

CAMBRIDGE

# Cambridge Natural Science

Teacher's Book



Experience  
Better  
Learning

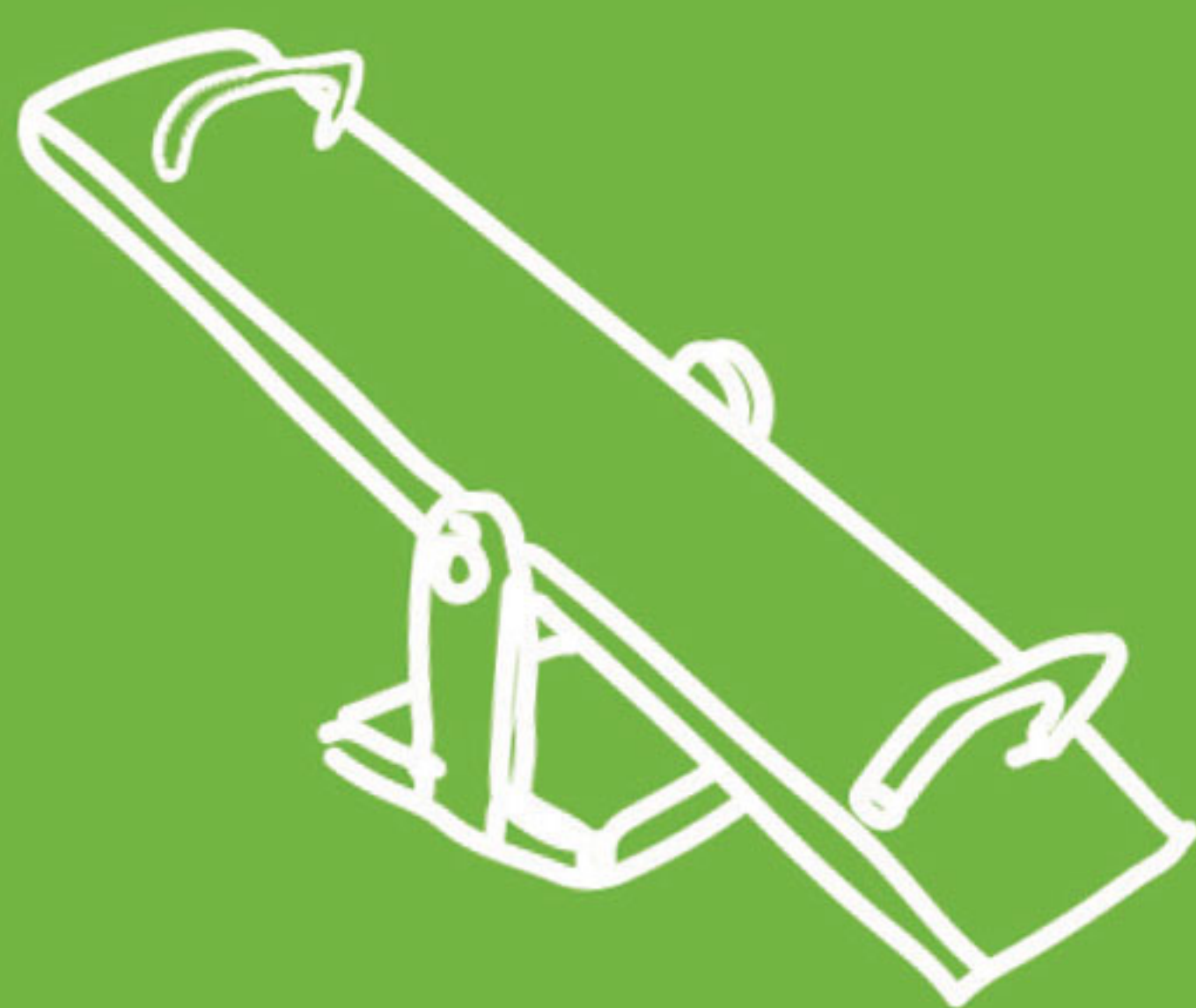
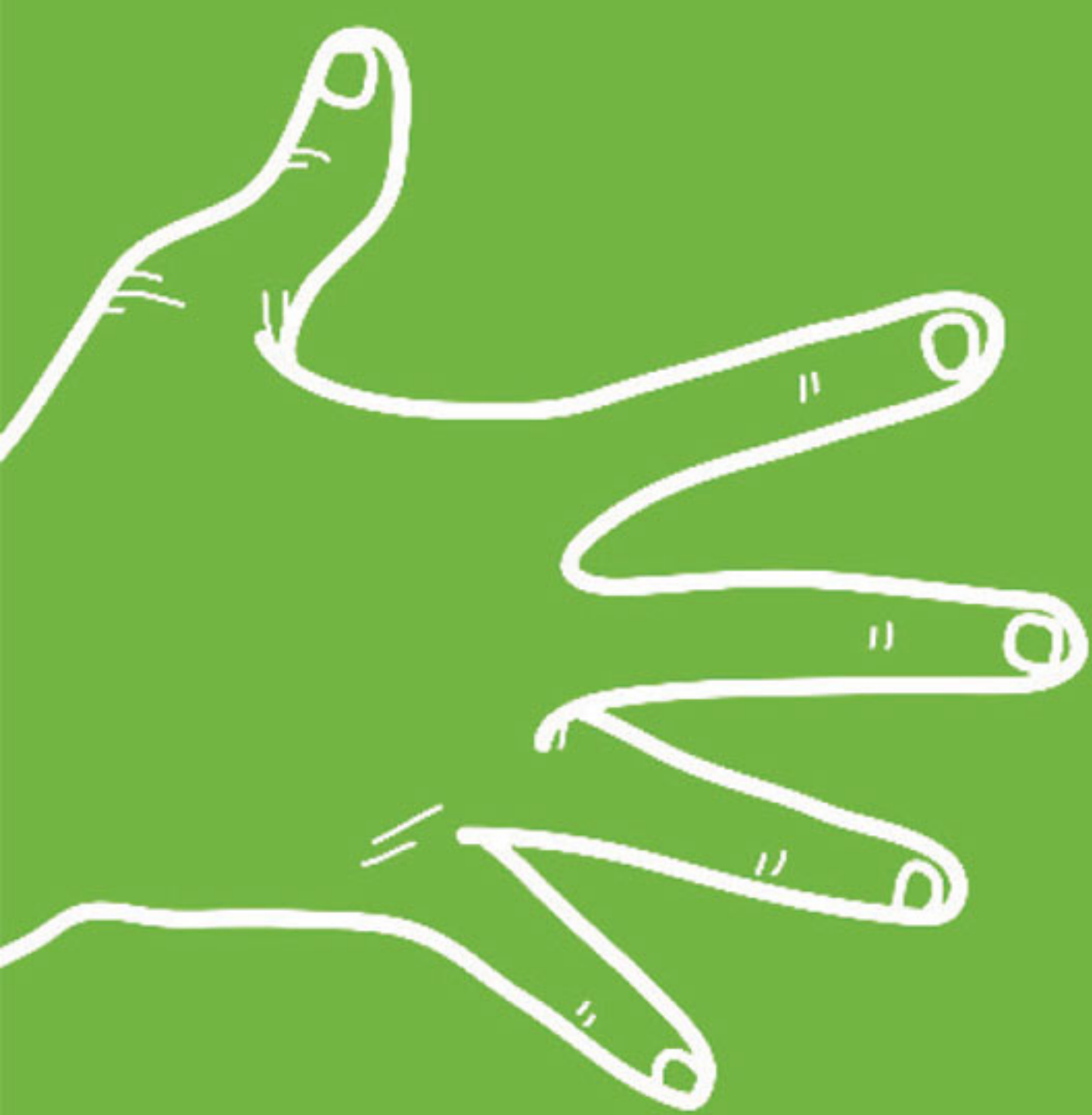




# WELCOME TO CAMBRIDGE NATURAL SCIENCE

## Course objectives

- The *Cambridge Natural Science* course has been designed specifically to follow the **LOMCE**. It takes learners on a journey as they discover the wonders of biology, chemistry and physics. Pupils are introduced to topics at a manageable pace, so they can engage with, enjoy and fully assimilate new concepts.
- Pupils learn about and cement their understanding of new concepts through **projects**. In some units, there are projects that run through the unit and pupils review and expand upon the concepts presented. In other units, pupils are presented with different mini-projects to practise and further develop the content at hand.
- Pupils also engage with Natural Science in a **hands-on** way by conducting **experiments**. This practises **critical-thinking skills** and collaborative learning.
- Pupils learn about new concepts through discovery. In *Cambridge Natural Science*, **learner autonomy** is encouraged through the inclusion of interesting facts and thought-provoking questions. Our aim is for pupils to be inspired by the fun and wondrous world of Natural Science.
- **Collaborative learning** is also encouraged through the projects and mini-projects which pupils carry out in pairs, in groups and as a class.
- The course provides pupils with the **linguistic support** that they require to study Natural Science in a second language. The course helps pupils develop their speaking, listening, reading and writing skills. The unit projects and mini-projects give pupils practice of a range of skills and sub-skills.
- Pupils are also given the opportunity to **review the grammar structures** presented in *Cambridge Life Adventures*. There are links between the two courses that allow pupils to review Science content in English class and grammar structures in Science class.
- *Cambridge Natural Science* is further linked to *Cambridge Life Adventures* in that it provides pupils with practice of the **Cambridge English Qualifications for young learners**. Level 1 provides practice of *Pre-A1 Starters* question types.
- **Mixed-ability assessment** provides teachers with support for pupils of different levels within the same class. It focuses on lower- and higher-order thinking skills, as well as critical thinking.
- *Cambridge Natural Science* has been developed around the key **competences** stipulated in the LOMCE. The course aims to help pupils develop the following key competences: linguistic competence; mathematical competence and basic competences in science and technology; digital competence; learning to learn; social and civic competences; initiative and entrepreneurship; and cultural awareness and expression.





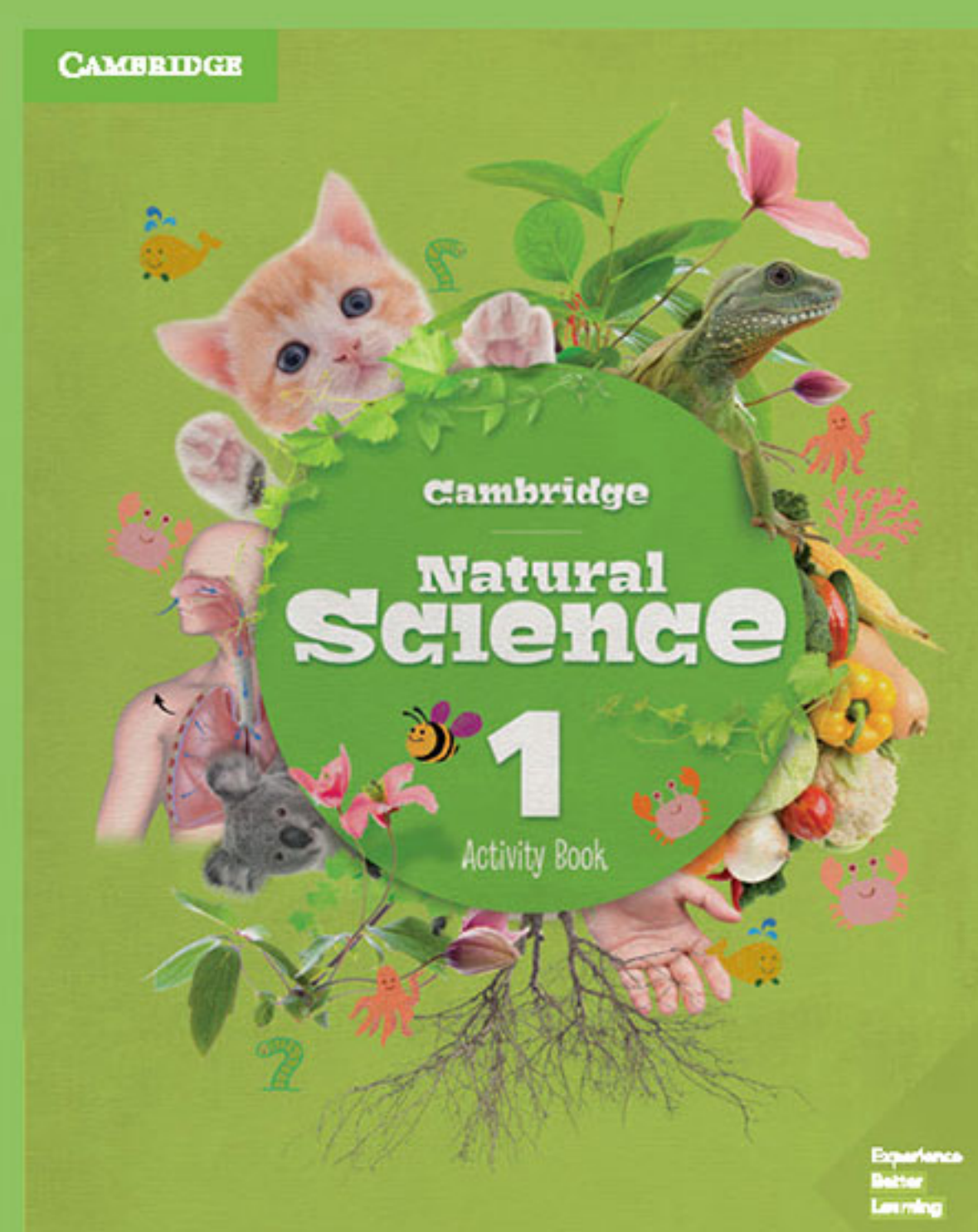


## Course components

**Pupil's Book:** each unit includes a unit project or different mini-projects, experiments, mixed ability assessment and practice of the Cambridge English Qualifications for young learners.



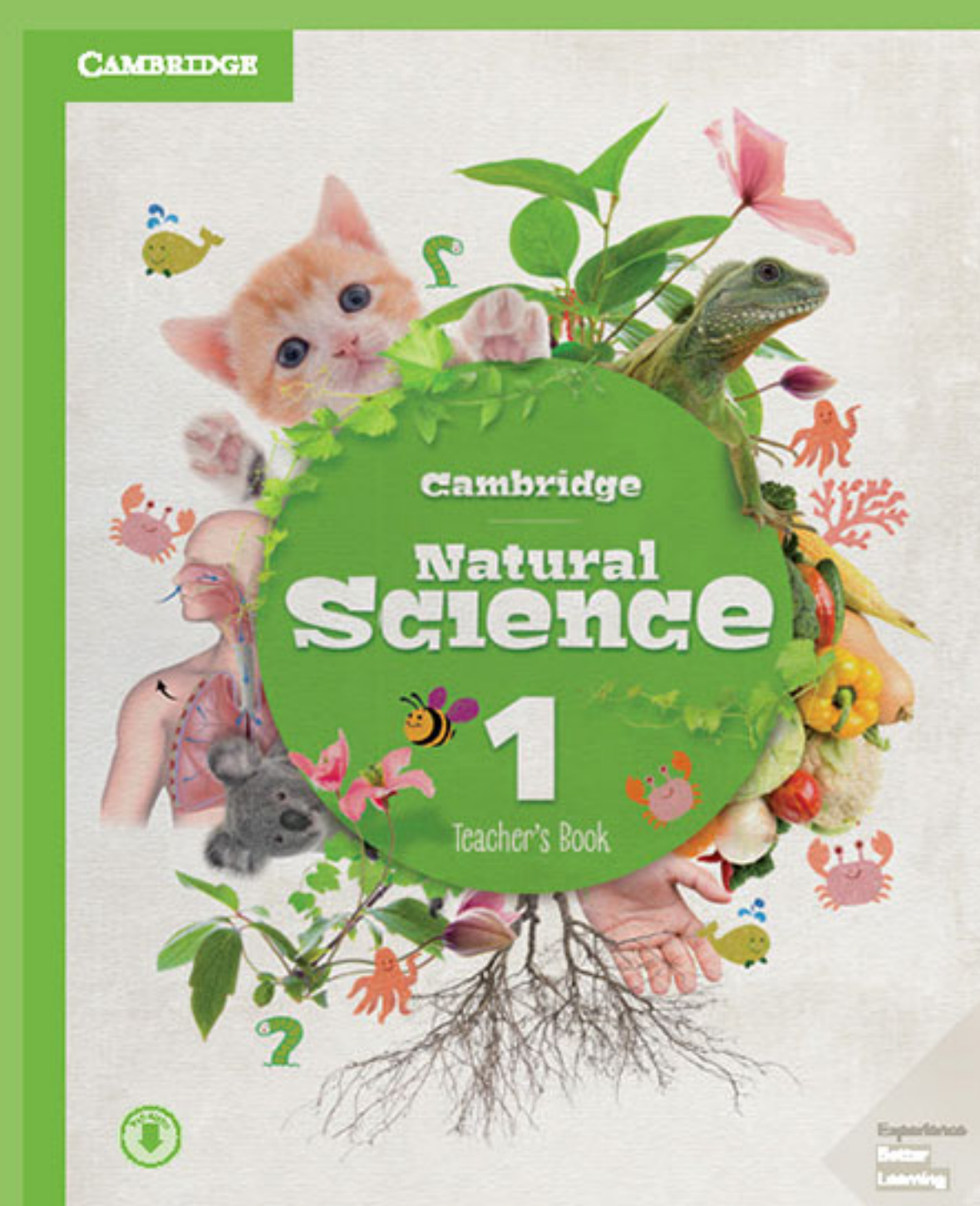
**Activity Book:** each unit includes activities that consolidate and expand upon the concepts introduced in the Pupil's Book, practice of the Cambridge English Qualifications for young learners and a bilingual glossary.



**Class audio:** provided through the *Digital Lab*, as well as being available to download online at [www.thecambridgeteacher.es](http://www.thecambridgeteacher.es).



**Teacher's Book:** includes useful suggestions for activities at each stage of the lesson, answer keys, audio scripts and track numbers for the audio.



**Test Generator:** allows teachers to build their own tests for each unit, term and end of year assessment.

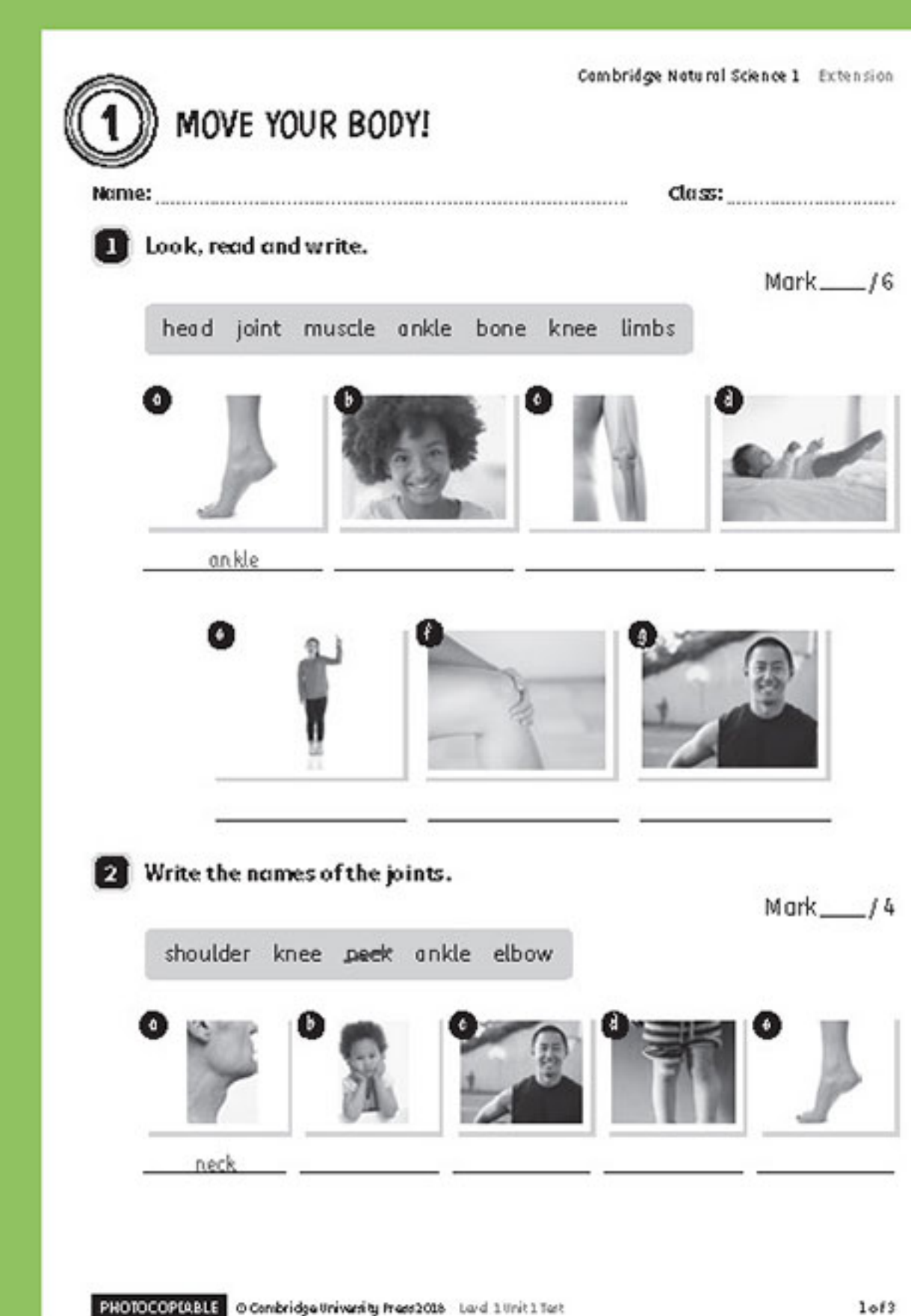


**Digital Lab:** includes an interactive, digital version of the Pupil's Book with a variety of features to help pupils cement their understanding of key concepts:

- flashcards in digital format
- answer keys
- audio with scripts available
- documentary videos for each unit to engage the pupils in a visual way and allow them to see Natural Science in action!



**Digital Resource Bank:** includes mixed-ability tests, project evaluation grids and curriculum evaluation grids. They are available online at [www.thecambridgeteacher.es](http://www.thecambridgeteacher.es).



**Classroom materials:** include posters and a full bank of flashcards to be used across levels. Suggestions for flashcards to use in each unit are provided in the Teacher's Book. The posters consolidate learning by helping pupils engage with Natural Science vocabulary and concepts in the classroom.





# MEET OUR SCIENTISTS

## PAGES 4–5

### Objective:

Pupils will meet the characters that represent each unit of the book. Through them they will become familiar with the main topics and skills that they will study. By discussing the images and text on these pages, they will become curious and engaged with the study of Natural Science. They will see how they too become scientists as they predict and experiment their way through the book and record their journey with their *passport*.

### Key vocabulary

animals, family, food, friends, living things, plants, sport, the human body, x-ray

### Warm up


Write on the board: animals, friends and family, plants, sport, the human body, in different colours. Ask pupils to give you some examples of each – for the human body, elicit parts of the body. Then say, e.g. *I like animals*. *What do you like? Tell a partner*.

### Main concepts

- Look at the page and ask pupils *What is a scientist?* Elicit that scientists like to discover new things and solve problems by doing experiments. (This is a broad, general description!)








I can think, predict, experiment, observe and conclude. **I am a scientist too!**

**Scientific method:**

- 1 Predict
- 2 Experiment
- 3 Observe and conclude




**Scientist card**

Name: \_\_\_\_\_


Age: \_\_\_\_\_

Print your finger here when you complete a unit.




Welcome Unit	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
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**What do you like? Circle.**



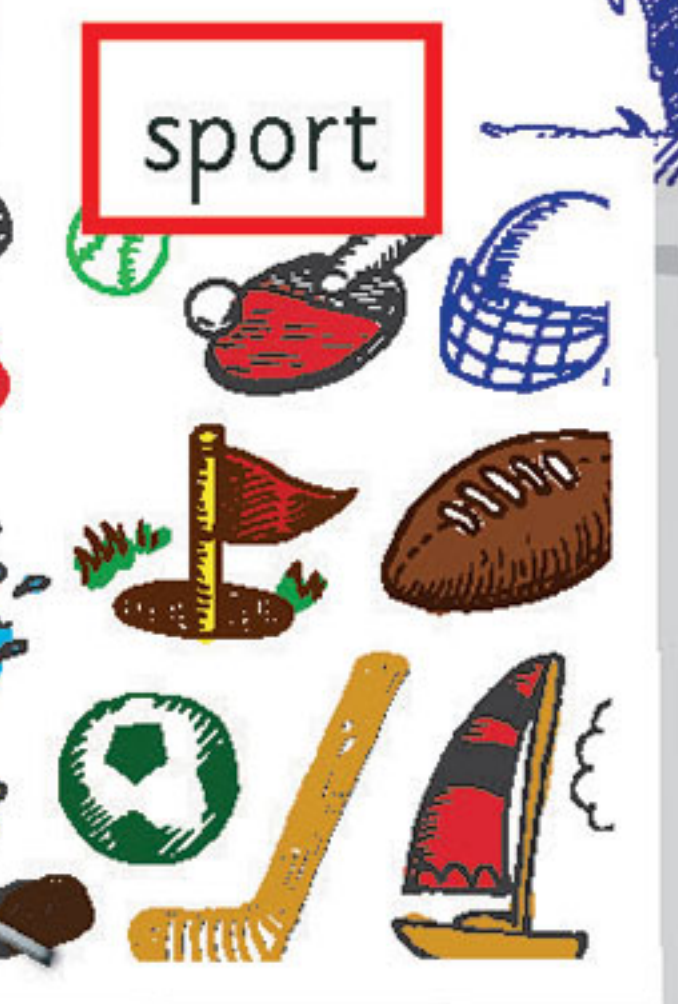
bones and skeletons




plants




healthy food



sport



family



friends

- Point to each character in turn and have pupils point too. Say *What's the name of the character? What does he/she like?* Ask *Which words tell you what he/she likes?*
- Ask pupils to look at the boy with the flower. *What is he doing?* Elicit the process from pupils and highlight the *Scientific method*.
- Ask pupils to circle the topics they like.
- Explain that as they finish a unit, they will put their fingerprint in the passport.

## Learn more

- Write on the board, *I'm \_\_\_\_\_. I like ...* Give an example and encourage pupils to write and draw their own sentence and picture in their notebook or on a piece of paper.
- Encourage pupils to practise saying their sentence and to show and tell a classmate.



# 1

## MOVE YOUR BODY!

### Learning objectives

By the end of this unit, your pupils will have achieved a greater understanding of the following concepts:

- the three main body sections and the external parts of the human body
- the five senses and their corresponding organs
- what muscles, bones and joints are

### Competences

This unit covers the following competences:

- Linguistic competence
- Digital competence
- Mathematical competence and basic competences in science and technology
- Learning to learn
- Cultural awareness and expression

### Key vocabulary

**Parts of the body:** ankle, bone, elbow, hip, joint, knee, muscle, neck, shoulder, wrist

**Main body sections:** head, limbs (arm, bottom, fingers, foot, leg, toes) torso (tummy)

**Parts of the face:** cheeks, chin, ears, eyebrows, eyelashes, eyes, mouth, nose, tongue

**Five senses:** hear, see, smell, taste, touch

### Cambridge English Qualifications practice

You will find *Pre-A1 Starters* activity types in the following exercises:

Pupil's Book, Page 79, Activity 2 – Reading and Writing Part 3

Activity Book, Page 4, Activity 6 – Reading and Writing Part 3

Throughout this unit, you will find the following *Pre-A1 Starters* vocabulary:

arm, body, ear, eye, face, foot/feet, hair, hand, head, leg, mouth, nose, person/people, see







## Materials needed for *projects*:

- Skeleton worksheet (download from Digital resource bank), split pins
- Mini book worksheet (download from Digital resource bank), photos of pupils' faces

## Materials needed for *experiment*:

- Lemon peel, mint leaves, an onion, an orange, liquid soap, vinegar

## Materials needed for other activities:

- A selection of fruit

## Experiment

The *experiment* provides your pupils with the opportunity to explore their sense of smell by mixing together different items. Pupils will use the scientific methods of prediction, experimentation and conclusion. In addition, they will get creative by mixing different products to create their own potions.

## Mindful time

Each unit has a mindful time feature that encourages pupils to relate learning to their feelings and emotions, their relationships with classmates, and their well-being.

In this unit, pupils focus on their breathing and connection to the world around them. An audio track (*track 02*) is available to introduce the breathing activities.

## Digital Lab +

- Interactive activities
- Flashcards: parts of the body, parts of the face
- Song: *Body parts*
- Chant: *Five senses*
- Video documentary: *Incredible bodies*



# UNIT 1

## PAGES 6–7

### Objective:

Pupils will talk about parts of the body, the five senses, and identify feelings using a birthday party as a backdrop. They will connect previous knowledge with new concepts.

### Key vocabulary

birthday party, body, dance, happy, sad

### Warm up

- Ask pupils to think about their last birthday party and tell another pupil: *Where did you celebrate it? Who was at the party? What was your favourite present?*
- Ask pupils to look at the scene and describe what they can see. Encourage them to use the structure *I can see ...*

### Main concepts

- Ask pupils *What do you think we are going to learn about in this unit?* – *We are going to learn about the body.*
- Ask individual pupils to read out the questions on the page and elicit answers. Then, ask pupils to read out *Hello! I'm Little Franklin. I'm six today.* Ask them to raise their hands if they are six.
- Ask other questions about the scene: *Who is looking at the presents?* – *Little Aristotle (is looking at the presents).* Ask pupils if they would like a piece of the cake and what they think it tastes like.



### Mindful time

Ask pupils to pay attention to how they breathe in and out, and how the air travels to their tummies. Ask pupils to sit or stand with a straight back, shoulders down and to breath in through their noses and out through their mouths, deeply, to their tummies, three times. The audio (track 02) can be used to help create a feeling of calm.





## Learn more

- Sing the song *Body parts* with actions.
- Ask pupils to point to different objects in the scene: *Point to the ...* table, lamp, presents, sofa, pizza, balloons, window, cake, rug, etc.

### Song

The song focuses on different parts of the body and their movement.

### Documentary

The documentary focuses on internal and external parts of the body including bones, muscles and joints. It also covers the five senses.

The audio (track 02) can be used throughout the course to achieve moments of calm, in which pupils focus on their breathing and connect with the world around them.



# UNIT 1

## PAGE 8

### Objective:

Pupils will learn the difference between bones, muscles and joints. They will be able to identify the principal joints in the body.

### Key vocabulary

ankle, bones, elbow, hip, joints, knee, muscles, neck, shoulder, wrist

### Tip

Play *Simon says* — asking pupils to move different joints. Then, pupils take turns to call.

### Warm up

- Do the Mindful time activity.
- Ask pupils *How do you move your body? What's inside your body?*

### Main concepts

- Ask pupils to read and say the names of the joints. Then, ask them to point to their own joints and say the names. They can observe the differences between bones, muscles and joints by feeling their own arms or legs. Demonstrate for pupils.
- Read the Fun Fact. Explain as necessary.

### Learn more

Pique pupils' curiosity by asking *We know the smallest bone in our body, but which is the biggest? – Femur.*

Bones are hard.

## ARE BONES HARD OR SOFT?

Point to your joints. Practise saying them.

Find out

bones

joints

wrist

shoulder

elbow

hip

knee

neck

ankle

muscles

**FUN FACT**  
The smallest bone in the body is in the ear.

8



### Objective:

Pupils will understand how bones and joints work together.

### Key vocabulary

ankle, bones, joints, knee, muscles

### Warm up

Show pupils the box and ask *What's in the box?* Give pupils time to guess and answer, then provide clues, e.g. *They are hard.* Open the box and show pupils what's inside.

### Main concepts

- Say *Let's make a skeleton! How can we put it together?* If pupils suggest using glue, glue a pair of arm bones together and show them that they don't move. After taking pupils' suggestions, say *It needs joints.* Show an example.
- Ask pupils to cut out and make their own skeletons using the template.
- Ask pupils *What would happen if we didn't have joints?* Ask pupils to move their bodies without using their joints.

### Learn more

- Read *My dictionary* as a class. Ask pupils to find the sticker and trace the words.
- Ask pupils to read and complete the *What have I learnt?* box individually.

bones

### Mini-project

? What's in the box?

1 Bones! Build a skeleton. Connect the bones.



2 The skeleton needs joints. Work together.



### What have I learnt?

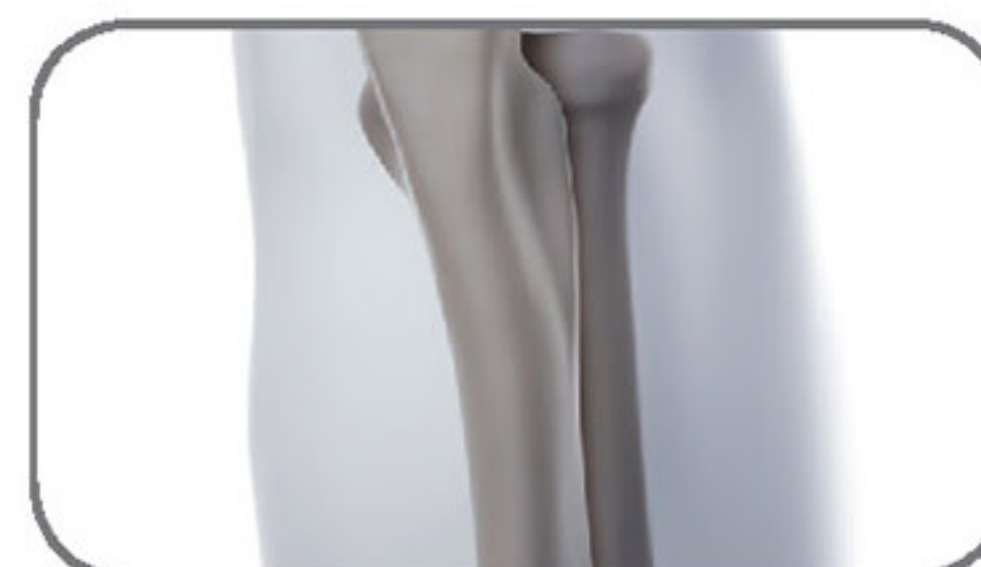
B\_\_\_\_\_ are hard.  
J\_\_\_\_\_ and m\_\_\_\_\_ help us move.  
My a\_\_\_\_\_ and my k\_\_\_\_\_ are joints.

Try it out

### MY DICTIONARY



ankle



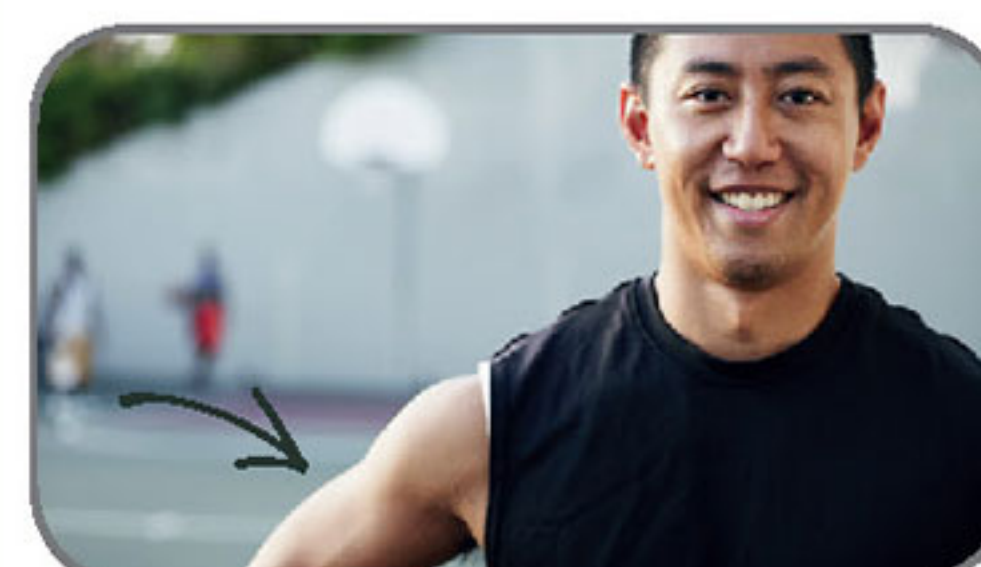
bones



joints



knee



muscles

Bones are hard. Joints and muscles help us move.  
My ankles and my knees are joints.