



**Teacher Edition**

**AlphaWorld**

# Magnets

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Published edition  
© Eleanor Curtain  
Publishing 2004  
Text © Kerrie Shanahan  
Photographs © Eleanor  
Curtain Publishing

First published 2004

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Developed by  
Eleanor Curtain Publishing  
Text: Kerrie Shanahan  
Consultant: Susan Hill  
Designed by  
Alexander Stitt  
Production by  
Publishing Solutions

Printed in China

ISBN 0 7253 3053 8

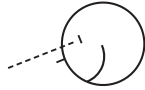
1 2 3 4 5 6 7 8 9  
04 05 06

## How to use this book



### Before reading: Talkthrough

Talk through the book with the children. Encourage them to predict the text from the cover and the pictures, and to think about the information provided. Direct the children's attention to aspects of the text that may challenge them. Support the children as they deal with these challenges by asking the *Talkthrough* questions on each page.



### During reading: Observe and support

Observe the children as they read and encourage them to monitor their own reading. Help the children to use reading strategies and cues to respond to reading challenges that arise in the text. Interruptions to the child's reading should be minimal and focused on a specific learning need.



### After reading: A range of comprehension and response activities

To develop children's understanding of the text, select from the activities found on page 12 and the inside back cover. These whole text, sentence and word level activities reinforce the teaching focus of this book. Assessment ideas are provided to assist with further teaching plans.

## Selected text features

- Contents page
- Conclusion and index
- Colour photographs support and extend the text
- Double-page spreads for each topic

## Vocabulary

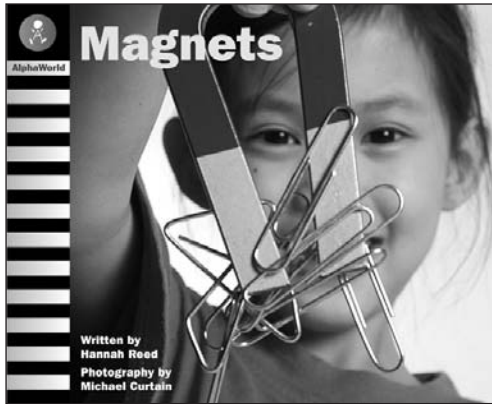
aeroplanes, attracts, electric, iron, machines, magnets, metal, motors, refrigerators, steel, surfaces

## Setting the context

The children could use a variety of objects to see which ones are attracted to a magnet. Discuss with the children what they found out and record their findings.

## Background information

*A magnet is a piece of iron or steel whose molecules have been aligned to create a field that attracts most steel objects. Magnets are used in many household items. They are used to generate power in electric motors. They are used in speakers and sound equipment.*

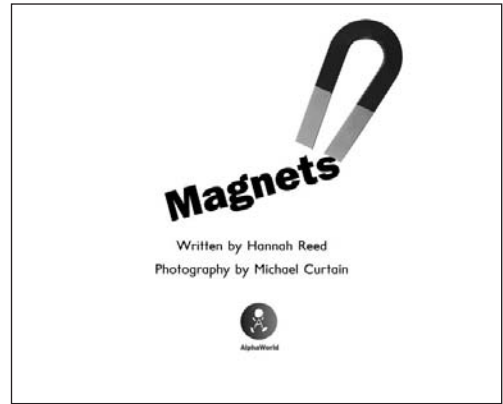


### Front cover

Show the front cover.

*What is happening in this photograph?*

*What sort of information do you think this book will contain?*



### Title page

Turn to the title page.

*Can you see the author's name?*

*Where is the photographer's name?*

*What else is on this title page?*



## **Talkthrough**

Turn to the contents page.

*This is the contents page. It tells us what sort of information will be in the book.*

*How do you use a contents page?*

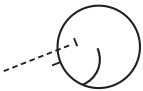
*Read the section headings. Which section most interests you?*

*Why?*

Turn to pages 4–5

*The section heading is 'What is a magnet?' How would you answer this question?*

*What do you think the children in the photograph on page 4 are doing?*



## **Observe and support**

Can the children use context to understand the meaning of subject-specific vocabulary?

*You read the word 'towards'. What does 'towards' mean?*

If the children have difficulty, demonstrate using a magnet to attract things while using the word 'towards'.



## Contents

|                            |    |
|----------------------------|----|
| What is a magnet?          | 4  |
| What does a magnet do?     | 6  |
| What do magnets look like? | 8  |
| Magnets in toys and games  | 10 |
| Magnets in the home        | 12 |
| Magnets in the workplace   | 14 |
| Magnets in transport       | 16 |
| Conclusion                 | 18 |
| Index                      | 20 |

## What is a magnet?

A magnet is a piece of metal that can pull some other metal things towards it.

These metal things stick to a magnet.





### **Talkthrough**

Turn to pages 6–7

*A magnet attracts things that are made of iron, steel and some other metals. What things are attracted to the magnets on these pages?*

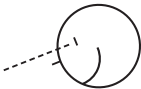
*Is the ball attracted to the magnet? Why not?*

Turn to pages 8–9

*The section is called ‘What do magnets look like?’*

*Magnets can be different shapes and sizes. What different-shaped magnets are in these photographs?*

*Have you seen magnets like the ones in the photographs?*



### **Observe and support**

Do the children understand the way the book is organised?

Do they read the question and then the answer?

*Where is the question?*

*How do you know it is a question?*

*Why might a book like this have a question as a section heading?*

*What is a statement?*

*Can you show me an example of a statement on this page?*

## What does a magnet do?



Nails that are made of iron stick to a magnet.



Spoons that are made of steel stick to a magnet.



A paper clip that is made of steel sticks to a magnet.



A magnet attracts iron and steel and some other metals. A plastic ball does not stick to a magnet.



## What do magnets look like?

Magnets can be many shapes and sizes.

Some magnets are flat. Flat magnets can be stuck to some flat metal surfaces.



Some magnets are round. Round magnets can be used to keep bags shut.

Some magnets are other shapes. All magnets can be used to pick up things.





### **Talkthrough**

Turn to pages 10–11

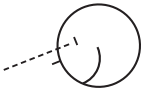
*This section is about magnets in toys and games. The magnets help parts of the toys to stick together.*

*How do you think the fish in this photograph is being picked up?*

Turn to pages 12–13

*This section is about magnets in the home. Many things in our homes have magnets inside their motors.*

*Are there magnets in your home? Where?*



### **Observe and support**

Can the children use their knowledge of letter-sound relationships to support their reading?

*You read the word 'motors'. How did you know this word was 'motors'?*

*What did you look for?*

*What did you check?*

If the children cannot read a particular word, you might say:

*Look at the start of the word. What sound might it make?*

*What do you notice about the end of the word?*

*What sort of word do we need here?*

*What would make sense?*





### Magnets in toys and games

Some toys use magnets.

Toy trains use magnets to join the different parts together.



Some games use magnets. In these games, one part has a magnet and the other part is made of metal. The metal and the magnet stick together.



There are small magnets in each piece of some board games. This stops the pieces from falling off the metal board.

In the game called 'go fishing', the magnet in the fishing line picks up the metal fish.



### Magnets in the home

Magnets are used in our homes.



The doors of refrigerators have magnets in them. The magnets help the doors stay shut. Many cupboard doors also have magnets to keep them shut.

There are lots of magnets in every house. We cannot see these magnets because they are inside electric motors.



There are magnets inside washing machines.



There are magnets inside CD players.



### **Talkthrough**

Turn to pages 14–15

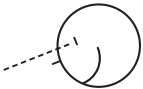
*This section is called 'Magnets in the workplace'.*

*This crane has a magnet that is strong enough to lift a heavy load.*

Turn to pages 16–17

*This section is about magnets in transport. Electric motors use magnets. Cars, buses and aeroplanes all have electric motors in them.*

*What other sorts of transport might use magnets?*



### **Observe and support**

Are the children able to understand the text at the three levels: literal, interpretive and inferential?

*How are magnets used in the workplace?*

*How do magnets assist us with transport?*

*Why are magnets useful in a scrap-yard?*

*Would we be able to have cars, buses and aeroplanes without magnets? Why or why not?*

*Could we do without magnets? Why or why not?*



### Magnets in the workplace

Many large machines have large magnets in them.

Some cranes have very strong magnets. These cranes can lift heavy loads of iron and steel.



### Magnets in transport

Cars, buses and planes, and many other things we travel in all have electric motors in them. These motors use magnets.

There are electric motors in windscreen wipers.

There are electric motors in electric windows and door locks.

An aeroplane has more than 100 electric motors, and each motor uses magnets.





### **Talkthrough**

Turn to pages 18–19

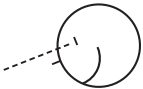
*Tell me about the magnets you can see on these pages.*

*Which of these objects use magnets?*

*Are you surprised that some of these objects use magnets?*

Turn to page 20

*This is the index. The index helps us to find information in a book.*



### **Observe and support**

Can the children identify the features of an index? Are they able to use the index?

*What can you tell me about the way the words in the index are ordered?*

*Why would it be done this way?*

*What do the numbers next to each word mean?*

*Why have some words got more than one page number written next to them?*

*When might you need to use an index?*

*On what pages would you find out information about motors in this book?*

## Conclusion

Magnets are very useful.  
They are all around us.  
We use them every day.



## Index

games 11  
home 12, 13  
machines 14  
metal 4, 7, 8, 11  
motors 12, 16, 17  
toys 10



## Magnets



### After reading

#### Being a meaning maker

Encourage the children to support their answers to these questions with evidence from the book:

*What sorts of objects stick to magnets?*

*How do magnets work?*

*What do we use magnets for?*

*Why are magnets important?*

*What are some household things that have magnets in them?*

*What are three things that would stick to a magnet?*

*What are three things that wouldn't stick to a magnet?*

#### Being a code breaker

Explore the following language features:

- Compound words: cupboard, horseshoe, household, scrap-yards, something, windscreen, workplace
- Punctuation: capital letters, commas, full stops, question marks
- Words that start with /m/: machines, magnets, make, many, metal, most, motors

#### Being a text user

*What sort of book is this: fact or fiction?*

*Why would you read a book about magnets?*

*How might the index help you when reading this book?*

#### Being a text critic


*What did the author have to find out to write this book?*


*What did the author want to tell you?*


*Does the author think you are clever?*

*Why?*

## Responding to text

 The children could complete a concept map showing everything they now know about magnets.

 The children could draw a labelled diagram of an object that uses a magnet.

 Using magnets and a range of objects from the classroom, the children could find out which objects are attracted to magnets and which are not. (Objects could include paperclips, ruler, pencil, pencil sharpener, book, eraser, blocks.) The children could record their findings on a chart.

| Attracted to magnets | Not attracted to magnets |
|----------------------|--------------------------|
|                      |                          |

## Writing links


Using the children's ideas, write a list of statements about magnets. Use the information gathered as part of the *Setting the Context* activity as a starting point. Be sure to correct any misconceptions. The children could work in pairs to write their own book about magnets. Encourage them to use what they learnt from playing with magnets as well as the information gained by reading the text.

## Possible assessment focus


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Can the children:

- explain how magnets work and why we need them?
- explain the difference between a question and a statement and provide examples from the text?
- explain why we need an index?
- use the index?

 whole text activity

 sentence activity

 word activity

# Magnets

**Topic:** Force/ Science

**Curriculum link:** Physical Science

**Text type:** Report

**Reading level:** 15

**Word count:** 352

**Vocabulary:** aeroplanes, attracts, electric, iron, machines, magnets, metal, motors, refrigerators, steel, surfaces

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## Possible literacy focus:

- Understanding the text at the three levels: literal, interpretive and inferential.
- Understanding the difference between a question and a statement.
- Identifying the features of an index.
- Using an index.

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## ESL possibilities:

- Read through the contents page and brainstorm words you'd expect to find in the text.
- Understand the specialised meaning of everyday words (attracts, sticks).



## Summary

This book explains what magnets are and how they work. It also shows a variety of everyday objects that use magnets.

**AlphaWorld**



ISBN 0-7253-3053-8



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