

Book 3A, Unit 3 Magnets

Lesson 2 Attract and Repel

Science Objectives

By the end of this lesson, students will be able to:

- state that two magnets can attract or repel each other.
- identify the two poles of a magnet.
- state that same poles repel and that different poles attract.

Language Objectives

In this lesson, students will have the opportunity to use:

- Words relating to the features of magnets: **attract, north, pole, repel, south**
- The sentence structure: “These poles (repel/attract).” to describe the interaction of different poles.
- Additional language: **force, different, same**

Materials

Review Activity	Stimulus Activity
- a magnet	<i>per group:</i> - two identical magnets

Review Activity

Books closed!

Review what a magnet attracts

- Hold up a magnet and ask: **What does a magnet attract?** Walk around the classroom and encourage students to suggest objects and surfaces that the magnet might stick to. Find out if they are correct by holding the magnet against the object or surface.

Stimulus Activity

Open your books

- Open the SB at p33. Draw students’ attention to the picture and read the question: **Two magnets meet. What happens?** (students’ own answers)

Key Words

- Open the SB at p15 and draw students’ attention to the key words.
- Write the key words on the board: **attract, north, pole, repel, south**
- Read or play the recording of the key words and ask students to repeat.
- Use pictures or gestures to help students understand their meanings.

Activity 1

Books closed!

- Put students into groups. Give each group two identical magnets and ask: **Can two magnets attract?** Give students time to experiment with their magnets, then nominate a few groups to share their observations.
- Ask: **Can two magnets repel?** Again, give students time to experiment with their magnets, then nominate a few groups to share their observations.
- Ask: **Can you feel the force of the magnets?** (students' own answers)

Teacher Tips

Remind students to be careful not to drop the magnets on the floor, as this can cause them to lose their magnetism.

If possible, provide magnets on which the poles are clearly labelled and/or coloured. This will make it easier to discuss which ends must be put together in order to make the magnets attract or repel.

Activity 2

Books closed!

- Draw a red and blue magnet on the board, positioned vertically. Ask: **How many ends does a magnet have?** (A magnet has) two (ends). Explain that the ends are called “poles” and write *poles* on the board.
- Label the top, red end *N* and the bottom, blue end *S*. Ask: **What do “N” and “S” stand for?** Encourage students to share their ideas, then explain that each magnet has a north and a south pole. Write *north* and *south* on the board.
- Ask: **What happens when you push two poles together?** Encourage students to share their ideas, then put them into groups and give each group two identical magnets to find out. As students are experimenting, walk around the classroom to check their progress and ask: **Can you feel the force? Are the magnets pushing or pulling?**

Open your books

- Open the SB at p34 and tell students to complete the activity by circling the right words.
- Check answers as a class (“Same poles repel. Different poles attract”).

Activity 3

Books closed!

- Play the recording.

Open your books

- Open the SB at p35 and read the song line by line. Do actions for students to copy:
 - *Magnet, magnet, what can you do?*

- *You attract and repel too.* (step forward and move your hands together on “attract”; step back and move your hands apart on “repel”)
- *Two north poles will push away.* (move your hands further apart)
- *North and south will pull and stay.* (move your hands closer together)
- *Magnet, magnet, what can you do?*
- *You attract and repel too.*
- Put students into pairs. In each pair, one student is “north” and one is “south”.
- Tell students to form two lines so that each of them is facing their partner.
- Play the recording again, students step towards each other on “attract”/“pull” and back on “repel”/“push away”.

Now I Know ...

- Ask: **How many poles do magnets have?** (Magnets have) two (poles).
- Ask: **What do two north poles do?** (Two north poles) repel. **What do two south poles do?** (Two south poles) repel. **What do a north and a south pole do?** (A north and a south pole) attract.
- Read and/or listen to the recording and ask students to repeat: *Magnets have two poles. Same poles repel. Different poles attract.*

Find Out More!

Books closed!

- Put students into groups. Sit each group around a table and give them a magnet. Scatter a pile of paperclips on the table. Ask: **How many paperclips can your magnet attract?** Give students time to experiment.

Open your books

- Open the SB at p59 and tell students to complete the activity by drawing their results.