



# Computing At School

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15th October 2014

# Our Purpose

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- Computing At School (CAS) was formed in 2008 by a small group of individuals from a range of sectors concerned about the inadequate teaching of Computer Science (Informatics) in school.
- It was born out of our excitement with the discipline, combined with a serious concern that many students are being “turned off” Computing by a combination of factors that conspired to make the subject seem dull and pedestrian to school pupils.

# Six Years Later

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- The English National curriculum for ICT (Information and Communication Technology) has been completely reformed, and now explicitly embodies Computer Science as a foundational part of the curriculum, starting from primary school.
- In 2008 there were no GCSEs (age-16 national examinations) in Computer Science. Now every awarding body offers such a GCSE.
- CAS is now an online community of over 15,000 members. It supports over 100 face-to-face teacher "hubs" that meet regularly to share best practice.
- The government is funding CAS to run a national programme of training for Computing teachers

# What is CAS?

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- It is a grass roots organisation, whose energy, creativity, and leadership comes from its members.
- It is now part of BCS, The Chartered Institute for IT
- It has formal support from major industry partners, including Microsoft Research, Google, Ensoft.
- Its membership is open to **everyone**, (teachers, parents, exam boards, industry, professional societies, and universities).
- It is now recognised as an influential organisation in terms of policy and decision-making at a statutory level.
- It is the UK national subject association for teaching Computing.

# Advocacy



*At its foundation in 2008, CAS seemed to fight a lonely battle against the odds. While many individuals agreed that the state of computer science teaching in UK schools was problematic, few organisations or institutions of influence seemed inclined to act to improve it.*

- Computer Science is a discipline, like Maths, Physics, or History
- Computer Science is a school subject, not just a university-level discipline.
- Computer Science is educationally important.
- Computer Science is economically important
- Innovative ICT teachers are in the vanguard of the movement for change.

# Advocacy

## Key Steps

- **A Curriculum for Computer Science**
- **Shut down or Restart: the Royal Society report**
- **2014: A new National Curriculum for England**
- **New School Qualifications**
- **The English Baccalaureate (EBacc)**



# A Community of Practice

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- CAS is a community of practice.
- A central feature of CAS activity has been the formation of regional/local hubs
- The CAS hub is the “bottom line” of all CAS activity and defines the CAS ethos of:
  - collaboration,
  - mutual support and
  - active participation.
- "There is no THEM; only US!"

Advocacy

Community  
of Practice

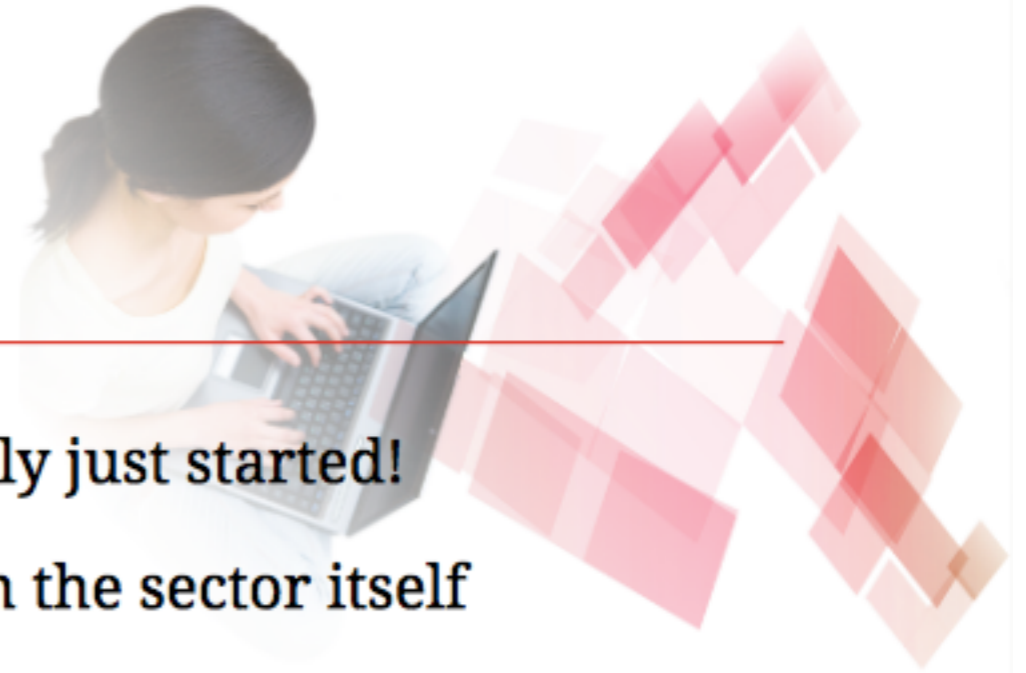
- **CAS Hubs**
  - local
  - face to face
  - teacher led
- **The Online CAS Community**
  - Discussions
  - Resources
  - Events
  - News





# Professional Development

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- Curriculum is in place, so challenge has only just started!
- DfE standing back to allow leadership from the sector itself
- Majority of teachers have no post-16 qualification in Computing
- Confidence is key
- Different challenges at
  - Primary (4-11)
  - Secondary (11+)

Advocacy

Community  
of Practice

Professional  
Development

- **Network of Teaching Excellence in Computer Science**
  - "Master Teachers"
    - local
    - face to face
    - teacher led
    - cascading good practice
  - Lead Schools
  - University Partners



# Resources

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- Subsidiary activity to supporting the teaching community
- Produced by the community for the community including
  - **Computer Science in the school curriculum**
  - **CAS Magazine/Newsletter: "Switched On"**
  - **Guidance for the new curriculum: Primary and Secondary**
  - **Classroom resources e.g. Barefoot and Quickstart**
  - **Assessment: progression pathways**
  - **CAS Community**

# Impact

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- The CAS Community
  - 15,000 members (800+ per month)
  - 67% Teachers, 15% IT Professionals, 8% Higher Education
  - 120+ local hubs (90% within 20 miles)
- Network of Excellence CPD
  - 1100 schools (300+ Lead Schools)
  - 79 Universities
  - 290 Master Teachers

# Impact

- Attend local hub meeting
- Attend session run by a local Master Teacher
- Other communication with and support from a local Master Teacher
- Attend a session run by their local university
- Carry out a classroom research project/investigation in their school.
- Discuss with other teachers on CAS Forum
- Pass on what they have learned within their department/school
- Work towards the BCS/CAS Certificate of Computer Science teaching

# Reflections

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## What have we learned?

- One simple message
- Explain what computer science is
- Start with primary
- Diversity
- **There is no "them"; there is only us**

