

# National Centre for Computing Education (NCCE)

## Your Local Computing Hub

Dartford Grammar School



# Who are the NCCE?

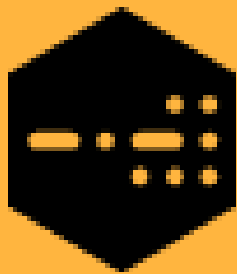


## The Consortium:

- STEM Learning
- the British Computer Society
- the Raspberry Pi Foundation

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Centre for  
Computing  
Education





isaac  
computer  
science



**Computing** at School

# Barefoot

Unlock the future of your classroom

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# The Rationale



The country needs an estimated **1.2 million** new technical and digitally skilled people by 2022 to satisfy future skills needs. (UK Digital Strategy)

**12 million** people don't have the skills to thrive in the digital era. (BT)

**£63 billion** of GDP per year is lost to the UK economy due to digital skills shortages and the lack of digital skills inhibits growth and opportunities for employment. (UK Digital Strategy)

To meet demand we will need:

- **240,000 young people** taking Computer Science GCSE every year
- **8,000 teachers** of Computer Science GCSE

# The Scale of the challenge



Almost a  $\frac{1}{4}$  of pupils at KS4 attend a school that does not offer Computer Science GCSE

Whilst numbers grew in 2019, only 12% (77,400) students took GCSE Computer Science (= 30% of the 240,000/year target). Just 21% of these were girls

87% of A Level Computer Science providers operate below the DfE's minimum viable A Level class size

Not enough computing teachers: only 53% secondary schools currently offer GCSE Computer Science

75% existing GCSE CS teachers do not have an academic background in Computer Science. (Compared to 25% of science teachers and 48% of physics teachers).



# The Hub Network



# Role of the Hubs

## 30 Computing Hubs & 10 regional partners

Support the work of the NCCE to July 2022. (Providing a geographical spread across England)

Provide a range of CPD opportunities for all teachers  
Focus on teachers in schools in category 5 and 6 Local Authority Districts

Provide support to all computing teachers in state primary and secondary schools and colleges



# Your Local Computing Hub



## Dartford Grammar school

- *Located in Dartford, Kent*
- *Boys Grammar School*
- *Ofsted Outstanding*
- *MFL Hub Sept 2018*
- *Computing Science Hub (Kent & East Sussex) Sept 2019*

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The background of the slide features a blue-tinted photograph of a person in a professional setting. On the left, a hand is shown writing on a notepad with a pen. On the right, a man with glasses is looking at a laptop screen. The overall scene suggests a focus on learning and professional development.

TRAINING

TEACHING

KNOWLEDGE

DEVELOPMENT

COACHING

LEARN

NEW

SKILLS

# CPD Programmes

## The national programme of **Primary & Secondary CPD**

- aims to improve teachers' subject knowledge & confidence in all aspects of computing to support the National Curriculum teaching requirements at Key Stages 1 - 4
- provides practical advice on how to teach this to pupils
- aims to improve girls' engagement in secondary school computing and computer science
- aims to upskill participating teachers to teach the new knowledge-rich GCSE Computer Science more effectively (CS Accelerator programme)
- aims to train and certify 8,000 secondary computing teachers (CS Accelerator program)

## Continued Professional Development



# Types of CPD

- Free online courses to ALL computing teachers
- Free face-to-face CPD for teachers in state-funded schools

## CS Accelerator programme

- 10 hours CPD
- **£1800 Bursary** (Currently £920)

## Core programmes

- Key Stage 1 & 2 courses
  - **£220 a day** bursary – For one teacher, per school, per academic year
- Key Stage 3 courses



A photograph of two young children, a boy and a girl, sitting at a desk with a laptop. They are both cheering with their mouths open and arms raised in excitement. The boy is on the left, wearing a dark shirt, and the girl is on the right, wearing a striped shirt. The entire image is overlaid with a semi-transparent blue filter. The word "Impact" is written in white, sans-serif font on the left side of the image.

# Impact

# Impact Tool Kit (ITK)



Participants will complete the Impact Toolkit:

- **Reflect** on their CPD
- **Plan** how they will action what they have learned
- **Assess** and evidence the impact of their CPD
- **Embed** and share best practice

## What independent evaluation tells us about our impact

- CPD improves teachers' subject and pedagogical knowledge, skills and confidence
- CPD develops strong leadership in education from primary to post-16, benefitting teachers, schools and young people.
- Sustained engagement of schools with network support is associated with improved teaching and learning as well as increased uptake and achievement, as demonstrated through the Science Learning Partnership

The background of the slide features a conceptual image of collaboration and technology. It shows several hands reaching towards the keyboards of multiple laptops. Overlaid on this is a complex network of interconnected nodes and lines, resembling a web or a molecular structure, all in a light blue color. The overall aesthetic is clean and modern, emphasizing teamwork and digital expertise.

# Subject Matter Experts (SME)



The School Engagement Programme aims to ensure all schools not yet delivering GCSE Computer Science, and priority primary and secondary schools (those located in Local Authority Districts 5 and 6) are fully supported by the NCCE.

### Schools not delivering GCSE computer science.

1. Schools that have recently ceased offering GCSE CS will receive the full 2.5 days of support from an SME and are eligible for the £1400 bursary.
2. A bursary award of £4,000 is now available to schools and colleges that offer Computer Science GCSE, when they have not done so in the previous 12 months
3. Schools at risk of dropping GCSE CS will receive 1 day SME support and will be eligible for the £1400 bursary.
4. Schools that are recent adopters of GCSE are given 1 day of SME support to use the action plan as a health check.

### Priority Schools in LAD 5 & 6

SMEs can support schools in priority areas (approx 0.5 days) in developing their computing curriculum further by supporting SLT, and computing departments in a needs analysis and from that generating a 3 year engagement plan with the NCCE. Schools will therefore be aware of the available support and training and when they should seek it.

Bespoke CPD can be tailored and can make up part of this support for a school or group of schools.

# SME support



# Questions?



# Contact

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