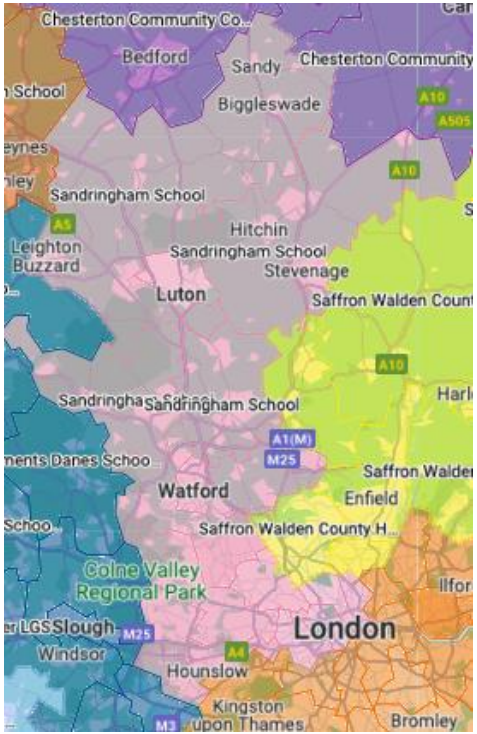
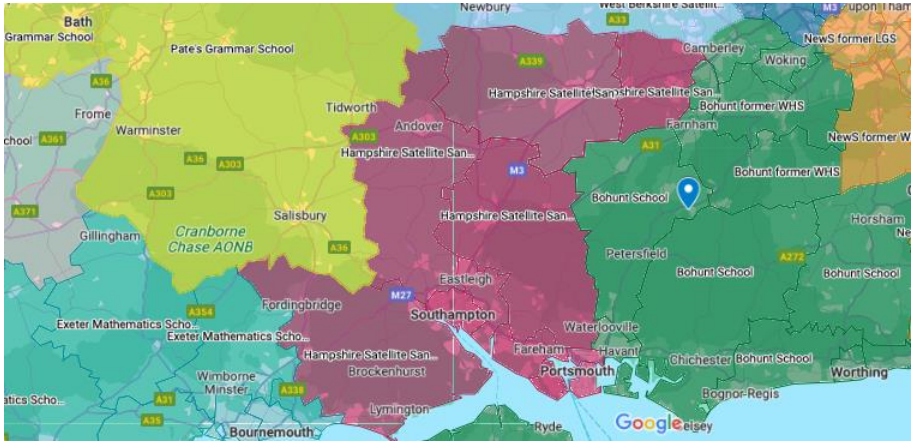
National Centre for Computing Education

Sandringham Computing Hub

@ComputingHubSAC

London, Hertfordshire and Hampshire





Who are we and what do we do?

Led by schools and colleges across England with excellence in teaching computing

Provide a high-quality computing education to all young people

Work with you to identify your computing needs and provide a targeted programme of support to help embed Computer Science in your school

Who are we and what do we do?

We’re the local face of the National Centre for Computing Education (NCCE) and arrange high quality Continuous Professional Development for teachers across our regions as well as supporting clusters of schools to improve their Computing education provision.

The National Centre is run by STEM Learning UK who receive funding from the Department for Education.

National Centre for Computing Education

STEM LEARNING

Department for Education

AlbanTSH Teaching School Hub

HiSP Learning Partnership

National Centre for Computing Education

Our vision

For every child in every school in England to have a world-leading computing education.

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The UK tech sector has grown by over 40% in the last two years but the number of young people studying computer science has only gone up by 2%.

Every young person is growing up in a world where they need to be able to understand and engage with computing, whatever their ambitions and career destinations.

Education leaders at all levels are focused on ensuring that all young people get the education and opportunities they need and deserve.

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NCCE Offering

Computing Quality Framework
Schools and MATS

- Accredited framework to identify strengths and weaknesses in your computing curriculum
- Gain feedback and suggested actions
- Achieve Computing Mark

Teach Computing
Primary and secondary Teachers

- Explore courses and accreditation
- Access funding for supply cover
- Download free curriculum resources

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NCCE Offering

Isaac Computer Science (KS 4 to 5)

- Browse high-quality homework and revision content
- Access free online learning platform
- Explore materials for use in the classroom

Work in partnership Businesses and Partners

- Discover opportunities to work with NCCE
- Find out more about contributing
- Become an advocate or volunteer

Computing Quality Framework

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NCCE's Computing Quality Framework is intended to help schools review their progress in developing an exemplary computing curriculum.

The framework takes schools through each aspect of computing, helping them to access the NCCE's wide range of report functions, and resources for progress. The development of the framework was funded by the DfE

Computing Quality Framework

The framework provides:

A process for identifying strengths and areas for development

Links to the NCCE's resources, targeted on your school's specific needs.

Opportunities for commitment and involvement from across the school.

A continuum for schools to discuss how they might move from a basic level of provision for computing to practice that is aspirational and innovative.

Computing
Quality Framework

Computing Quality Framework

Progress through the 7 aspects of effective implementation, improve your practice, record progress and produce reports

Accreditation

When you are able to show good practice, you can apply for the nationally recognised Computing Quality Mark, which is awarded by STEM Learning on behalf of the National Centre for Computing Education.

Multi-Academy Trusts

Track and monitor progress across your chain of schools, identify areas of strength and development, and drive change

Computing
Quality Framework

Teacher John Palmer is computing lead at The Chase, Malvern, one of the first schools to receive a Computing Quality Mark.

"The CQF has allowed us to gain vital external validation of our computing provision so that we know it aligns to latest best practice. Nothing stays still for long in computing and education!

"We have large numbers of young people taking computing at GCSE and A level, including many girls. The key to that success is the effort we put into making the KS3 computing curriculum interesting and relevant.

We love the NCCE Teach Computing Curriculum and use this in our KS3 provision.

"Review and self-evaluation is a vital part of my role. Going through the CQF in detail gave me confidence that if Ofsted undertakes a computing "Deep Dive", we're able to demonstrate our strong computing provision.

"We found the CQF process very straightforward, and its suggested areas for improvement are very useful too. Whenever I had a query, the central team have been very helpful.

"We are also an NCCE Computing Hub school offering support to schools across our region. We're working to help them also adopt the CQF as a superb way of reviewing and extending their computing provision."

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Find out more at **computingqualityframework.org**

National Centre for Computing Education

Computer Science (CS) Accelerator

Subject knowledge certificate

Certificate awarded by BCS, The Chartered Institute for IT

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Computer Science (CS) Accelerators

Computer Science Accelerator is a professional development programme for teachers, funded by the DfE, leading to a national certificate in computer science subject knowledge.
The programme will help you develop or refresh your subject knowledge up to GCSE, with funding available for state-funded schools and colleges to support classroom cover.

Who's eligible?
Current and aspiring computing teachers. This is suitable for all abilities, from little or no experience in teaching computer science to experienced teachers looking to deepen their subject knowledge.

LONDON COMPUTER SCIENCE ACCELERATOR WEEK 16TH – 20TH OCTOBER

Want to upskill your knowledge to teach GCSE Computer Science?
Want support from a GCSE Computer Science Expert?
Want to gain a certificate in GCSE Computer Science subject knowledge from the British Computer Society?

Register for the CS Accelerator Programme: teachcomputing.org/cs-accelerator
Attend whichever courses best support your development
Be supported to prepare and take your test to gain your GCSE subject knowledge certificate!

HARRIS ACADEMY BERMONDSEY, 55 SOUTHWARK PARK RD, LONDON SE16 3TZ

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FREE

SIGN UP:

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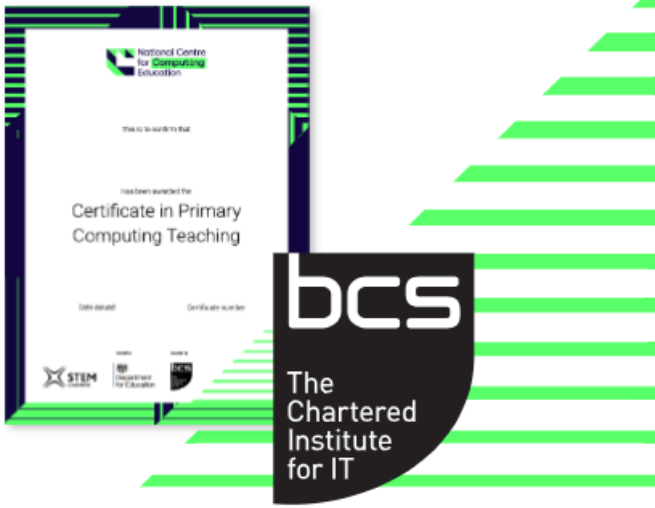
Teach primary Computing

Teach primary computing

Certificate awarded by BCS, The Chartered Institute for IT



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Teach primary computing

This professional development programme has been designed to guide primary teachers through our comprehensive offer of courses, enrichment and resources and leads to a nationally recognised certificate. We expect it to take around 20 hours to complete.

There are two pathways under which we have gathered relevant courses and activities to help you advance your knowledge and experience of teaching primary computing.

Specialising or leading

Developing in the classroom

National Centre for Computing Education

Computing courses for teachers

Discover our range of professional development courses, designed to help you teach computing. Courses cover key stages 1 to 4 and cater for all levels of knowledge.
Choose how and when you want to learn, through face to face, online, or live remote training.

The NCCE offer funding to state-funded schools and colleges across England, including subsidies to support supply cover for continuing professional development.

Computing courses

Isaac Computer Science

Isaac Computer Science

Discover the free online textbook for A level and GCSE computer science teachers and students.

Isaac Computer Science

Computer science learning

Free online platform for students and teachers.

- Use it in the classroom
- Use it for homework
- Use it for revision

Isaac Computer Science

Access a huge range of time-saving learning materials that cover the full A level and GCSE Computer Science curriculum for the AQA, OCR, EDEXCEL, and EDUQAS exam specifications — all for free!

Set questions for your students and the system will mark them and give you a detailed breakdown of their progress.

Isaac Computer Science is great for supporting remote teaching, homework and revision sessions, and helps you to quickly identify areas where students can improve.

Isaac Computer Science

Benefits to teachers:

- seamless integration of GCSE and A level content
- save time on lesson planning and marking
- high quality resources written by experienced teachers
- create personalised sets of questions for your class
- pinpoint areas to work on with your students
- manage students' progress in your personal markbook

Benefits to students:

- structured, self-paced study and progress tracking
- topics covering all exam boards – perfect for revision
- live online workshops and career events
- instant feedback from the interactive questions to guide further study
- deep dive into specific areas of interest
- smooth progression from GCSE to A level

I Belong

Encouraging girls into computer science

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I Belong

Computer Science is the fastest-growing STEM subject, and yet, despite its popularity, girls are consistently outnumbered by boys. In 2023, only **one in five** GCSE Computer Science and 15% of all A level Computer Science entries were from female students in England.

Our evidence-informed programme aims to help teachers and leaders understand the barriers to girls' participation in computer science and make a plan to overcome them. We offer curated resources, training and implementation support to empower you with the tools to support more girls into computer science qualifications and careers.

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I Belong

Who is it for?

- Educators aspiring to narrow the gender gap in computing education.
- Our resources are currently focused on key stage 3 but teachers of other key stages are welcome to access and use the materials.

What are the benefits?

- Develop an understanding of the factors affecting girls' participation in computer science.
- Work with colleagues to produce an action plan with strategies to make computer science in your school more inclusive.

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I Belong Champions

We're looking for educators to join us in championing computer science for girls. Our ‘I Belong’ champions initiative unites those with a common passion and purpose: to advocate for and create a sense of belonging for girls in computer science.

The champions will share and embed inclusive practice, leading by example through their own organisation’s progress through the National Centre for Computing Education’s ‘Equity, Diversity, Inclusion and SEND’ dimension of the Computing Quality Framework


Physical Computing Kits

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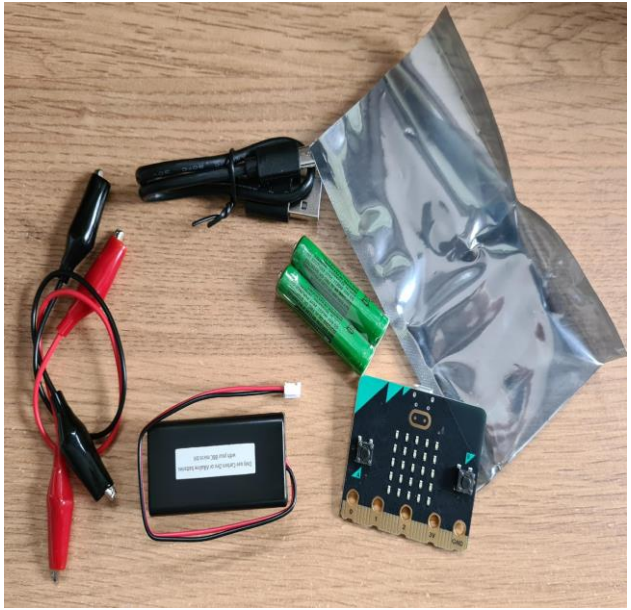
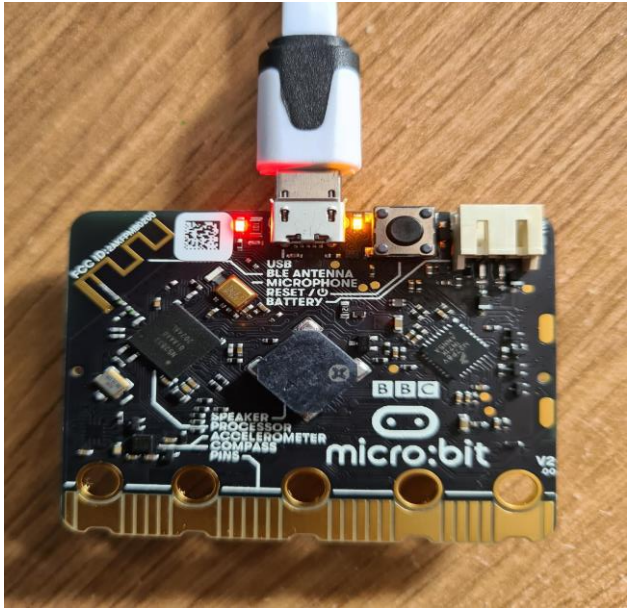
What are Physical Computing Kits?

Physical computing and digital making plays an important role in teaching computing, both as a tool to engage learners and a strategy to develop their understanding in more creative ways. However, it also presents financial and logistical challenges for schools.

The NCCE is therefore providing **free class sets of physical computing equipment for use by schools in England**, which will be stored and loaned out by Computing Hubs.

Kits

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BLE ANTENNA
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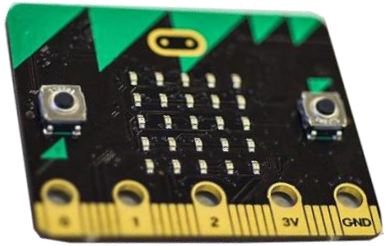
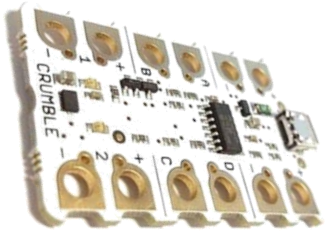
BATTERY
SPEAKER
PROCESSOR
ACCELEROMETER
COMPASS
PINS
BBC
micro:bit

Kits





Kits List

- Physical computing kit - KS1 BeeBots
- Physical computing kit - KS2 Data Loggers
- Micro:bit - KS2
- Raspberry Pi Pico - KS4
- Micro:bit - KS3

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Loan Kits – CPD Available

Our kits are an amazing way to boost engagement within the classroom for both students and teachers alike. The kits provide students with a hands-on experience of computing using different resources, enabling them to enrich their learning in a fun and engaging way.

For teachers, they can provide an excellent experience for their students, with additional kit training from us so that you can deliver the best experience to your learners. Kit training will need to take place before you start using the equipment.

We’d love to hear from you!

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STEM LEARNING