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

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

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

| UNIT 6 | Writing up research 1: materials and methods | Describing states and processes  
Describing data: numbers / numerical values  
Writing up from lab notes |
|---------|---------------------------------------------|--------------------------------------------------|

| UNIT 7 | Writing up research 2: presenting data | Analysing data (statistical analysis)  
Summarising data in visual form  
Writing captions for figures  
Describing visual data  
Prefixes and suffixes (5)  
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 |
|---------|---------------------------------------------|--------------------------------------------------|

| UNIT 8 | Writing up research 3: results and discussion | 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 |
|---------|---------------------------------------------|--------------------------------------------------|

| UNIT 9 | Writing up research 4: introduction and abstract | 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 |
|---------|---------------------------------------------|--------------------------------------------------|

| UNIT 10 | Presenting research at a conference | Giving a paper at a conference  
Socialising at a conference  
Presenting a poster  
Helping an audience understand the organisation of a presentation  
Organising a poster  
Summarising the content of a poster |
|---------|---------------------------------------------|--------------------------------------------------|

### Language focus

| UNIT 6 | 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 |
|---------|---------------------------------------------|--------------------------------------------------|

| UNIT 7 | Listening  
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 |
|---------|---------------------------------------------|--------------------------------------------------|

### Texts

| UNIT 6 | Listening  
A student gets advice on the first draft of a paper  
Researchers discuss experimental data  
A student describes changes to her method |
|---------|---------------------------------------------|--------------------------------------------------|

| UNIT 7 | Reading  
Extracts from an early draft of a paper  
Extracts from a researcher's lab notebook |
|---------|---------------------------------------------|--------------------------------------------------|

### Additional material

- Audioscript page 91
- Answer key page 103
- Glossary page 117
- Acknowledgements page 126

### Contents

- UNIT 6: Describing states and processes
- UNIT 7: Analysing data (statistical analysis)
- UNIT 8: Organising the results and discussion sections
- UNIT 9: Writing the introduction and abstract
- UNIT 10: Presenting research at a conference

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