

User guide

Welcome to *QuickStart Computing*: a CPD toolkit for the new primary curriculum. Computing is a new subject. It draws together the strands of computer science, information technology and digital literacy, and seeks to equip children with computational thinking skills and the creativity they need to understand and change the world.

Through the programme of study for computing, primary school-aged children learn the fundamental principles and processes of computation; they gain repeated, practical experience of writing code to solve problems and to model systems; they also become skilled at creating high quality products and content using digital technology; and they become safe, responsible and critical users of technology.¹ Computing is an enjoyable and empowering subject to learn, and it's a very rewarding one to teach. However, unlike other subjects in the primary curriculum, it's not one many primary teachers learned themselves when they were at school, or were taught about in their teacher training.

What is QuickStart Computing?

Quickstart Computing is a set of resources that address the subject knowledge and the subject-specific pedagogy teachers need in order to plan, teach and assess the primary computing curriculum effectively and confidently.

This handbook is broken down into three sections:

- Computing subject knowledge with suggestions for tried-and-tested classroom activities to run in school (see pages 6–49)
- Advice for planning, teaching and assessing the computing curriculum (see pages 50–55)
- Guidance for running computing CPD sessions (see pages 56–59).

All three sections are supported by:



a selection of videos to explain particular computing concepts and ideas; the video content is highlighted at the start of each subject knowledge section



weblinks to useful information, including activity ideas from Computing At School, Barefoot Computing and CS Unplugged.

All the resources are available to download free of charge from www.quickstartcomputing.org.

¹ National Curriculum in England, *Computing Programmes of Study* (Department for Education, 2013).

Delivering computing CPD

This toolkit can be used to develop and deliver computing CPD sessions to colleagues and computing coordinators. We have suggested a model for the use of this CPD on the page opposite but you can decide how best to share the training to meet the needs of your school, cluster or hub.

All timings and durations are suggestions only and should be adapted to fit with the needs of both the course leader and session attendees. For example, the diagram opposite outlines two half-day CPD sessions to take place at the beginning and end of a school term, but depending on availability of session leaders and attendees, it may be better to hold three shorter twilight sessions.

These resources are designed to be used flexibly and it is important to spend time reviewing the materials provided and developing these prior to delivering CPD sessions, to ensure they fit the needs of your attendees. The CPD session presentations are provided in editable format to help you with this.

Developing computing knowledge and skills

To benefit most from these resources, it's important to engage fully with them.

- Read the handbook, particularly those areas of content in which you are less confident (see pages 62–63 for the knowledge and skills audit form, and the interactive audit tool is at www.quickstartcomputing.org).
- Have a go at creating some code, for example making games in Scratch or Kodu; think about how you would apply these ideas in school.
- Look for existing examples of computational thinking that you make use of in your job.
- Try out some of the classroom activities described in the handbook.
- Engage with others. Learning as part of a group allows you to share knowledge and ideas. This can be done in school and by joining an online community such as Computing At School: www.computingatschool.org.uk/.

For more information about developing your computing knowledge and skills beyond this toolkit, see Next steps on page 60.

Note: throughout the guide we have highlighted computing terms in **blue**. The definitions of these terms are in the glossary on page 64.