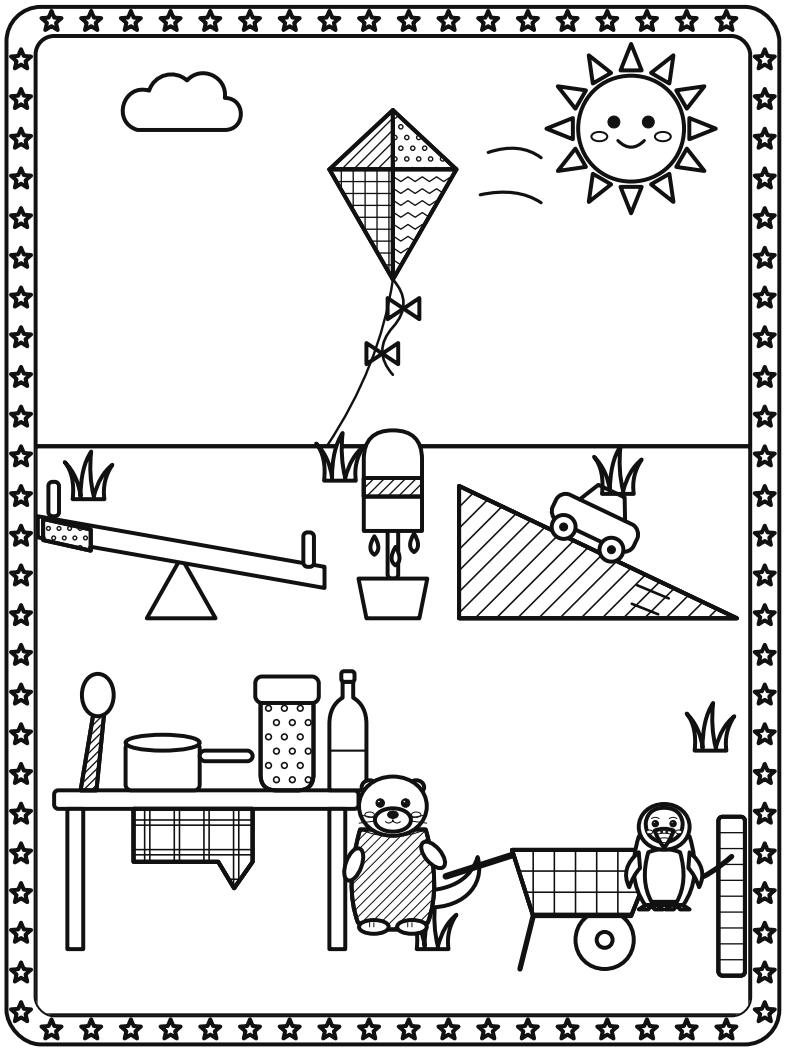
REAL-LIFE SCIENCE

Materials and Forces

Workbook for National 2 Science

Unit: Materials and Forces



C. Blewis

Blewis LEARNING

Contents

GETTING STARTED

	How to use this book	4

EXPLORING EVERYDAY MATERIALS

Topic 1	What things are made of	6
Topic 2	Testing materials	14
Topic 3	Using materials	22
Topic 4	Changing materials	30

FORCES

Topic 5	Pushes, pulls and twists	38
Topic 6	Measuring forces	46
Topic 7	Gravity, air and water	54
Topic 8	Friction and simple machines	62

AT THE BACK

	My progress tracker	70
	My practical skills	71

How to use this book

This book is about the stuff things are made of and the pushes and pulls that make things move. You will sort and test materials, see how they change, and explore forces all around you. Each topic follows the same pattern, so you always know what comes next.

EACH TOPIC HAS

Opener	the story for the topic, what you will learn and the key words
Learn pages	short explanations with diagrams, and questions to try
Practical	You follow simple picture steps with an adult, tick or draw what you see, and say what you found.
Brain break	a calm puzzle or colouring page
Check-up	a few questions to show what you know, and a checklist

PRACTICAL WORK: STAY SAFE

- Only start a practical when an adult says it is OK.
- Read the whole method and the Stay safe table first.
- Tell your teacher about anything that might affect you, like asthma or an allergy.
- Stop and tell an adult if you feel unwell or something goes wrong.

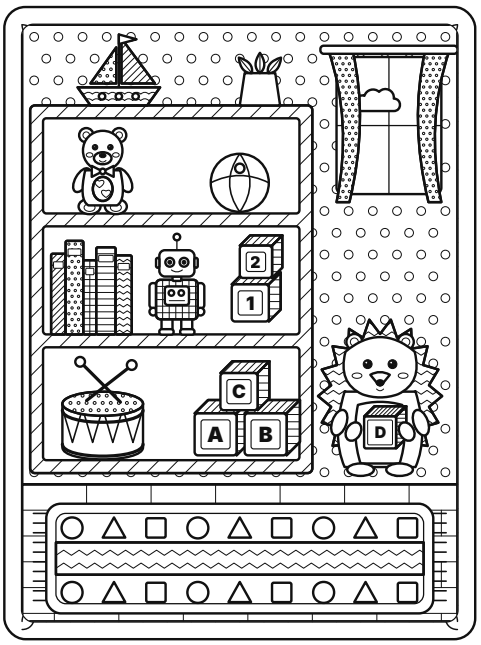
NO LAB TODAY?
Every activity has example results. If you could not do it, use these to fill in the table and the What did I find out? page.

DOODLE CORNERS
Some pages have a doodle corner. Colour it or doodle in it when you need a short break.

What things are made of

Everything is made of a material. Wood, metal and plastic are materials.

Theme: the school jumble sale. Isla and Kai are sorting things for the jumble sale. They put things made of the same material together.



IN THIS TOPIC YOU WILL LEARN TO

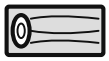
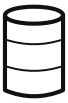
Skill 1	name everyday materials
Skill 2	say what an object is made of
Skill 3	sort objects into groups

KEY WORDS

Material	what something is made of
Wood	comes from trees
Metal	hard and shiny, like a key
Plastic	made in a factory, like a bottle
Sort	put things that are the same together

❶ Materials all around us

Look around. Everything is made of a **material**.

Material	Looks like	We use it for
wood		chairs, doors
metal		keys, spoons, tins
plastic		bottles, toys
glass		windows, cups
fabric		coats, socks
rubber		balls, boots
paper		books, bags

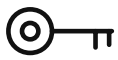
> **TOP TIP**
> Touch it and look at it. Is it hard? Shiny? Bendy?

DOODLE CORNER

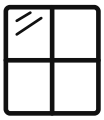


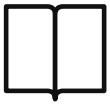
2 What is it made of?

1 Draw a line from each thing to its material.





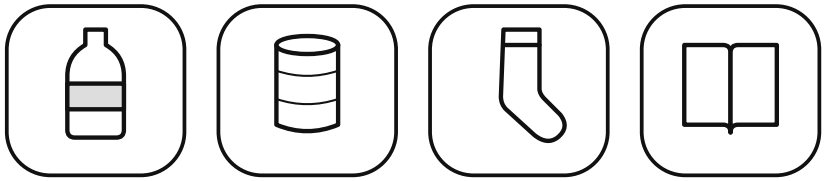




- glass
- paper
- metal
- fabric

2 This spoon is made of metal. Circle another thing made of metal.





3 Circle the material.



wood glass rubber



metal rubber paper

Do it

1. Take one thing out of the box.

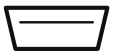


2. Look at it. Touch it. Is it hard or soft? Shiny?



3. Say what it is made of.

4. Put it in the right tray.



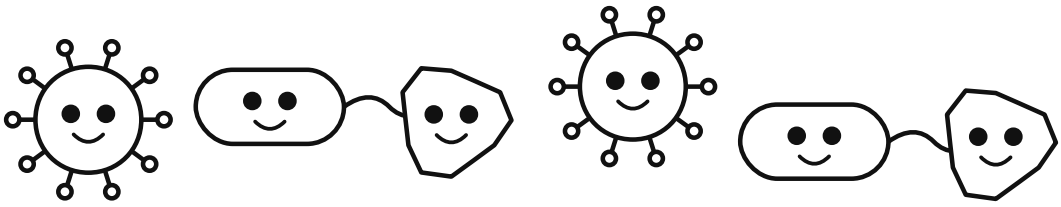
5. Do the same with every thing.

What I found

Draw or write one thing in each tray.

Wood	Metal	Plastic	Fabric

DOODLE CORNER



What did I find out?

The biggest group was **wood** **metal** **plastic** **fabric** .

A key is made of **metal** **paper** .

I sorted things by **colour** **material** .

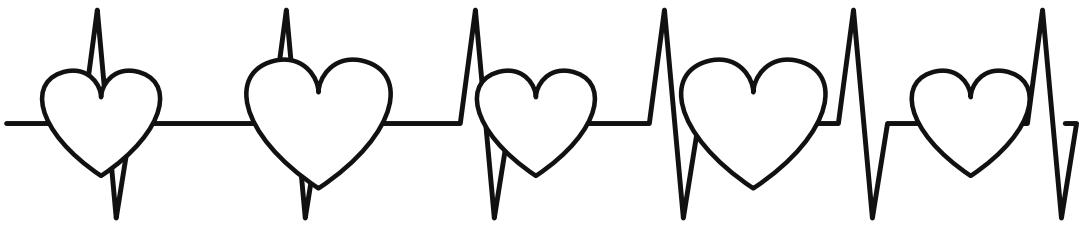
MY ADULT SAW ME

- ☐ look at and touch the things carefully
- ☐ say what things are made of
- ☐ sort things into groups
- ☐ follow the safety rules

Adult's initials: _____ Date: _____

Stick a photo of your work here, or draw it.

DOODLE CORNER



BRAIN BREAK · OPTIONAL

Colour by answer

Work out each sum. Use the key to colour the square. What picture appears?

4 = leave white	**10** = red

11−7	2×2	2×2	9−5	0+4	11−7	2+2	10−6	1+3	5−1
8−4	19−9	14−4	2×2	2+2	0+4	18−8	13−3	4+0	2×2
5+5	11−1	2×5	5+5	5−1	3+7	8+2	14−4	16−6	2+2
4+6	19−9	19−9	15−5	5×2	2×5	2×5	15−5	2×5	2+2
7+3	5×2	3+7	5×2	7+3	9+1	19−9	17−7	9+1	1+3
9−5	12−2	11−1	15−5	5×2	2+8	1+9	5×2	3+1	4+0
4+0	8−4	15−5	13−3	2×5	9+1	7+3	13−9	4+0	0+4
1+3	12−8	2×2	2×5	19−9	0+10	2×2	8−4	10−6	2×2
9−5	2+2	4+0	4+0	8+2	1+3	13−9	12−8	3+1	7−3
13−9	3+1	2+2	2×2	3+1	2×2	5−1	2×2	5−1	0+4

The picture is: _____

FREE SAMPLE

Materials and Forces (N2 Science)

This sample shows a few pages. The full printed workbook is available from Amazon.

blewislearning.co.uk

Blewis
LEARNING