CAMBRIDGE

Cambridge

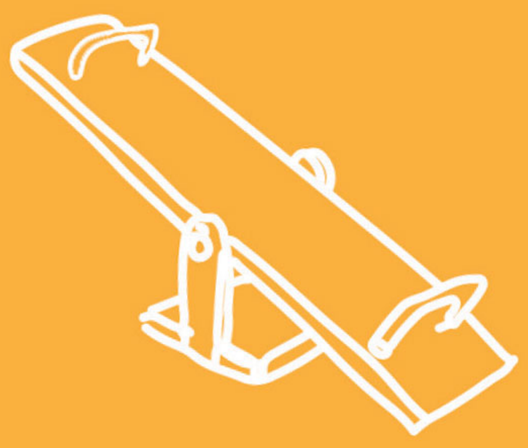
Natural Science

2

Teacher's Book

with Audio

Experience
Better
Learning



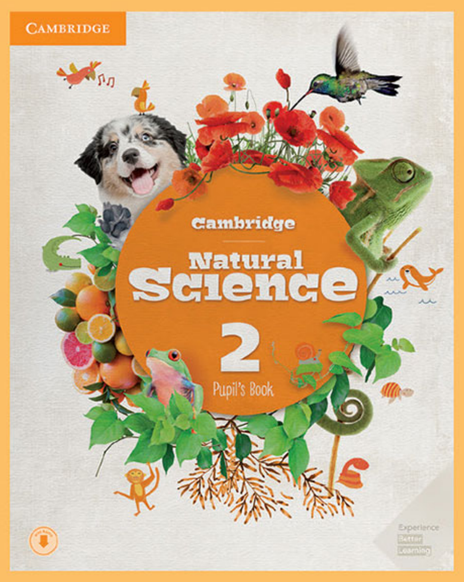
WELCOME TO CAMBRIDGE NATURAL SCIENCE

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 each unit, in which pupils review and expand upon the concepts presented in the unit. 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 2 provides practice of *A1 Movers* 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 competencies; 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.

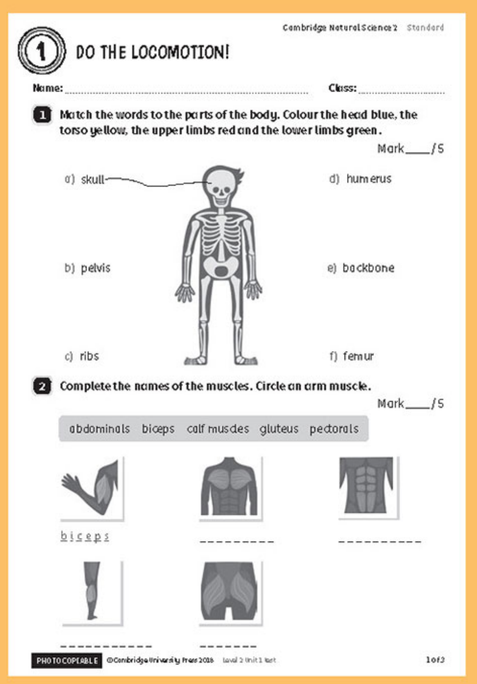
Teacher's Book: includes useful suggestions for activities at each stage of the lesson, answer keys, audio scripts and track numbers for the audio.

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

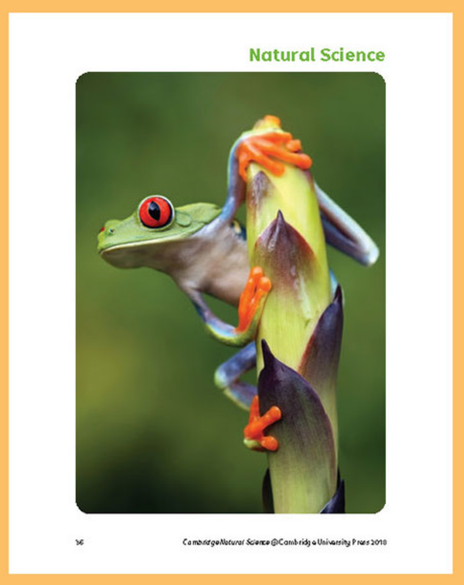
Digital Lab: includes an interactive, digital version of the Pupil's Book with a variety of features to help pupils cement their understanding of key concepts:

- 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.



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.



HERE WE GO AGAIN!
PAGES 4–5

Objective:

Pupils will meet the main characters and will become familiar with the topics that they will learn throughout this book. They will also have their first introduction to the scientific method.

Key vocabulary

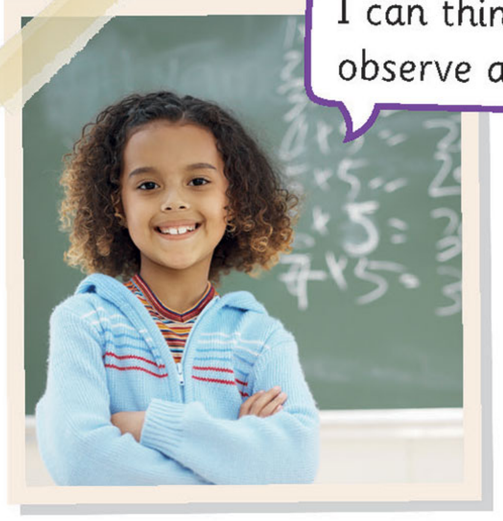
animals, machines, materials, plants, senses, the human body

Warm up

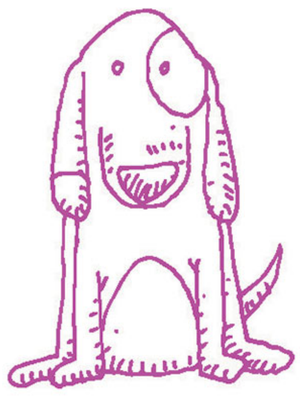
Write the vocabulary words on the board. Read them aloud and encourage pupils to read with you. Make sure they all understand the meaning. Ask pupils to raise their hands if they like animals, or plants, or machines, and so on. Explain that these are the key topics for the year.

Main concepts

- Play a ball game. Ask the pupils to stand in a circle. Start by saying *My name is* (say your name) *I like plants.* Throw the ball to a pupil, who will repeat. Play until everyone has had a turn.
- Ask pupils to look at the picture and say what they can see. Read the name labels and ask pupils if they know any of these famous people. This will help them make connections with previous knowledge.



I can think, predict, experiment, observe and conclude.



Scientific method:
1 Predict
2 Experiment
3 Observe and conclude

Scientist card

Print your finger here when you complete a unit.

Name:

Age:

Welcome Unit	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6

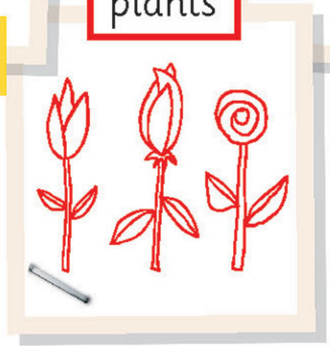
the human body

senses

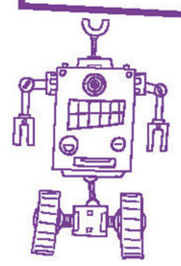
animals

plants

materials



machines



What about you?

My favourite topic is _____ .

- Ask volunteers to read the name labels. In pairs, pupils connect each person with the key topics on the board.
- Ask pupils to look at the photo of a girl. Ask the class to read aloud together. Then ask *Do you like experiments? Which was your favourite experiment from last year?* Explain that they are going to do lots of experiments. Point out the Scientist card for them to complete after each experiment.
- Finally, read the activity about favourite topics. Make sure everyone understands what to do. They can talk with a partner or in a small group about what they like.

Learn more

Ask pupils to write a word for each category they can, e.g. animals: cat; sport: basketball. For those they do not know (body systems or materials) tell they will learn and complete it as they go along.

1

DO THE LOCOMOTION!

Learning objectives

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

- personal body image
- the main characteristics and functions of bones, muscles and joints
- personal safety habits

Competences

This unit covers the following competences:

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

Key vocabulary

Body image: head, lower limbs, torso, upper limbs

Bones: femur, hard, humerus, pelvis, protect, ribs, rigid, skull, support

Muscles: abdominals, biceps, calf muscles, flexible, gluteus, pectorals, soft

Joints: ankle, bend, connect, contract, elbow, hip, jaw, knee, neck, relax, shoulder, wrist

Cambridge English Qualifications practice

You will find ***A1 Movers*** activity types in the following exercises:
Pupil's Book, Page 17, Activity 1 – Listening, Part 2
Pupil's Book, Page 79, Activity 1 – Listening, Part 5
Activity Book, Page 3, Activity 3 – Reading and Writing, Part 1
Activity Book, Page 4, Activity 6 – Reading and Writing, Part 2

Throughout this unit, you will find the following ***A1 Movers*** vocabulary:
circle, how, neck, shoulder, why

Materials needed for *Mini-projects:*

- a roll of paper to draw body outlines
- black card and white paint, brushes
- red plasticine, worksheet (download from Digital resource bank)
- cardboard, cord, straws

Mindful time

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

The audio (track 60) 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.

In this unit, the Mindful time activity focuses pupil's attention on their breathing.

Digital Lab

Interactive activities

Flashcards: bones, muscles, joints

Song: *With or without*

Chant: *Ready, steady, go!*

Video documentary: *Train your muscles*

Mindful time: *Remember the beginning.*

UNIT 1
PAGES 6–7

Objective:

Pupils will learn about the external parts of the body, sports and how to be safe at sports, using the setting of a gym. They will connect previous knowledge with new concepts.

Key vocabulary

arms, hands, head, helmet, legs, muscles, yoga

Warm up

Ask pupils to read the unit title and look at the picture. Ask them what they think they will learn about in this unit. You may like to have a class discussion about the importance of learning about our body parts and how to do sport safely.

Main concepts

- Ask pupils *What do you think we are going to learn in this unit?* Ask individual pupils to describe what they can see in the picture. As some children are doing sports in the picture, ask pupils which body parts they are using.
- Ask pupils if they do any sport and what their favourite sports are. Ask individual pupils to read out the questions on the page and elicit their answers.

(Little Earhart's) arm muscle. / (Little Earhart's) biceps.

Mindful time

Pupils will pay attention to how they sit. They will be mindful of their inhalation and exhalation, and of breathing deeply.

Learn more

- Play the song and ask pupils to do actions, e.g. *bend, dance, be robots.*

Song

The song focuses on our bones, muscles and joints and the movements we can do with each of them.

Documentary

The documentary focuses on parts of the body and specific muscles.

UNIT 1
PAGE 8

Objective:

Pupils will think about how their body is structured. They will be able to identify upper and lower limbs.

Key vocabulary

arm, body, foot, hand, head, leg, lower limbs, torso, upper limbs

Warm up

Draw a torso on the board. Draw a head, two arms and two legs, but in the wrong places. Ask volunteers to come up and draw the body properly.

Ask pupils *What are the lower limbs*?

Main concepts

- Ask pupils to read the texts and say the names of the body parts. Ask one or two pupils to come to the board and circle the upper and the lower limbs. Ask if they can now identify the lower limbs. Ask pupils to do the activity on the Pupil's Book page.
- Read the Fun Fact. Explain as necessary.

Learn more

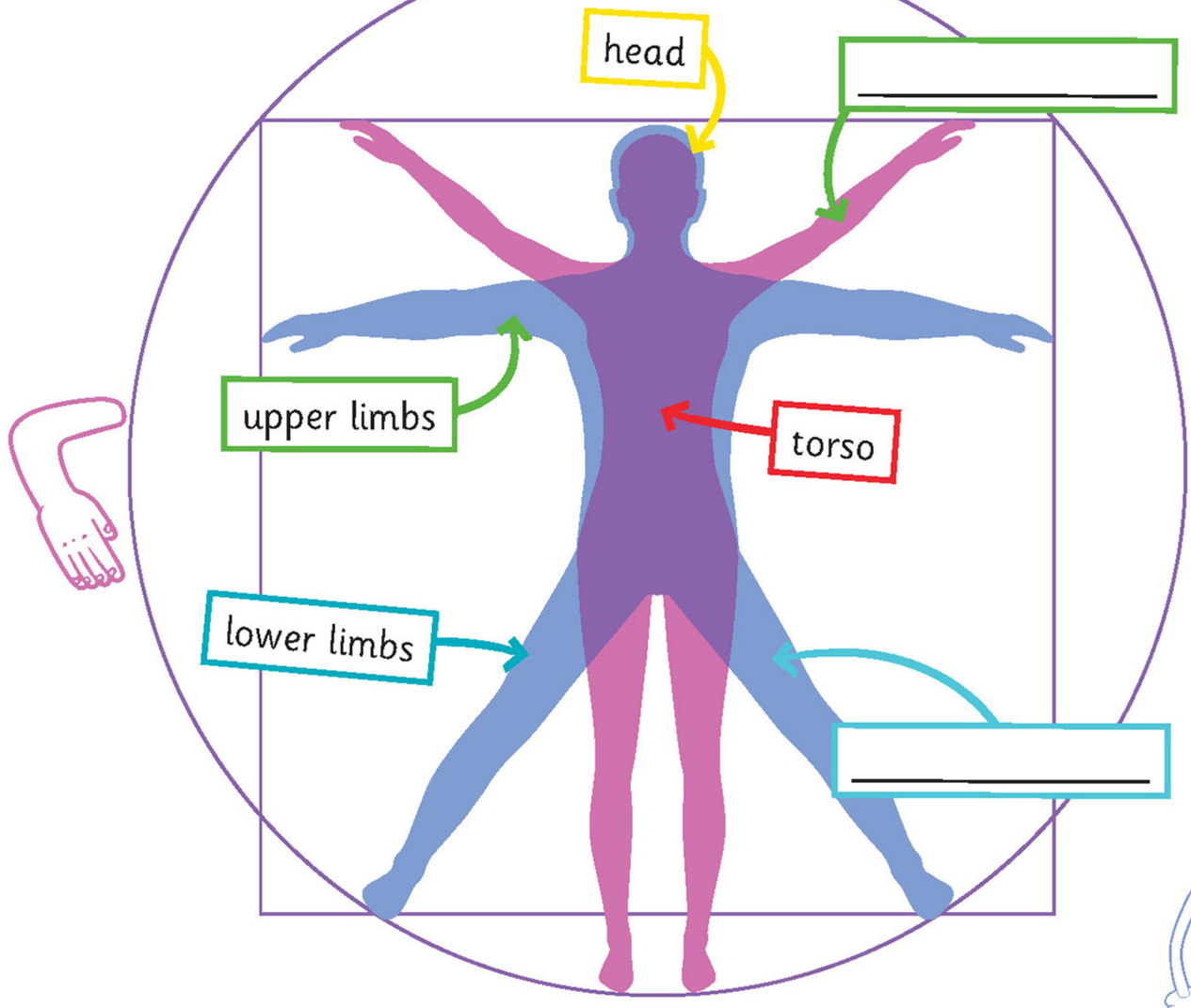
- Encourage pupils to think more about the topic by asking *What's the name of the bone in your forearm? Are there one or more than one?*

The legs.

WHAT ARE THE LOWER LIMBS?

Find out

Label the arms and legs.



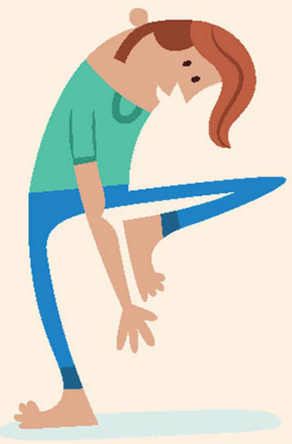
Our body has got three parts: head, torso and limbs.

Our arms are the **upper limbs**.

Our legs are the **lower limbs**.

FUN FACT

Your foot is the same length as your forearm! Try to measure it at home!



Mini-project

Try it out

Let's discover parts of the body.

1 Work in groups. Choose a friend and draw their outline.

2 Label the body parts.

Show it to your class.

What have I learnt?

My body has got three parts:
h_____, t_____
and limbs.
My arms are u_____ limbs and my legs are lower l_____.

MY DICTIONARY

body

head

torso

lower limbs

upper limbs

My body has got three parts: h**ead**, t**orso** and limbs.

My arms are u**pper** limbs and my legs are lower l**imbs**.

UNIT 1
PAGE 9

Objective:

Pupils will reinforce the concept of upper and lower limbs and think about their body structure.

Key vocabulary

arm, body, foot, hand, head, leg, lower limbs, torso, upper limbs

Warm up

Show a photo of a body. Ask pupils to identify the different parts of the body.

Main concepts

- Organise the class for group work. Read the instructions for the Mini-project together. Say *Let's make some space!* Give out the materials and ensure that there is room for pupils to draw the outlines. You may have to let groups take turns.
- 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.

Learn more

- Ask pupils to label all the body parts they know on the body outlines made in the Mini-project. They can present their completed work to the class.