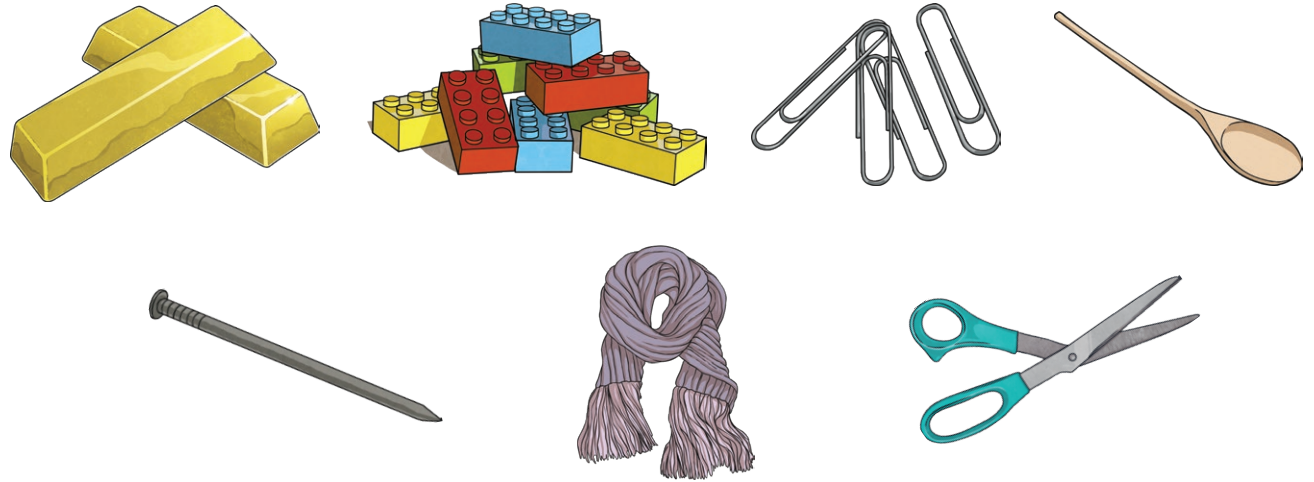


# Year 3 Forces and Magnets

Name the piece of equipment that tells you where 'north' is.

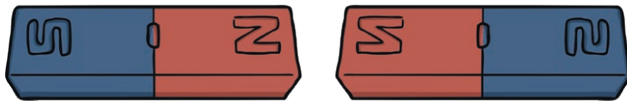
Circle the object in **red** if it's magnetic and in **blue** if it's non-magnetic.



Fill in the missing words.

Like poles \_\_\_\_\_.

Opposite poles \_\_\_\_\_.



Tick the possible effects that forces can have.

Forces can make things:

- |  |  |
|--|--|
| <input type="checkbox"/> evaporate     | <input type="checkbox"/> slow down     |
| <input type="checkbox"/> start to move | <input type="checkbox"/> change colour |
| <input type="checkbox"/> grow          | <input type="checkbox"/> change smell  |
| <input type="checkbox"/> speed up      | <input type="checkbox"/> stop          |

List **two** surfaces a car may struggle to move on due to not having enough friction.

- \_\_\_\_\_
- \_\_\_\_\_

# Year 3 Forces and Magnets

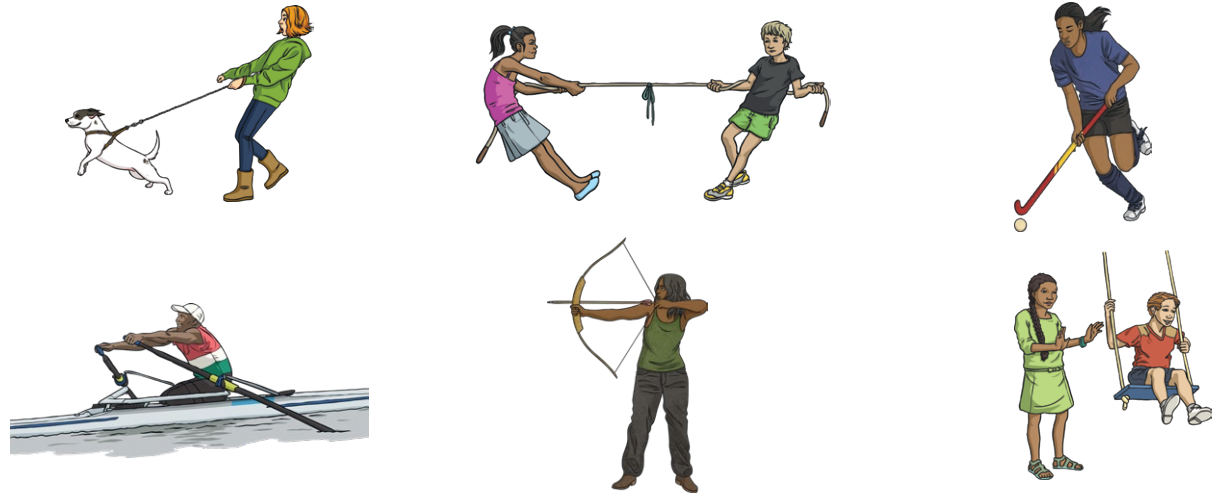
Fill in the missing words with words from the box:

Friction is a force that acts between two surfaces or objects that are moving, or trying to move, across each other.

Different \_\_\_\_\_ create different amounts of \_\_\_\_\_. This depends on the \_\_\_\_\_ of the surface, the object and the \_\_\_\_\_ between them.

force	friction
roughness	surfaces

Circle the force in **red** if it's a push and in **blue** if it is a pull.



In which of the options below do both objects have a north and a south pole? Tick the right answer.

- a) magnets and batteries
- b) magnets and the Earth
- c) batteries and the Earth

Write **true** or **false** after each of these statements.

- a) Repulsion is a force that pushes objects together. \_\_\_\_\_
- b) When a north pole is placed near the south pole of another magnet, the two poles repel. \_\_\_\_\_
- c) When a north pole is placed near the north pole of another magnet, the two poles repel. \_\_\_\_\_
- d) A magnetic field is invisible. \_\_\_\_\_

iron	gold	steel
cobalt	nickel	silver

Choose **two** metals from the box that are magnetic.

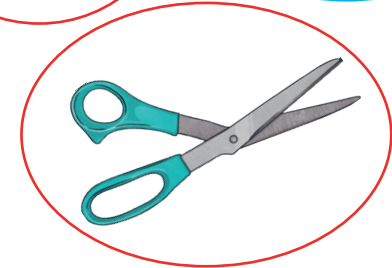
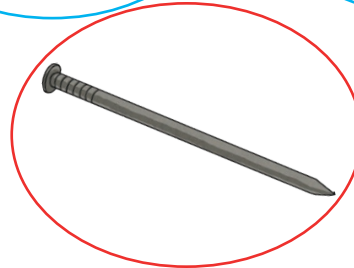
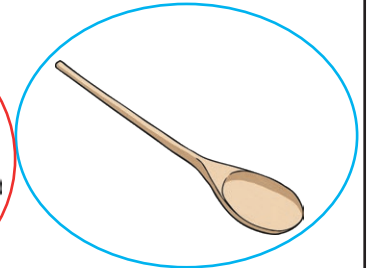
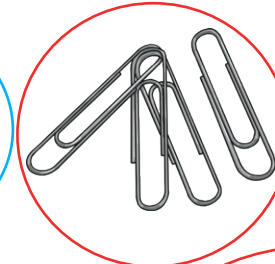
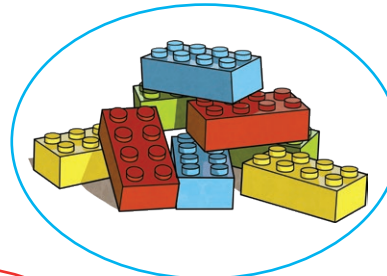
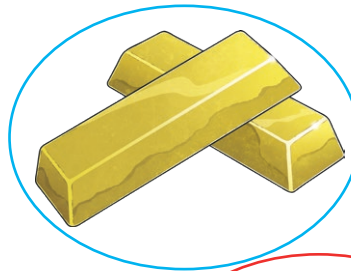
- \_\_\_\_\_
- \_\_\_\_\_

# Year 3 Forces and Magnets - Answers

Name the piece of equipment that tells you where 'north' is.

**compass**

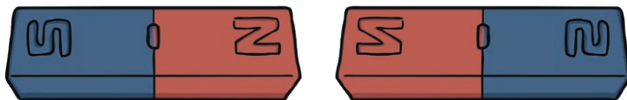
Circle the object in **red** if it's magnetic and in **blue** if it's non-magnetic.



Fill in the missing words.

Like poles **repel**.

Opposite poles **attract**.



Tick the possible effects that forces can have.

Forces can make things:

- |   |   |
|---|---|
| <input type="checkbox"/> evaporate                | <input checked="" type="checkbox"/> slow down |
| <input checked="" type="checkbox"/> start to move | <input type="checkbox"/> change colour        |
| <input type="checkbox"/> grow                     | <input type="checkbox"/> change smell         |
| <input checked="" type="checkbox"/> speed up      | <input checked="" type="checkbox"/> stop      |

List **two** surfaces a car may struggle to move on due to not having enough friction.

**Accept any of the following answers:**

- grass
- gravel
- sand

# Year 3 Forces and Magnets - Answers

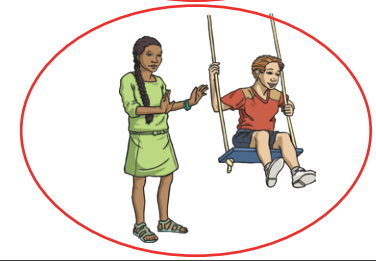
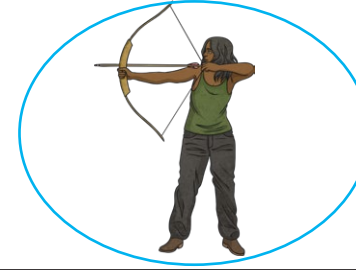
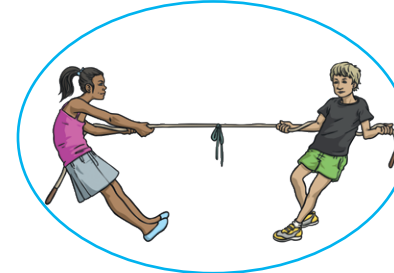
Fill in the missing words with words from the box:

Friction is a force that acts between two surfaces or objects that are moving, or trying to move, across each other.

Different **surfaces** create different amounts of **friction**. This depends on the **roughness** of the surface, the object and the **force** between them.

force	friction
roughness	surfaces

Circle the force in **red** if it's a push and in **blue** if it is a pull.



In which of the options below do both objects have a north and a south pole? Tick the right answer.

- a) magnets and batteries
- b) magnets and the Earth** ✓
- c) batteries and the Earth

Write **true** or **false** after each of these statements.

- a) Repulsion is a force that pushes objects together. **false**
- b) When a north pole is placed near the south pole of another magnet, the two poles repel. **false**
- c) When a north pole is placed near the north pole of another magnet, the two poles repel. **true**
- d) A magnetic field is invisible. **true**

iron	gold	steel
cobalt	nickel	silver

Choose **two** metals from the box that are magnetic.

**Accept any two from:**

- iron
- cobalt
- steel
- nickel