

CPD Summer 2023



Explore physical computing using the Crumble device

Physical computing involves programming digital devices to sense and interact with the world – an engaging alternative to screen-only activity. It touches upon many areas of the computing curriculum, bringing subject knowledge and programming skills to engaging and enjoyable classroom activities.

The Crumble Controller is an easy-to-use programmable device, ideal for physical computing in primary schools. It is capable of driving two motors. With 4 input / output terminals, children can connect LEDs, switches and other interesting add-ons. This course is delivered on behalf of the NCCE.

Course Objectives

- You'll explore how Crumble can be used in the classroom, with blocks of code 'snapping' together in an easy-to-use, Scratch-like environment suitable for key stage 2.
- You'll find out how to setup the device
- Make use of input and output terminals and explore how to use the device with children.
- The CPD will help you gain confidence in teaching using Crumble, and the free Teach Computing Curriculum.

**National
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Who is it for?

This course is aimed at classroom teacher and subject leaders of computing, looking to develop physical computing approaches in the KS2 classroom.

Expected impact on schools - Participants will:

- gain hands-on experience and confidence using the Crumble controller
- explore pedagogy and lesson activities that make effective use of physical computing in the classroom
- plan to implement physical computing in the classroom

When:

Wednesday 24th May 2023	4 - 5.30pm
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Where: OpenZone@The Word



Implementing the Teach Computing Curriculum in your school

This course aims to support teachers and subject leads in providing the best computing experience for their pupils using the Teach Computing Curriculum. It will guide leaders through the Teach Computing Curriculum's design and structure, exploring how it can be implemented within an individual school's setting. There will be a focus on the content children will need to learn, skills they will need to access this and how these are progressed within the curriculum. It will consider the starting point of schools and how best they can include the Teach Computing Curriculum resources to teach computing effectively, troubleshooting any issues that they may have. It will also support subject leads in getting to grips with content, software, and approaches to enable them to effectively deliver the curriculum within their own school. This course is delivered on behalf of the NCCE.

Who is this course for?

Computing Subject Leads

Course Objectives

1. Design and structure of the Teach Computing Curriculum- explore the design and structure of Teach Computing Curriculum and the research behind this. Unpick how this fulfils the National Curriculum objectives for computing.
2. Making it work in your school: software and hardware requirements- Identify the software and hardware requirements of the Teach Computing Curriculum and how this may differ in your school. Explore alternative software to deliver the content based on the technology within your school.
3. Making it work in your school: Teaching and learning- Identify potential barriers and how you can overcome them. Explore strategies for ensuring the curriculum meet the needs of pupils in your school, including how to provide support and challenge.
4. Planning to implement the Teach Computing Curriculum in your school- Develop an action plan for your school, considering where you are now, your identified issues to using the curriculum and strategies for overcoming them

Expected impact on schools - Participants will:

- Understand the aims and design of the Teach Computing Curriculum
- Identify issues with implementing the TCC in your school and strategies for overcoming them
- Explain strategies for support and challenge within computing
- Know how to implement the Teach Computing Curriculum within your own setting, ensuring that it meets the needs of pupils in your school

**National
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When:

Wednesday 28th June 2023

9.30 am - 3pm

Where: OpenZone@The Word

Note: Attendees on this course could apply for funding to cover school supply costs.

Explore physical computing using the micro: bit device

The micro:bit provides an engaging way to develop subject knowledge, through cross-curricular projects that provide instant feedback to develop understanding of programming in Key Stage 2. This course is delivered on behalf of the NCCE.



Course Objectives

During this CPD, you'll learn how to get started with the micro:bit, exploring the in-built buttons, LEDs, and sensors for detecting movement, sound, light and heat. You'll find out how to setup the device, how to attach add-ons to make use of the inputs and outputs, and how to teach using micro:bit, making use of freely available resources.

Who is it for?

This course is aimed at teachers and subject leaders of computing, looking to develop physical computing in the classroom to complement existing approaches.

Expected impact on schools - Participants will:

- gain hands-on experience and confidence using the micro:bit
- explore pedagogy and lesson activities that make effective use of physical computing in the classroom
- plan to implement physical computing in the classroom



When:

Wednesday 10th May 2023	4 - 5.30pm
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Where: OpenZone@The Word

All sessions are face to face at OpenZone @ The Word. If you are interested in taking part in any of our CPD sessions, please email: julia.small@ictinschools.org