

# Cambridge English for Scientists

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## Introduction

The aim of *Cambridge English for Scientists* is to improve your professional communication skills whether you are a professional or a student scientific researcher. To give you practice in carrying out the most common communication tasks of a researcher in English, each unit contains:

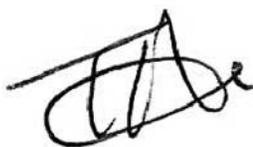
- situation-based activities so you can practise the language and communication skills you have learned in realistic contexts
- engaging topics based on examples of published scientific research
- realistic listening activities so you can learn the language you need to participate in meetings and discussions with colleagues and supervisors
- relevant vocabulary presented and practised in professional contexts

Audioscripts for the listening material and a complete answer key, including answers for some of the discussion questions and activities, are at the back of the book. You will also find a full glossary containing explanations of useful words and phrases common to all fields of scientific research as well as some of the more specialised words connected to the scientific research case studies explored in each unit. In addition, you can find extra activities online at [www.cambridge.org/elt/englishforscientists](http://www.cambridge.org/elt/englishforscientists)

### How to use *Cambridge English for Scientists* for self-study

If you are working on your own, you can do the units in any order you like. Choose the topic that you want to look at and work through the unit, doing the exercises and checking your answers in the answer key. Note any mistakes you make, and go back and listen or read again to help you understand what the problem was. For the listening exercises, it's better to listen more than once and to look at the audioscript after the exercise so that you can read the language you've just heard. For the speaking activities, think about what you would say in the situation. You could also try talking about the discussion points with your colleagues or friends.

I hope you enjoy using the course. If you have any comments on *Cambridge English for Scientists*, you can send an email to [englishforscientists@cambridge.org](mailto:englishforscientists@cambridge.org)



Tamzen Armer (BSc, CELTA, DELTA) graduated with a degree in Anatomical Sciences. Her professional experience as a scientific researcher includes a one-year placement at the Multiple Sclerosis Society laboratory at the Institute of Neurology, London, followed by a full-time position as a research assistant at the Christie Hospital, Manchester. As an English language teacher, she has taught in South Korea, the UK, New Zealand and most recently in Australia. She is currently the Assistant Director of Studies at the University of Canberra English Language Institute.

	Skills	Language focus	Texts
<b>UNIT 1</b>	Planning a career in science Applying for research funding Writing up a résumé or CV Preparing for an interview	Talking about your career path Summarising a research proposal Organising and adding detail to a résumé or CV Preparing and practising the presentation of a proposal Answering interview questions	<b>Listening</b> A researcher discusses her career options A supervisor gives advice on writing a CV A researcher practises presenting a research proposal  <b>Reading</b> A notice for a scholarship A project summary An extract from a CV An extract from an email Advice on conference call interviews
<b>Getting started in research</b> page 6			
<b>UNIT 2</b>	Communicating with scientific communities Writing a critical review Completing a Material Transfer Agreement	Recognising different styles of writing Asking for help using an online forum Reading and note-taking for a critical review Completing an MTA (Material Transfer Agreement)	<b>Listening</b> A student asks for advice on writing a critical review A student discusses published research with his supervisor A researcher completes an MTA with help from his supervisor  <b>Reading</b> Extracts from different styles of writing Questions from an online science forum An extract from a critical review An email
<b>The scientific community</b> page 14			
<b>UNIT 3</b>	Doing a literature review Using evidence in arguing a point Taking part in a meeting	Linking sentences in writing (1) Arguing for and against an idea appropriately Supporting ideas with evidence Following a discussion in a team meeting Interrupting a meeting appropriately	<b>Listening</b> A student explains a new idea to her supervisor Four scientists describe their problems with team meetings in English A monthly research meeting  <b>Reading</b> Extracts from a literature review An extract from an email How geckos walk on walls
<b>Finding a direction for your research</b> page 22			
<b>UNIT 4</b>	Describing approaches to data collection Designing an experimental set-up Describing material phenomena and forces Making predictions of experimental results	Making suggestions and plans for an experiment Giving advice to a colleague Prefixes and suffixes (1) Predicting the results of an experiment	<b>Listening</b> A researcher discusses procedure with her supervisor A researcher describes her experimental set-up to a colleague A researcher makes predictions about her experiment  <b>Reading</b> The scientific method
<b>Designing an experiment</b> page 30			
<b>UNIT 5</b>	Describing a process Evaluating the results of an experiment Describing problems with an experiment Keeping a lab notebook	Describing experimental procedure Revising a paper (1) Describing expectations and outcomes of an experiment Describing and reporting problems in an experiment Linking sentences in writing (2) Using symbols and abbreviations in lab notebooks Describing lab protocols	<b>Listening</b> A researcher asks a colleague to comment on his paper A researcher discusses the progress of his research with a colleague A researcher reports a problem with his research A researcher explains why she prefers using an electronic lab notebook  <b>Reading</b> A summary of a scientific procedure A summary of a researcher's results
<b>Describing an experiment</b> page 38			

	Skills	Language focus	Texts
<b>UNIT 6</b>	Describing states and processes Describing data: numbers / numerical values Writing up from lab notes	Describing procedure in the materials and method section Revising a paper (2) Expressing numbers and describing data Prefixes and suffixes (2) Rewriting lab notes for a paper	<b>Listening</b> A student gets advice on the first draft of a paper Researchers discuss experimental data A student describes changes to her method <b>Reading</b> Extracts from an early draft of a paper Extracts from a researcher's lab notebook
<b>Writing up research 1: materials and methods</b> page 46			
<b>UNIT 7</b>	Analysing data (statistical analysis) Summarising data in visual form Writing captions for figures Describing visual data	Prefixes and suffixes (3) Describing data for statistical analysis Comparing and contrasting experimental results (1) Writing a caption for a figure or graph Describing a figure or graph in a paper	<b>Listening</b> A student describes his research A supervisor asks a student to make corrections to a figure A student asks her supervisor for help with her paper <b>Reading</b> Extracts from a researcher's lab notebook A table of experimental data
<b>Writing up research 2: presenting data</b> page 54			
<b>UNIT 8</b>	Organising the results and discussion sections Preparing and writing the results section Preparing and writing the discussion section	Organising writing in paragraphs Referring to visual data in a paper Comparing and contrasting experimental results (2) Summarising information efficiently (1) Describing the limitations of research Making suggestions for future research	<b>Listening</b> A student explains his research to a colleague A student gets advice on the first draft of a paper <b>Reading</b> Extracts from a student's paper
<b>Writing up research 3: results and discussion</b> page 62			
<b>UNIT 9</b>	Writing the introduction Writing the abstract Giving a title to your paper Contacting journals	Reporting the work of other researchers in a paper Organising an abstract Summarising information efficiently (2) Writing a cover letter to a scientific journal	<b>Listening</b> A supervisor comments on the first draft of his student's abstract A student discusses the title of a paper with his supervisor <b>Reading</b> Extracts from a student's paper Advice on how to get your research published A cover letter to a scientific journal
<b>Writing up research 4: introduction and abstract</b> page 70			
<b>UNIT 10</b>	Giving a paper at a conference Socialising at a conference Presenting a poster	Helping an audience understand the organisation of a presentation Socialising at a conference Organising a poster Summarising the content of a poster	<b>Listening</b> A researcher gives a paper at a conference Eight conversations of people socialising at a conference A student answers questions about his poster presentation <b>Reading</b> How the adaptive immune system responds to a viral vaccine Advice on preparing a good poster
<b>Presenting research at a conference</b> page 78			
<b>Additional material</b>	<b>page 86</b>	<b>Glossary</b>	<b>page 117</b>
<b>Audioscript</b>	<b>page 91</b>	<b>Acknowledgements</b>	<b>page 126</b>
<b>Answer key</b>	<b>page 103</b>		