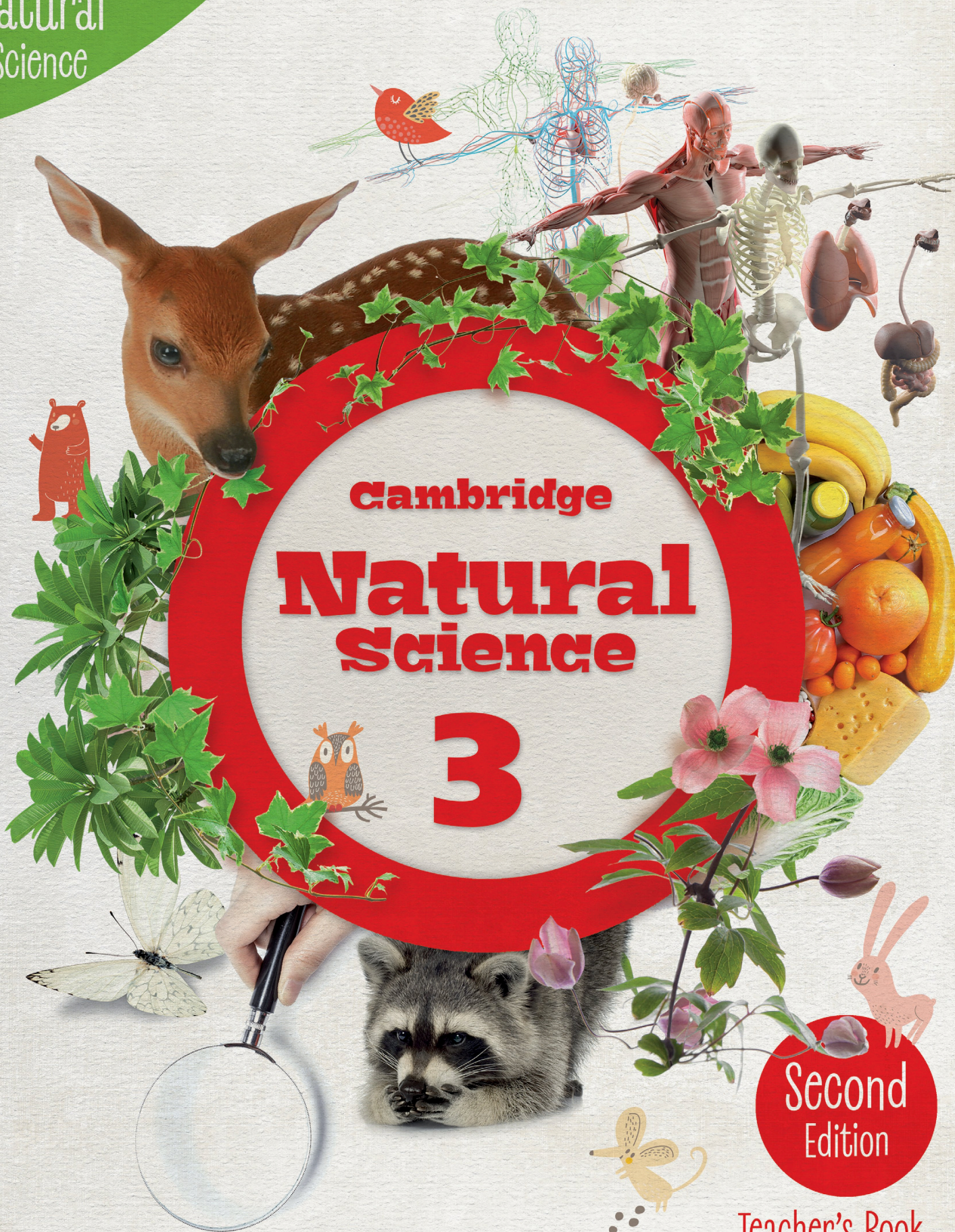


Natural Science



Second Edition

Teacher's Book

with Digital Pack



CAMBRIDGE



NATURAL SCIENCE 3



Course introduction

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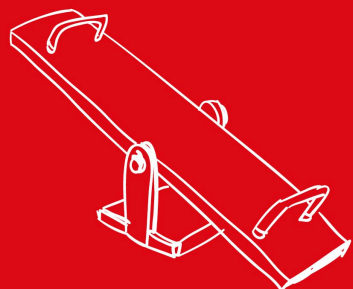
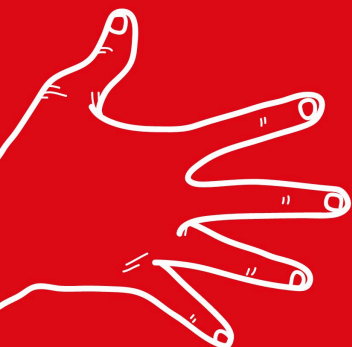
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WELCOME TO CAMBRIDGE NATURAL SCIENCE



Cambridge Natural Science Second Edition follows the new Primary Natural Science curricula with complete coverage of the Science competencies.

- An **enquiry-based approach** with Big Questions promotes critical thinking around relevant Science topics.
- **Hands-on experiments and manual activities** engage students with the content in a child-friendly, memorable way.
- Three **competency-based projects with posters and assessments** encourage pupils to deepen their exploration of new concepts while strengthening their collaboration and presentation skills.
- A **new content review section** on every spread ensures that students have enough practice with new concepts to effectively consolidate their knowledge.
- **English speaking, listening, reading and writing skills** are developed while **grammar structures** presented in Cambridge Primary courses are systematically reinforced.
- **Exam vocabulary and practice for Cambridge English Qualifications** for young learners are featured in every level:
 - Level 1: Pre A1 Starters**
 - Level 2: A1 Movers**
 - Level 3: A1 Movers and A2 Flyers**
 - Level 4: A2 Flyers**
 - Level 5: A2 for Schools and B1 Preliminary for Schools**
 - Level 6: B1 Preliminary for Schools**

Cambridge Natural Science Second Edition has been developed around the key Science competencies stipulated in the new curriculum. For every lesson you teach, the competencies covered by the content are listed on the corresponding Teacher's Book spread. In addition, the three level projects are supported by competency-based assessments.



Sci C1 Digital competency

Use digital devices and resources in a safe, responsible and efficient way.



Sci C4 Competency in self-awareness and empathy

Develop awareness of one's own and others' physical, emotional and social well-being.



Sci C7 Competency in historical awareness

Understand continuity and change in society and culture.



Sci C2 Scientific thinking competency

Use different techniques, instruments and modes of scientific thought to interpret and explain facts and phenomena occurring in their own natural, social and cultural environment.



Sci C5 Competency in preservation of natural and cultural heritage

Identify and understand relationships between systems in the natural, social and cultural environment to appreciate the value of cultural and natural heritage and preserve it.



Sci C8 Competency in cultural and social awareness and empathy

Value plurality and respect other cultures to build a more harmonious society that integrates EU values.



Sci C3 Problem-solving competency

Use design projects and computational thinking to cooperatively solve problems in interdisciplinary projects.



Sci C6 Competency in environmental sustainability

Develop awareness of human impact on the environment, including sustainable practices.



Sci C9 Citizenship competency

Recognise democratic values, human and child rights and the principles of the Spanish Constitution and the EU.



Course Components

Pupil's Book with eBook: Each unit includes hands-on experiments, manual activities, mixed-ability assessment and practice of the Cambridge English Qualifications for young learners. There are three competency-based projects per level: each **Our Project** includes an accompanying **Project Poster**, **Project Worksheet** and **Project Assessment Grid**. Pupils can find their eBook access code on the inside front cover of their Pupil's Book

Activity Book with Digital Pack: Each unit features activities that consolidate the concepts introduced in the Pupil's Book and practise of the Cambridge English Qualifications for young learners. Self- or peer-assessments are included on the Activity Book project pages. The Digital Pack access code is on the inside front cover of the Activity Book.

Teacher's Book with Digital Pack: Teaching ideas are offered at each stage of the lesson and competencies are flagged. Each unit highlights Cambridge English Qualifications vocabulary and practice activities, as well as links to digital components. Teachers can access digital content using a unique code found on the inside front cover of the Teacher's Book.

Flashcards: Full-colour printed flashcards (Levels 1–4) bring Science topics to life. Digital flashcards are available for all levels.



Digital components on Cambridge One platform

The digital components for **Cambridge Natural Science Second Edition** are available on our new **Cambridge One** online learning platform.



Presentation Plus: Digital front-of-class presentation with interactive versions of the Pupil's Book and Activity Book and a variety of features to help pupils cement their understanding of key concepts.

- **interactive Pupil's Book and Activity Book activities**
- **documentary videos** for every Pupil's Book unit
- **animations** to support the meaning of core concepts
- **digital flashcards**
- **class audio with scripts**

Test Generator: Features downloadable ready-made mixed-ability tests and allows teachers to build their own exams.

Teacher's Resource Bank: Includes teacher training videos; *Our Project* assessment grids, worksheets, posters, and self- and peer-evaluations; revision worksheets; concept maps; letters to parents; and downloadable class audios and videos.

Practice Extra: Teachers can set homework and track each pupil's progress. Provides extra practice in a way that rewards and motivates young learners.

WELCOME UNIT

PAGES 4–5

Objective:

Pupils will become enthusiastic about the study of Natural Science by discussing the images on these pages. They will be encouraged to predict the topics they will study this year and also to remember information related to these topics that they have studied in previous years.

Key vocabulary

biologist, engineer, paramedic, plant scientist, physicist, veterinarian

C2



Warm up

Write the names of the topics that the pupils will study on the board: *the human body, animals, plants, ecosystems, energy and matter, and machines*. Ask the pupils to work with a partner and try to match the photos which do not have children to the topics on the board. Ask them to write what they already know about these topics in their notebooks. Invite volunteers to share their ideas with the class.

WELCOME TO CAMBRIDGE NATURAL SCIENCE

Welcome to the amazing world of natural science.

I'm Carla and I want to be a paramedic!

Hello! I'm Omar and I want to be a veterinarian.

Hello! I'm Aileen and I want to be a plant scientist.

Hey! I'm David and I want to be a biologist.

Tip

During this first lesson, make sure that the pupils understand your classroom rules for group work. It is worth taking time to establish the rules and to also involve the pupils in drawing them up.



Main concepts

- Invite pupils to read the speech bubbles for each of the children and describe what each job is and what type of scientific knowledge is required to perform that job.
- Ask pairs of pupils to match the jobs to the pictures. biologist: *Alaskan brown bear*; engineer: *robotic arm*; veterinarian: *dog in veterinarian's office*; plant scientist: *plants growing in containers*; paramedic: *ambulance*; physicist: *laser*. Accept all reasonable answers and ask volunteers to explain their reasoning.
- Then, ask pupils to talk about how the jobs relate to the topics that you wrote on the board earlier. Invite volunteers to suggest other jobs that might relate to those topics as well.

Learn more

In groups, pupils write a question for each topic from the warm-up activity. Then, draw five circles on the board and divide each circle into five segments. Play a game of *trivia* using the groups' questions. The first group asks a question to the group next to them. If that group answers the question correctly, they colour in one segment of their circle and ask their question to the next group. If they cannot answer or answer incorrectly, the question passes to the following group.

1

HOW DO WE INTERACT WITH THE WORLD?




Learning objectives

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

- vital functions and body systems
- the brain as the control centre of the body
- the locomotor system and how it works
- the senses and the nervous system, and how they help us find out about our surroundings
- the sense organs and how they function
- the importance of taking care of the sense organs

Competencies

This unit covers the following competencies:

- Sci C2: Scientific thinking competency 
- Sci C3: Problem-solving competency 
- Sci C4: Competency in self-awareness and empathy 

Key vocabulary

Vital functions: circulatory, digestive, excretory, female, interact, locomotor, male, nervous, nutrients, reproductive, respiratory

Nervous system: brain, brain stem, cerebellum, cerebrum, nerves, nervous system, sense organ

Locomotor system: bones, joints, muscles, skeleton

Hearing: ear, eardrum, earwax, hearing, inner ear, middle ear, outer ear, vibrations

Sight: eye, eyebrows, eyelashes, eyelid, iris, pupil, retina, sight

Smell and taste: bitter, nose, nostrils, olfactory nerve, salty, sour, sweet, taste buds, tongue

Touch: hard, rough, sensory nerves, skin, smooth, soft, touch





Cambridge English Qualifications practice

You will find **A1 Movers** activity types in the following exercises:

Pupil's Book, Page 16, Activity 1 – Listening Part 1

Pupil's Book, Page 17, Activity 2 – Speaking (Odd-one-out)

Activity Book, Page 6, Activity 12 – Reading and Writing Part 1

Activity Book, Page 7, Activity 13 – Reading and Writing Part 4

Throughout this unit, you will find the following **A1 Movers** vocabulary:

any, anywhere, around, back, be called, because, below, by, centre, circle, dance, different, everything, help, hot, how, more, move, off, on, only, out, place, rain, send, shape, something, star, sweet, than, then, travel, up, wave, when, why, work, world

Digital Resources on Cambridge One

- Song: *Five senses*
- Video documentary: *Helping the senses*
- Presentation Plus with interactive activities
- Practice Extra with interactive activities
- Test Generator
- Resource Bank:
 - Flashcards: 1–15
 - Revision worksheets
 - Concept map
 - Letter to parents
 - Practice Extra answer keys
 - Oracy talking points worksheet and cue cards
 - Programaciones
 - Downloadable class audios and videos

Materials needed for *Hands on*

- aluminium foil
- cardboard tube
- elastic bands
- black card
- drawing pins
- wax paper

Materials needed for other activities

- black card
- blue cheese
- container
- empty yoghurt pots
- objects with texture, e.g. apple, ball, glove, pencil, pine cone, rubber, ruler, sponge, stone
- perfume
- popcorn
- tissue
- white plasticine

Objective:

Pupils will review vocabulary and concepts relating to the human body studied in previous years and share their knowledge.

Key vocabulary

bones, joints, muscles, senses, skeleton



Warm up

In groups, pupils think of parts of the body which begin with different letters of the alphabet. Set a time limit and award five points for words that the other groups do not think of and one point for shared words.

Main concepts

Pupils look at the photos and predict what they are going to be learning about in this unit. Review the names of the five senses and the sense organs, and write the words on the board for reference. Pupils answer the questions in pairs.

1

HOW DO WE INTERACT WITH THE WORLD?

Look and see...



Name the senses in the photos.

6

sight, taste, hearing, smell and touch

skull, ribs,
backbone, etc.

Joints are where our bones
connect to each other.

Can you name
any bones on
the skeleton?



Song
Five senses

What do joints do?



What do muscles do?

DOCUMENTARY
Helping the senses



When I grow up, I want to be
a paramedic!
Come with me and learn about:

- how our nervous system works.
- what our skeletal system does.
- how our senses help us.



Muscles help us move.

Learn more

Tell the pupils that you are going to test their observation skills. Ask them to look at the photos for a few minutes and then to close their books. Ask the pupils: *What was the girl looking at? What was the boy tasting?* etc.

Play the audio of the *Five senses* song (track 03).

Song

The song focuses on the senses and the sense organs.

Documentary

The documentary focuses on the five senses. It shows how our senses perceive things. It also gives pupils an opportunity to talk about visual impairment and hearing loss.

Tip

Have objects ready to bring into the class during the teaching of this unit, to help the pupils better understand the five senses and what they perceive. For example, you could bring in a selection of foods for them to smell and taste, or different materials for them to touch. Pupils learn well through *hands on* experiences.