

Name:

Date:

Science Assessment Year 3: Forces and Magnets

Pushes and Pulls

1. Circle the correct word from each box:

A force is a or a acting on an .

Forces can make objects or or go

or .

5 marks

2. Write **push** or **pull** in each row to finish the table below:

(The first one has been done for you.)

| Activity | Push or Pull? |
|----------------------------------|---------------|
| Jumping on a trampoline | push |
| Hitting a ball with a bat | |
| Getting ready to fire an arrow | |
| A car taking a trailer somewhere | |
| Tying shoe laces | |

3 marks

3. Write **start** or **stop** in each row to finish this table:

| Activity | Start or Stop? |
|---------------------------------------|----------------|
| Pulling your brakes on your bike | stop |
| Kicking a ball | |
| A piece of toast landing on the floor | |
| Pedalling a bike | |
| Throwing a paper aeroplane | |

3 marks

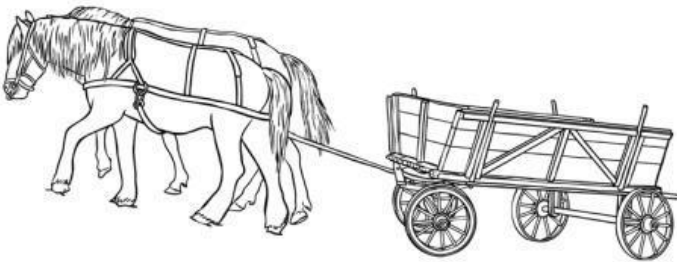
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4. Where is the pushing force coming from in this picture?



1 mark

5. Where is the pulling force coming from in this picture?



1 mark

Magnets

6. Circle the metals that magnets can pick up:

Gold

Iron

Aluminium

Steel

Cobalt

Copper

Silver

Nickel

2 marks

7. Write **attract** or **repel** on these bar magnets below:

| Magnets | Attract or Repel? |
|---------|-------------------|
| | |
| | |
| | |

2 marks

Total for this page

8. Name another type of magnet.

1 mark

9. A compass uses magnetism. Which way does a compass always point?

1 mark

10. If we do an investigation on different magnets to see how far away they were before they picked up a paper clip, what would we find out about the magnets?

1 mark

Here are the results of the magnet investigation

| Magnet | Distance when attracted paperclip |
|-------------------------------|-----------------------------------|
| Medium sized horseshoe magnet | 6cm |
| Large bar magnet | 10cm |
| Fridge magnet | 2cm |

11. Which is the strongest magnet?

1 mark

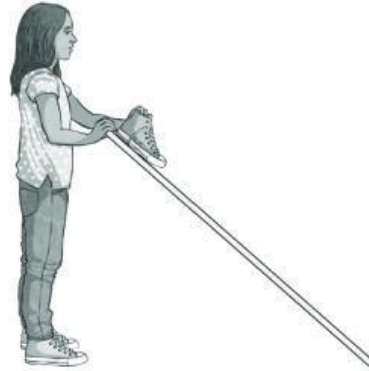
12. Which is the weakest magnet?

1 mark

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Gripping Surfaces Investigation

A group of Year 3 children carried out an investigation where they had some planks of wood with different coverings. They made each plank into a ramp and put a shoe at the top. They measured how high they had to lift the plank before the shoe slid down it.



Here are the results from that investigation in a table:

| Surface on plank | Height of plank when shoe slid down |
|------------------|-------------------------------------|
| Carpet | 70cm |
| Rough wood | 43cm |
| Rubber bath mat | 82cm |

13. What do these results tell you?

.....

1 mark

14. What is the name of the force that is stopping the shoe sliding down and making it grip?

.....

1 mark

15. Can you predict how high the plank would be for a smooth plastic surface similar to a slide in an adventure playground?

.....

1 mark

Total for this page