

CAMBRIDGE

Teacher's Book

Science Path 1



Better
Learning



WELCOME TO CAMBRIDGE SCIENCE PATH

Course objectives

- *Cambridge Science Path* takes students on a journey as they discover the wonders of biology, chemistry, and physics. Students are introduced to topics at a manageable pace, so they can engage with, enjoy, and fully assimilate new concepts.
- Students learn about and cement their understanding of new concepts through **projects**. There is an *Investigate* project that runs through each unit, in which students review and expand upon the concepts presented in the unit. Each individual stage of the *Investigate* project feeds into the project finale, in which students present or produce something to demonstrate their understanding of the topic.
- Students also engage with Science in a **hands-on** way by conducting **experiments**. This practices **critical-thinking skills** and promotes collaborative learning.
- Students 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 students to be inspired by the fun and wondrous world of Science.
- **Collaborative learning** is also encouraged through the *Investigate* projects that students carry out in pairs, in groups, and as a class.
- The course provides students with the **linguistic support** that they require to study Science in a second language. The course helps students develop their speaking, listening, reading, and writing skills. The unit projects give students practice of a range of skills and sub-skills.
- *Cambridge Science Skills* provides students 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 students of different levels within the same class. They focus on lower- and higher- order thinking skills, as well as critical thinking.
- *Cambridge Science Path* aims to help students 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

Student's Book: each unit includes a project, experiments, mixed-ability assessment and practice of the Cambridge English Qualifications for young learners.



Class audio: provided through Presentation Plus, as well as being available to download at www.cambridge.org/scienceaudio.



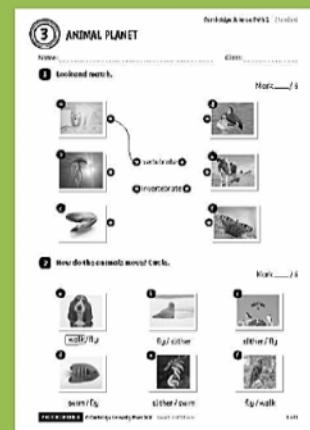
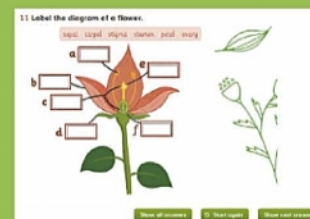
Teacher's Book: includes useful suggestions for activities at each stage of the lesson, answer keys, audio scripts, and track numbers for the audio.



Science Path Presentation

Plus: includes an interactive, digital version of the Student's Book with a variety of features to help students 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 students 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 students engage with Science vocabulary and concepts in the classroom.



MEET OUR SCIENTISTS

PAGES 4–5

Objective:

Students 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, sports, the human body, x-ray

Warm up

Write on the board: animals, friends and family, plants, sports, the human body, in different colors. Ask students 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 students *What is a scientist?* Elicit that scientists like to discover new things and solve problems by doing experiments. (This is a broad, general description!)



MEET OUR SCIENTISTS



I like studying the human body.

Little Franklin



I like healthy food and I love milk!

Little Pasteur



I love animals.

Little Cuvier



I know a lot about plants.

Little Aristotle

Scientist card

Name: _____

Age: _____



Print your finger here when you complete a unit.



Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7	Unit 8



- Point to each character in turn and have students 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 students to look at the boy with the flower. *What is he doing?* Elicit the process from students and highlight the *Scientific method*.
- 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 students to write and draw their own sentence and picture in their notebook or on a piece of paper.
- Encourage students to practice saying their sentence and to show and tell a classmate.

1

MOVE YOUR BODY!

Learning objectives

By the end of this unit, your students 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:

Student's Book, Page 102, Activity 2 – 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), pictures of students' 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 students with the opportunity to explore their sense of smell by mixing together different items. Students 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.

Other Resources

- 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:

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

Main concepts

- Ask students *What do you think we are going to learn about in this unit? – We are going to learn about the body.*
- Ask individual students to read out the questions on the page and elicit answers. Then, ask students 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 students if they would like a piece of the cake and what they think it tastes like.

Little Franklin, Little Curie, Little Cuvier and Little Pasteur (are happy).

Little Curie and Little Franklin (are dancing).

Little Linnaeus (is sad).





Song 03

Body parts

DOCUMENTARY

Incredible bodies

In this unit, you will learn about the body.
To do this, you will:

- make a skeleton with bones and joints.
- make a mini book about the body.
- experiment with the sense of smell.

Learn more

- Sing the song *Body parts* with actions.
- Ask students 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.

Objective:

Students 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 students to move different joints. Then, students take turns to call.

Warm up

- Ask students *How do you move your body? What's inside your body?*

Main concepts

- Ask students 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 students.
- Read the Fun Fact. Explain as necessary.

Learn more

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

Bones are hard.

Find out


ARE BONES HARD OR SOFT?

04

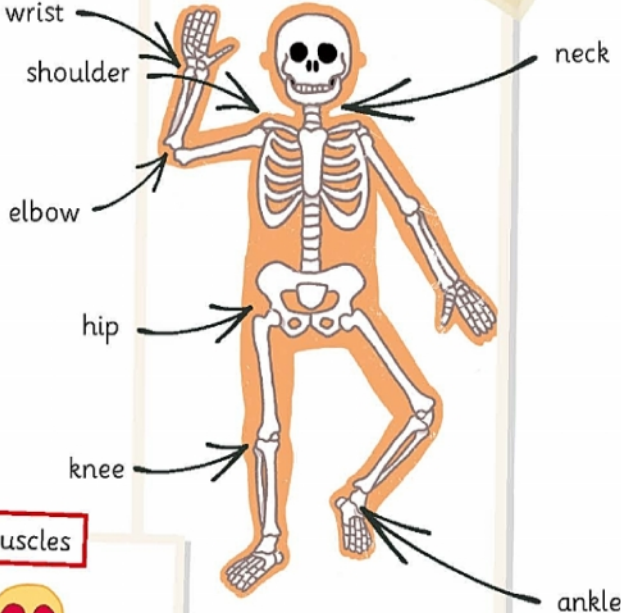
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Point to your joints. Practice saying them.


bones



joints



muscles



FUN FACT

The smallest bone in the body is in the ear.

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Objective:

Students will understand how bones and joints work together.

Key vocabulary

ankle, bones, joints, knee, muscles

Warm up

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

Main concepts

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

Learn more

- Read *My dictionary* as a class. Ask students to trace the words.
- Ask students to read and complete the *Investigate and trace* 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.



KEY WORDS



ankle



bones



joints



knees



muscles

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

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

UNIT 1

PAGE 10

Objective:

Students will identify and locate parts of the body.

Key vocabulary

arm, bottom, fingers, foot, head, leg, limbs, toes, torso, tummy

Warm up

Point to different parts of your body and ask students to name any that they know. Then, point to and name all the parts. Students copy your actions and repeat the words.

Main concepts

- Ask students to read the lesson title and the words for parts of the body. Draw their attention to the different colors for the head, torso, and limbs. Ask *What are limbs?* – Arms and legs. Point to the lesson title and ask *Can you answer the question now?*
- Read the Fun Fact. Clarify the meaning of *long* using gestures and/or illustrations.

Learn more

- Ask students *Can you remember the names of the joints in your leg?* – Knee, ankle.
- Sing the song *Body parts*.

I have four limbs.



HOW MANY LIMBS DO YOU HAVE?



Point to the limbs.

Look back
Point to the head, torso, and limbs of the skeleton on page 8.

FUN FACT

The longest bone in your body is the femur bone. It is in your thigh.

