

Science Skills

2

Teacher's Book



With
Downloadable
Audio

Experience
Better
Learning



SCIENCE SKILLS 2



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WELCOME TO CAMBRIDGE SCIENCE SKILLS

Course objectives

- *Cambridge Science Skills* 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**. There is an *Investigate* project that runs through each unit, in which pupils review and expand upon the concepts presented in the unit. Each individual stage of the *Investigate* project feeds into the project finale, in which pupils present or produce something to demonstrate their understanding of the topic.
- Pupils also engage with Science in a **hands-on** way by conducting **experiments**. This practises **critical-thinking skills** and promotes collaborative learning.
- Pupils learn about new concepts through discovery. In *Cambridge Science Skills*, **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 Science.
- **Collaborative learning** is also encouraged through the *Investigate* 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 Science in a second language. The course helps pupils develop their speaking, listening, reading and writing skills. The unit projects give pupils practice of a range of skills and sub-skills.
- *Cambridge Science Skills* 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. They focus on lower- and higher- order thinking skills, as well as critical thinking.
- *Cambridge Science Skills* 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 project, 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 Presentation Plus, as well as being available to download at www.cambridge.org/scienceaudio.



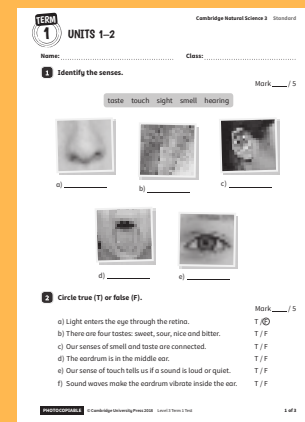
Teacher's Book: includes useful suggestions for activities at each stage of the lesson, answer keys, audio scripts and track numbers for the audio.



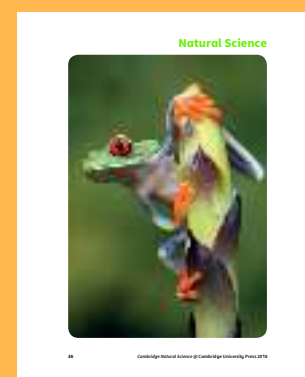
Science Skills Presentation Plus:

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
- mixed-ability tests
- documentary videos for each unit to engage the pupils in a visual way and allow them to see Natural Science in action!



Classroom materials: include posters and a full bank of flashcards to be used across levels. The posters consolidate learning by helping pupils engage with 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.



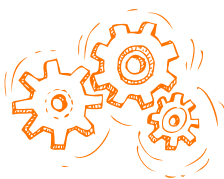


I can think, predict, experiment, observe and conclude.

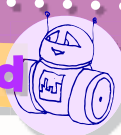


Scientific method:

- 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



senses



animals



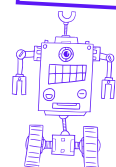
plants



materials



machines



What about you?

My favourite topic is _____.

5

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

Competences

This unit covers the following competences:

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

Other Resources

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.



By practising sports.

Song
With or without

How can you train your muscles?

Are all the children
being careful?

DOCUMENTARY
Train your muscles

No, one of them is playing on the
gym bars without any protection.

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.