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CAMBRIDGE **Primary Science**

Learner's Book 1

Jon Board & Alan Cross

Introduction

Welcome to Stage 1 of Cambridge Primary Science. We hope you will enjoy it. We know you will find the science topics interesting and the activities fun.

You are going to learn about:

- humans
- plants
- materials
- forces
- sound
- planet Earth.

We know that Stage 1 learners love to learn science and learn about the world. We will be asking you to talk about what you know already.

We know you can do science yourself, so each unit has lots of practical activities and investigations for you to try. You will need to ask questions and talk about ways to find out the answers. You will need to look at things carefully, talk and think about what you see and what you are learning. Don't be afraid of being wrong. This is an important part of learning new things. Scientists often get things wrong at first but then they find the answer!

There are also some projects where you can find out how science is used in the world around you and how the ideas of scientists have changed over time.

We hope you enjoy thinking and working like a scientist!

Jon Board and Alan Cross



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How to use this book

In this book you will find lots of different features to help your learning.

What you will learn in the topic. —————→

We are going to:

- find living things and things that have never been alive
- draw some living things
- put things into groups.

Questions to find out what you know already. —————→

Getting started

- Name some living things.
- Look around your classroom. Point to some things that are not alive.

Important words to learn. —————→

answer asks grow investigation light question

A fun activity about the science you are learning. —————→

Activity

Healthy plants?

What could we do to help these plants grow?

What do you think will happen to these plants?

Tell other people what you **predict**.



If plants do not have enough water they can die.



If plants have too much water they can die.

An investigation to carry out with a partner or in groups. —————→

Think like a scientist 1

How plants get water

You will need:
two plants, a plastic bag, string, a watering can

Zara pours water onto the leaves of one plant. She puts a plastic bag around the leaves of the other plant and waters the roots.

Predict what will happen.
Now try this science investigation.
Observe what happens.
Draw the plants before and after the investigation.

Make sure you wash your hands after touching the plants.



Questions to help you think about how you learn. —————→

This is what you have learnt in the topic. —————→

Questions that cover what you have learnt in the unit. If you can answer these, you are ready to move on to the next unit. —————→

At the end of each unit, there is a project for you to do, using what you have learnt. You might make something or solve a problem. —————→

How did the hands-on work help you to learn today?

Look what I can do!

- I can explain why plants need water.
- I can record observations in tables.
- I can predict what will happen in a science investigation.
- I can say if what happened was what I predicted.

Check your progress

Talk about these questions.

1 Which pictures show a sound source?



Project

Gardens and gardeners

We all love to play in a garden.

In a garden we can learn about plants and how to care for them.



Part 1

Draw a garden for school, home or the park.

1 Living things

> 1.1 Animals and plants alive!

We are going to:

- find living things and things that have never been alive
- draw some living things
- put things into groups.

alive	look
animal	non-living
group	plant
living	water

Getting started

- Name some living things.
- Look around your classroom. Point to some things that are not alive.

1.1 Animals and plants alive!

Use your eyes to **look** at the picture. What can you see?

Point to a **plant**. Most plants are green.

Plants make their own food.

Point to an **animal** in the picture.

Animals move around and eat other things.

Plants and animals are **alive**.

They are **living** things.

All living things need food.

Water moves but it is not alive.

Point to what is **non-living** in the picture.

Think like a scientist

What living things can we find?

You will need:

paper, a pencil, a clipboard or thick card to rest on, a digital camera

Go outside to look for living things.

Be careful in case there are plants or animals that are prickly, sting or bite.

Try to find four living things.

Draw and photograph some living things.

What is the largest living thing you can find?

What is the smallest living thing you can find?



Activity

Living or non-living?

Zara is putting things into two **groups**.

Where should she put the toy?

What other things could she put in the groups?

Look at the non-living things.

Point to something that used to be alive.

Point to some things that have never been alive.

Make a group of living things and a group of non-living things.

Use things from your classroom.

How do you know which things are alive?



How am I doing?

Ask a friend to look at your groups.

Have you put things in the right group?

How does putting things into groups help you learn science?

Look what I can do!

- ☐ I can name four or more things that are living.
- ☐ I can name four or more things that have never been alive.
- ☐ I can draw some living things.
- ☐ I can put things into two groups.

> 1.2 Parts of a plant

We are going to:

- find out about the parts of plants
- name the parts of plants
- draw parts of a plant.

Getting started

You know that plants are living.

- What parts of plants have you seen?
- Tell a friend about some parts of plants.

Plants are all around us.

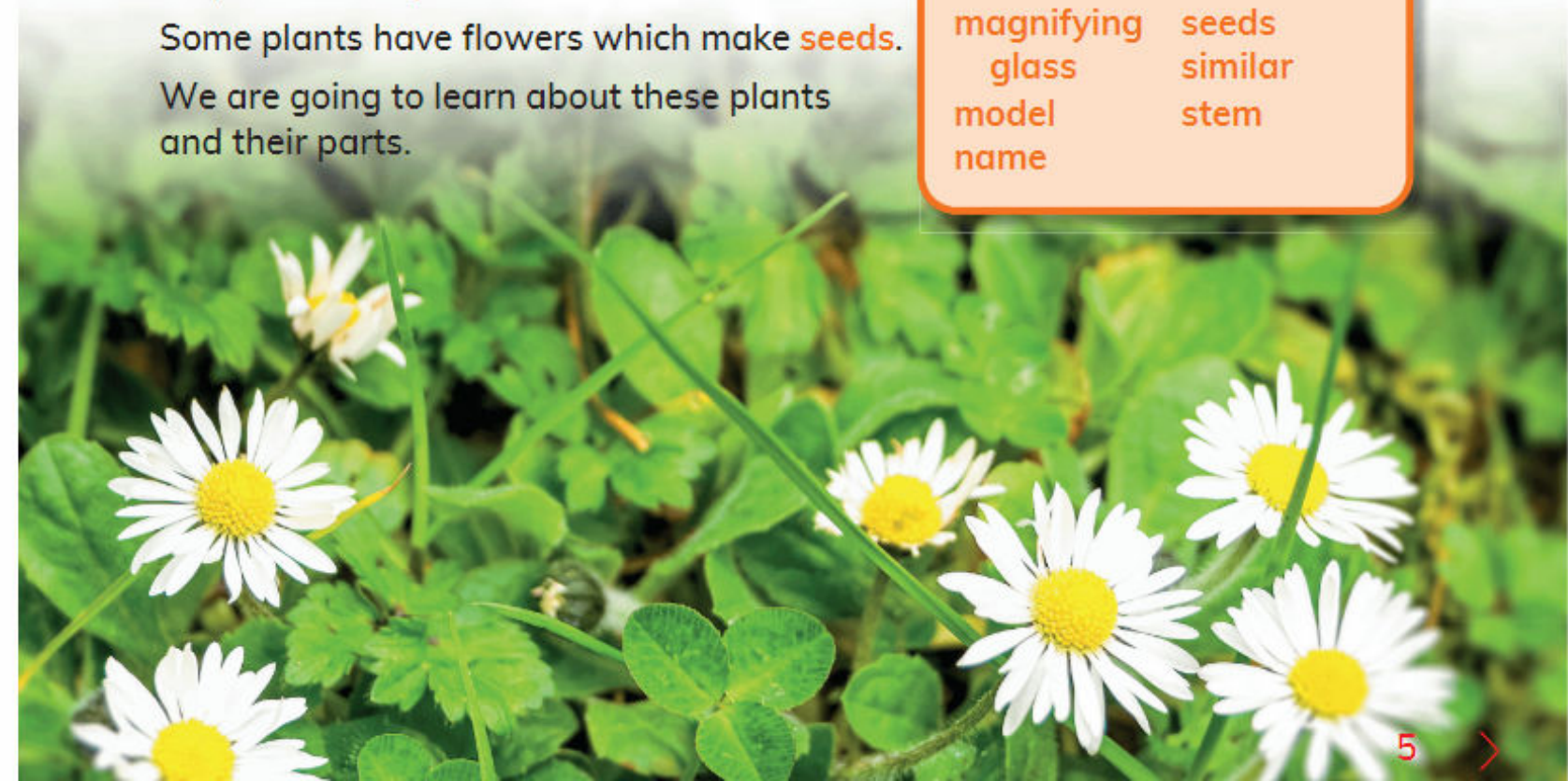
Some plants are tall and some are small.

All plants have **parts** that we can see.

Some plants have flowers which make **seeds**.

We are going to learn about these plants and their parts.

different	observe
flower	parts
leaf	root
magnifying	seeds
glass	similar
model	stem
name	



Activity 1

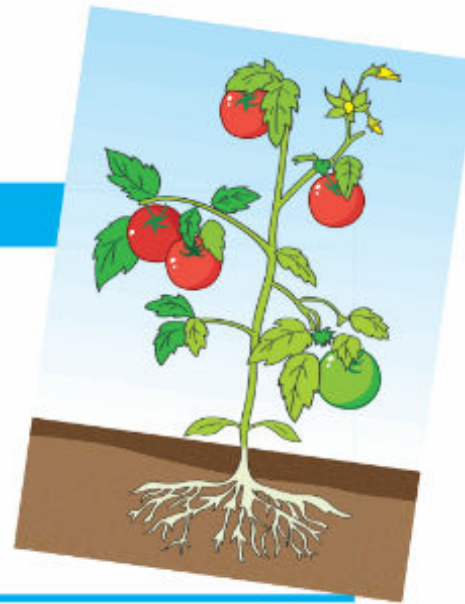
Finding plant parts

Plants have many parts.

Look carefully at the plant in the drawing.

What do you see or **observe**?

Point to a **leaf**, a **flower**, the **stem** and the **roots**.



Activity 2

Making a model plant

Sofia can tell us what the parts do.

Make a **model** of a plant with these parts.

Say what each part is for.



The flower is the part where the seeds are made.

The leaf makes food for the plant.

The roots collect water. The roots hold the plant still.

The stem holds the leaves and flowers up.

Think like a scientist

Observing plant parts

You will need:

a plant, a **magnifying glass**, paper, a pencil

Observe a plant.

Look carefully at the plant parts.

Do not eat plants you find and wash your hands after touching any plants.

Name the plant parts.

Observe three **different** plants.

Look at the plant parts.

Draw them.

Do they all look the same?

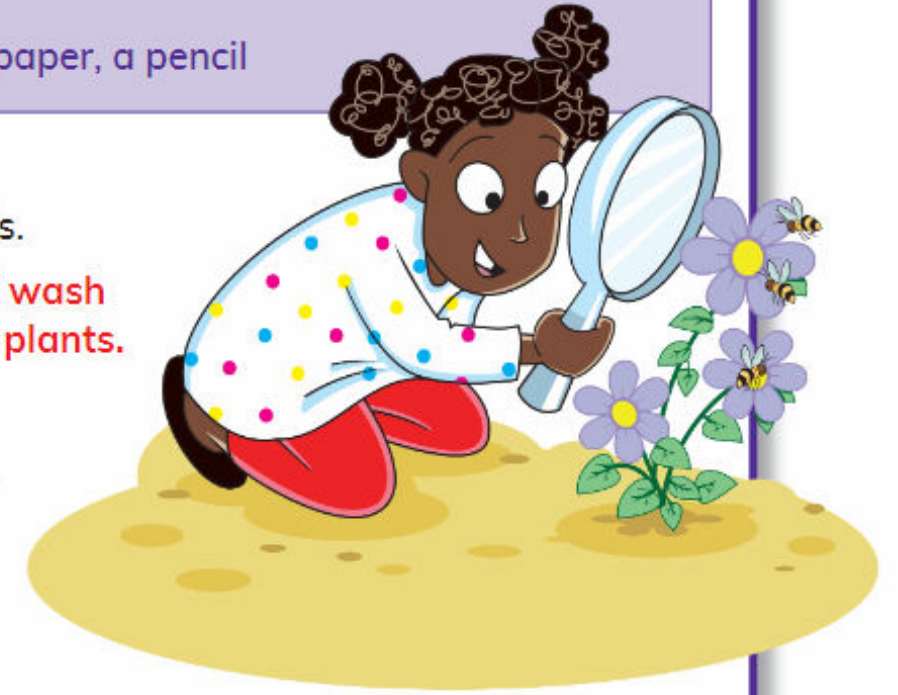
Are they **similar** or different?

How am I doing?

Play 'What am I?' with a friend.

Use the words leaf, stem, flower, root.

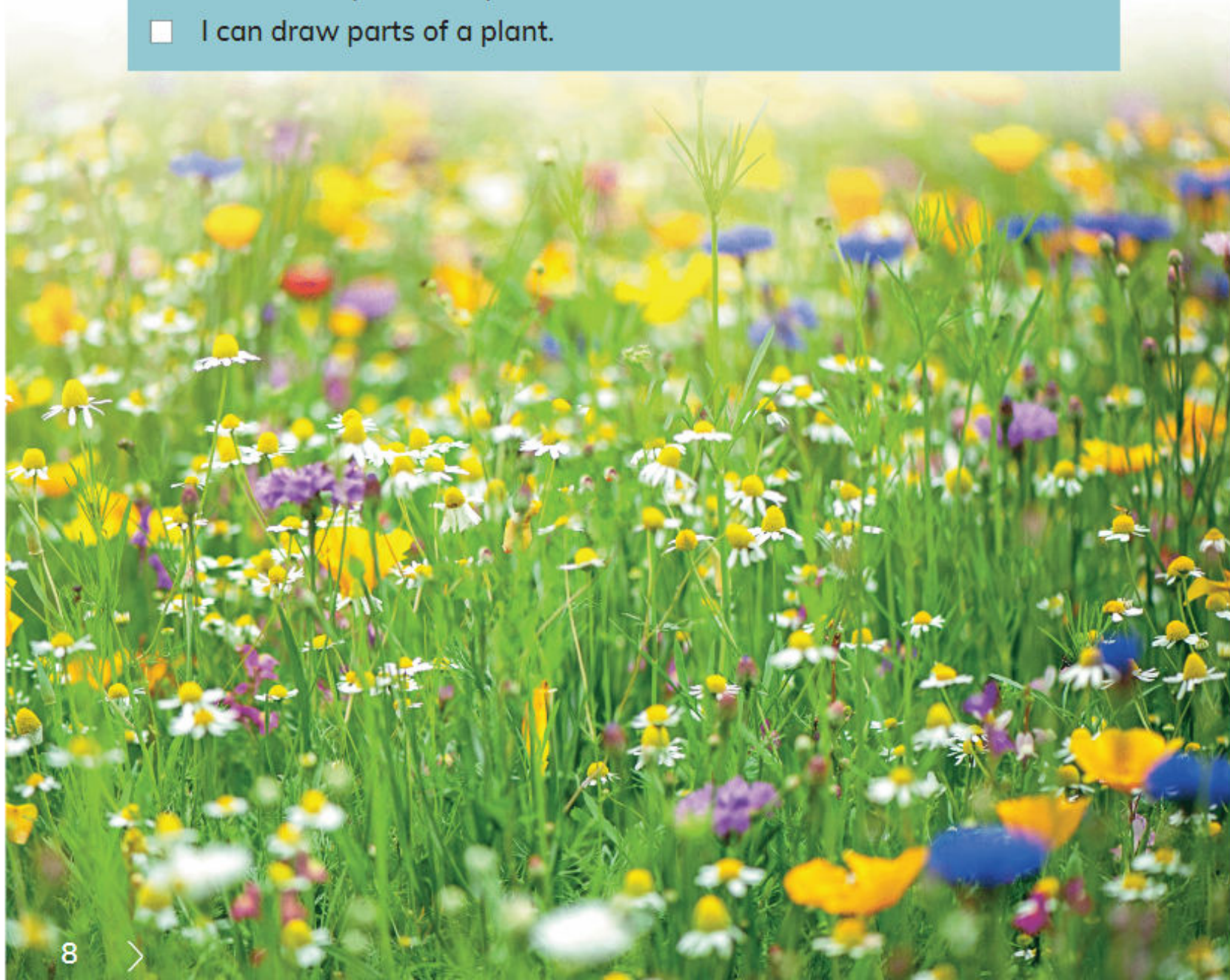
Say what each is for.



Do you find it easy to observe living things?
How does observing help you learn?

Look what I can do!

- ☐ I can find out about plants.
- ☐ I can name parts of a plant.
- ☐ I can draw parts of a plant.



> 1.3 Plants and light

We are going to:

- find out if plants need light
- do an investigation and say what we think will happen.

Getting started

- Where do you see plants?
- Do you have plants at home? Tell a friend where you keep plants at home.

answer
asks
grow

investigation
light
question

Here are some young plants.
When plants get bigger we say they **grow**.



Activity

What do plants need to grow?

What do you think plants need to grow?
Talk with a friend. What do they think plants need?
Do plants need food and water like people?
Write or draw what you think plants need.

Marcus **asks** a **question**: 'Why is this plant bent?'

Here is the **answer**: 'It is growing towards the **light**.'



Think like a scientist

What happens to a plant with no light?

You will need:
two plants, a box

Marcus wants to answer this question.
'What will happen to a plant with no light?'

He covers one plant with a box.

He puts the other plant in the light.

Say or draw what you think will happen.

Try this **investigation** yourself to find out the answer.

How am I doing?

What places would be too dark for plants to grow?

Talk about your ideas or draw them.



Look at this cave.

Why are no plants growing inside?

Plants use light to make food.

Plants can't grow in the cave because there is no light.

Look what I can do!

- ☐ I can say what will happen to a plant with no light.
- ☐ I can say what I think will happen in an investigation.

> 1.4 Plants need water

We are going to:

- learn about how plants need water
- record observations in tables
- predict what will happen in an investigation
- see if what happened was what we predicted.

Getting started

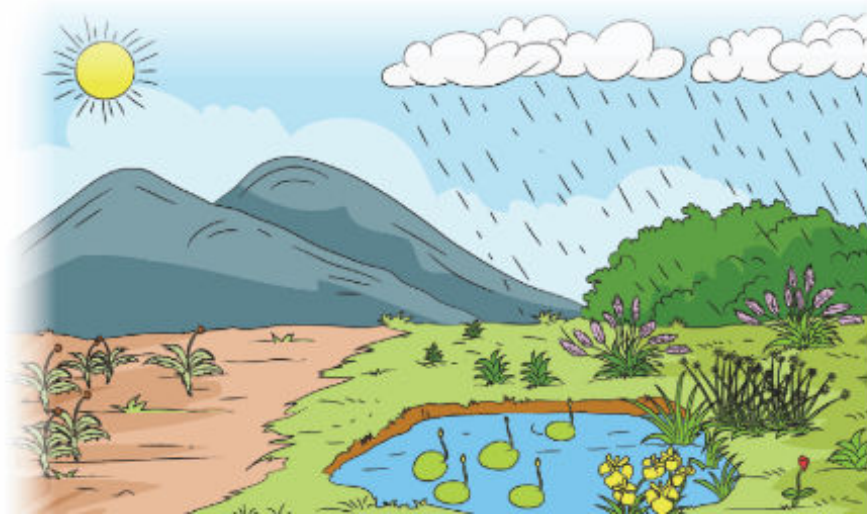
- Draw two things you know about plants.
- Show a friend what you have drawn.

explain record
practical table
predict

What should the children do to keep this plant alive?



You may have seen plants growing in places like this.
Some plants live near water.
Some plants live in water.
Some plants live in dry places.
Where do plants get water from?



Activity

Healthy plants?

What could we do to help these plants grow?

What do you think will happen to these plants?

Tell other people what you **predict**.



If plants do not have enough water they can die.



If plants have too much water they can die.

Think like a scientist 1

How plants get water

You will need:
two plants, a plastic bag, string, a watering can

Do plants get water through their leaves or roots?

Let's do a test!

Zara pours water onto the leaves of one plant. She puts a plastic bag around the leaves of the other plant and waters the roots.

Predict what will happen.
Now try this science investigation.
Observe what happens.
Draw the plants before and after the investigation.

Make sure you wash your hands after touching the plants.

