Foundation School - Science

**Topic: Introduction of Forces (non-statutory)**

**Year: 2**

**Strand: Physics**

## What should I already know?

- The shape of some materials can be changed when they are **stretched, twisted, bent** and **squashed**.
- Know how different toys move.

## Vocabulary

bendy	an object that bends easily into a curved shape
force	the <b>pulling</b> or <b>pushing</b> effect that something has on something else
position	The <b>position</b> of someone or something is the place where they are in relation to other things
pull	When you <b>pull</b> something, you hold it firmly and use <b>force</b> in order to move it towards you or away from its previous <b>position</b>
push	When you <b>push</b> something, you use <b>force</b> to make it move away from you or away from its previous position
squash	pressed or crushed with such <b>force</b> that something loses its shape
stretchy	slightly elastic
twist	turn something to make a spiral shape

## Investigate!

- Observe how different objects move when they are **pushed** or **pulled**.
- Make a list of every day activities that involve **pushing** or **pulling** objects (e.g. **pulling** a drawer open or **pushing** a pram.)
- Investigate the **forces** of **pushing** and **pulling** in PE.
- Observe how different toys move (e.g tricycles, water wheels, pull along toys).
- Draw diagrams to show how objects move when a **force** is applied to it. Use arrows to show the direction of the movement.
- Explain how the strength of the **force** determines how fast or how far something moves.

## What will I know by the end of the unit?

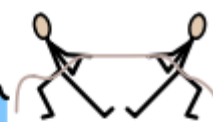
How do objects move?

- Objects move when they are **pushed, pulled** or **twisted**. These are all **forces**.
- A **push** or **pull** can move an object start to move, or stop it from moving.
- A **push** or **pull** can make an object speed up or slow down.
- A **push** or **pull** can make an object change direction.
- A **push** can **squash** some materials, and a **pull** can **stretch** some materials.

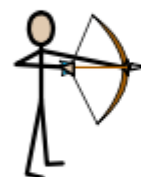
What are examples of **pulling** forces?



rowing a boat



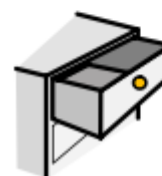
tug of war



archery



pulling a sledge



opening a drawer



slingshot

What are examples of **pushing** forces?



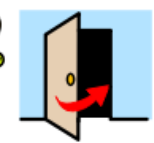
running



playing hockey



playing tennis



pushing a door closed



playing piano



pushing a pram

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Question 1: Pushes and pulls are examples of.....	Start of unit:	End of unit:
how to play		
forces		
how to use all toys		

Question 2: The harder the force, the _____ and _____ an object will move. Tick the two words that can go in the gaps.	Start of unit:	End of unit:
further		
nearer		
faster		
slower		

Question 3: If you push play dough, the play dough will be...	Start of unit:	End of unit:
squashed		
stretched		
bent		

Question 4: If you pull play dough, the play dough will be...	Start of unit:	End of unit:
squashed		
stretched		
bent		

Question 5: Match these activities to the forces that are being applied.	Start of unit:	End of unit:
 opening a bottle		
 kicking a football		
 using a pulley		
pull		
push		
twist		