Name: _____   Class:_____ Date:_____

SCIENCE STAGE 3 - UNIT 5 - FORCES AND MAGNETS
Review Material - Part 2

5.3 Friction

I.A. William investigates the question 'Which surface has the most friction?' He measures friction on different surfaces to find the answer. Here are his results.

1. Which surface has the least friction?
   _____

2. Which surface has the most friction?
   _____

Surface	Friction (N)
Wood	10
Carpet	20
Sand	18

3. Which sentences are **true** about William's investigation?
   Put a tick on the box.
   a. Sand produces more friction than carpet.   ☐

   b. Carpet produces around 20N of force.   ☐

   c. Wood has a smoother surface than the carpet.   ☐

II. Fill in the blanks. Choose from the words listed below. One has been done for you.
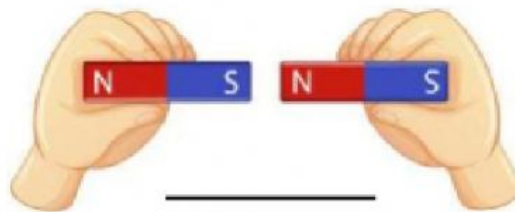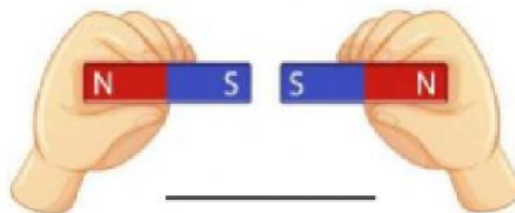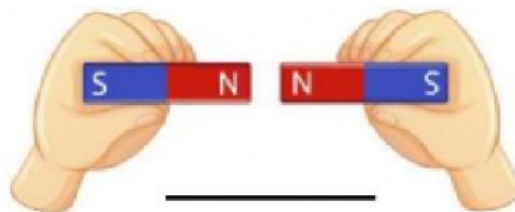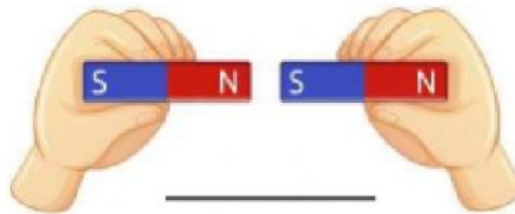
friction	grippy	slippery
surface	brake	oil

1. When one object moves on another object (rubbing each other) it makes a force called _____.

2. A rough _____ produces more friction than a smooth surface.

3. A surface that only has a little friction is called a _____ surface. You can easily slide over this surface.

4. A surface that has lots of friction can be called a _____ surface.

5. When we bike, we can apply _____ on the chains to reduces friction.

6. To stop a bike, we should press on the **brake** _____ gently until we come to a complete stop.

5.4 Magnets

I. For each pair of magnets, write *attract* or *repel*.

S N   S N

_____

S N   N S

_____

N S   S N

_____

N S   N S

_____

TRUE or FALSE.

1. Like poles repel each other.

2. North and South poles repel each other.

II. What Are the Uses of Magnets?
Match each picture to the correct use of the magnets.

•   • The magnet helps to hold notes to surfaces that are made of magnetic materials.

•   • The magnet always points to Earth's North Pole. It helps us to find our direction.

•   • The magnet attracts only rubbish that is made of magnetic materials. These magnetic materials are separated from the rubbish and recycled.

•   • The magnet allows a Maglev train to 'float'. This allows Maglev trains to move much faster than normal trains.
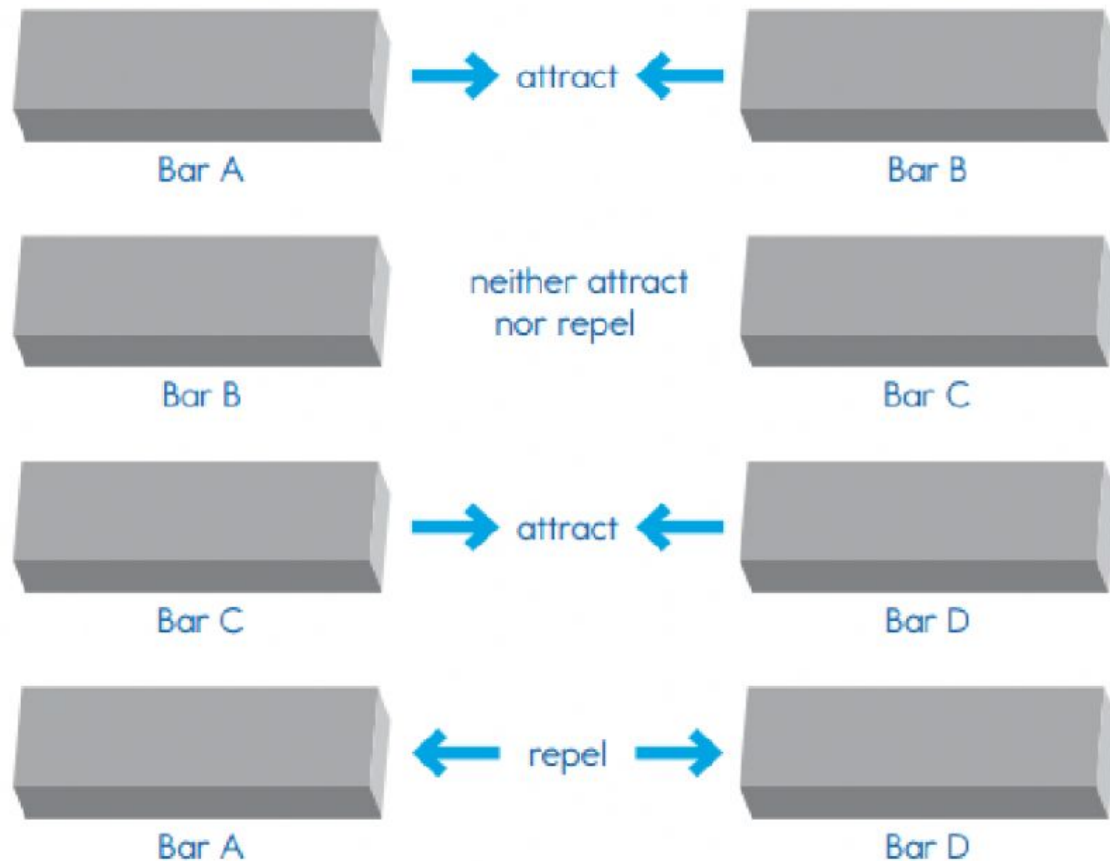
5.5 Magnetic Materials

*I.A. Put a **tick** on magnetic objects.*

3. What materials are attracted to a magnet?

4. What materials are not attracted to a magnet?

II. Tom had four bars. He placed them next to one another to test if any of them were magnets. His observations are shown below.

| Bar A | → attract ← | Bar B |

| Bar B | neither attract nor repel | Bar C |

| Bar C | → attract ← | Bar D |

| Bar A | ← repel → | Bar D |

1. Which bars are magnets?

2. Which bars are not magnets?