

# Learning pathway

## New to computing

### Who is this pathway for?

For teachers who are confident with programming but need help with computer systems and networks, this learning pathway will improve your subject knowledge to meet the requirements of computer science up to GCSE level.

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#### Foundation knowledge of computer science for KS3 and GCSE

Explore the foundation subject knowledge required to teach the computing programme of study up to GCSE level.

📍 CP226 face to face  
📺 CP426 remote course

2

#### An introduction to algorithms, programming and data in GCSE computer science

Create some simple block-based computer programs and discover how to implement them in Python.

📍 CP228 face to face  
📺 CP428 remote course

3

#### Introduction to computer systems, networking and security in GCSE computer science

Learn about the different components of computer hardware, including devices not instantly recognisable as computers.

📍 CP238 face to face  
📺 CP438 remote course

4

#### How computers work: demystifying computation

Explore the fundamentals of computing - computer architecture, binary logic, data processing, circuits, and more.

💻 CO206 online course

5

#### Programming 101: an introduction to Python for educators

Explore the basics of Python. Guided by the Raspberry Pi Foundation, you'll learn to code your first program.

💻 CO207 online course

6

#### Impact of technology: how to lead classroom discussions

Discover the ethical, legal, cultural, and environmental concerns surrounding computer science.

💻 CO215 online course

You might also consider...

### Remote courses:

Remote courses are live, interactive online sessions led by an experienced professional development leader.

### Other courses to enhance this pathway:

[CP223](#) - Python programming constructs: sequencing, selection and iteration (face to face)

[CP423](#) - Python programming constructs: sequencing, selection and iteration (remote)

[CP422](#) - Fundamentals of computer networks (remote)

[CP420](#) - Representing algorithms using flowcharts and pseudocode (remote)

### Online courses:

On-demand courses that offer a new and exciting way to learn about computing and digital making. Take part in these free online courses and learn at your own pace, in the comfort of your own home.

### Other courses to enhance this pathway:

[CO209](#) - Data representation in computing: bring data to life

[CO212](#) - Understanding computer systems

### Support to complete your pathway:

- Use the questionnaire on your dashboard to support you to find further suitable courses, based on your level of experience.
- **Download the CSA Handbook** to find out more about the topics, explore useful resources, identify further CPD and practice sample assessment questions.
- To find out more about the programme, our national support network and how we can help, email the team at [info@teachcomputing.org](mailto:info@teachcomputing.org).

## Take the next step

Once you have completed your Subject knowledge certificate, if you work in secondary state-funded education you will receive free access to all our courses, including our follow-on **Secondary certificate**. This qualification can help to upskill your pedagogical practice, curriculum, and leadership.