Informatics in British Schools

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Contextual Argument Base

- A Teacher's knowledge base should be higher than the pupil they are teaching.

- No other subject is incorporated into the curriculum through afterschool activities with the pupils.

- Teachers must understand the pedagogical elements contributing to subject delivery.

- In learning new subject knowledge face-to face training is preferred by teachers.

England

- CAS Master Teacher and Lead School

- Network of Excellence (NoE) – BCS and CAS funded (April 1st 2013 to March 31st 2015)

- CAS Regional Centres (CRC) – April 2015 funded by DfE the NoE established 10 regional centres

NETWORK OF EXCELLENCE COMPUTER SCIENCE TEACHING

Run by

bcs Academy of Computing

COMPUTING AT SCHOOL
EDUCATE · ENGAGE · ENCOURAGE
In collaboration with BCS, The Chartered Institute for IT

Funded by

Department for Education

Further funding from

Microsoft Google

The Master teacher will

- model teaching of lessons
- provide or facilitate access to teaching resources;
- help mentees to use specialist resources;
- help mentees with lesson planning;
- team teaching with mentees;
- provide 'A shoulder to cry on' and enabling mentees to share confidences;
- cultivate, and encourage mentees to engage with, a peer network;
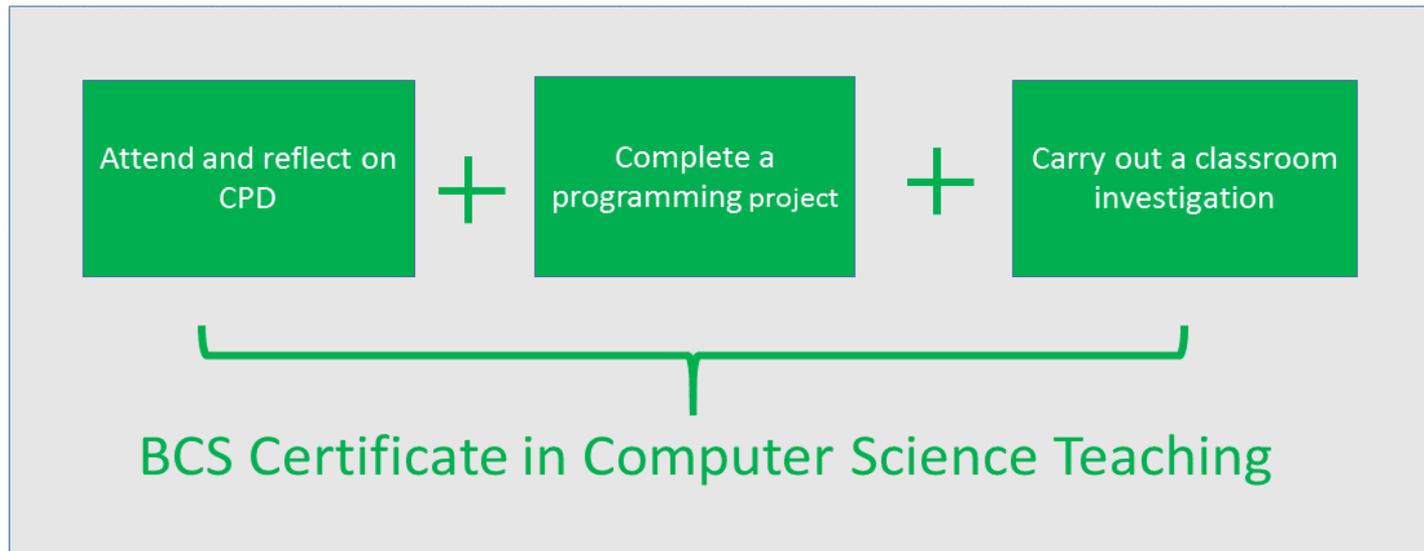
Funded jointly by DfE and industry.

Observed teachers described themselves as "DfE CAS Master Teacher".

Professional Recognition

Thus, to achieve the accreditation the teacher would be required to submit three types of evidence:

- Part 1: Demonstration of attendance at/participation in professional developmental activities
- Part 2: Demonstration of subject knowledge skills
- Part 3: Demonstration of an investigative approach to the pedagogy of computer science
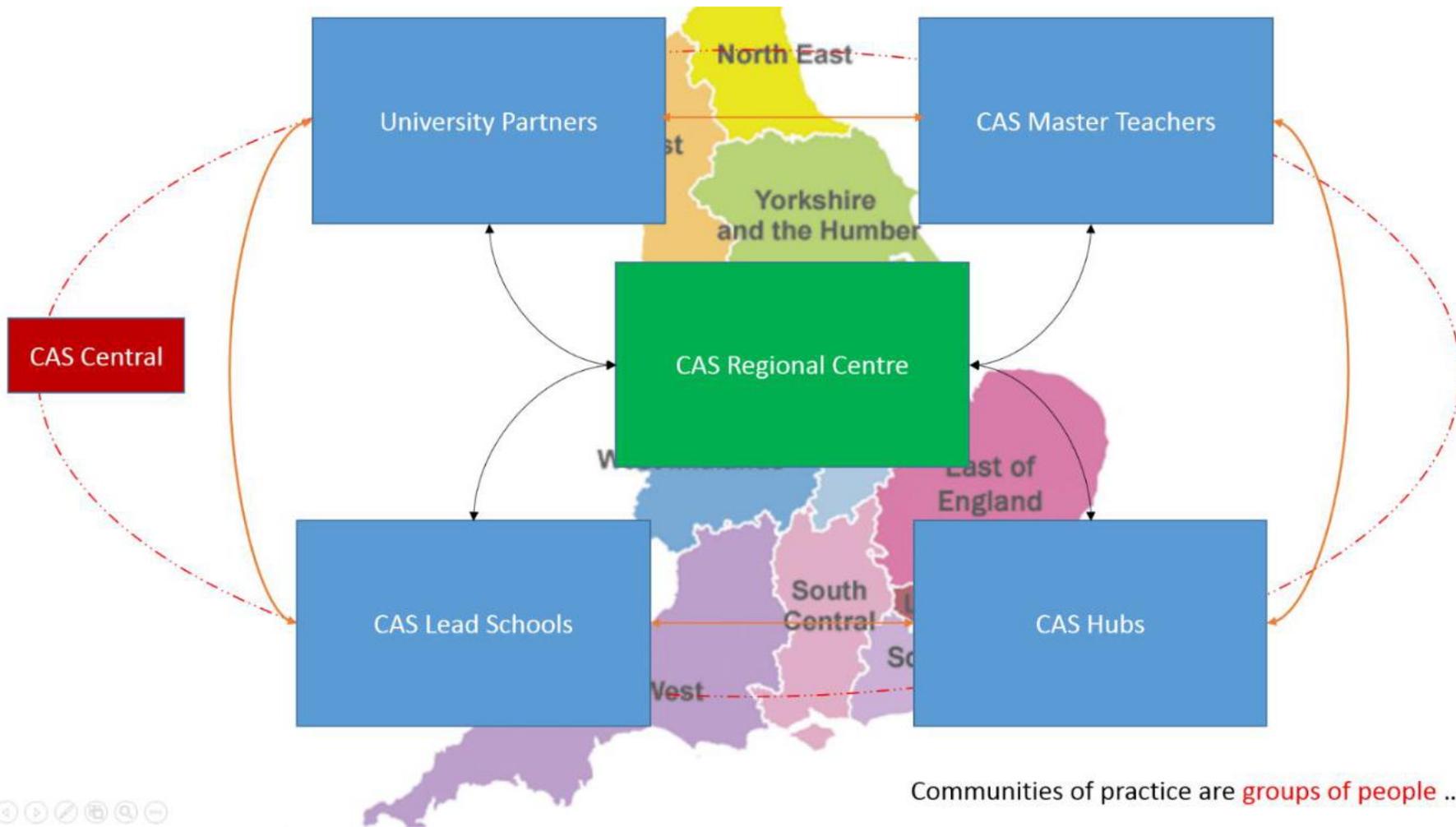
Attend and reflect on CPD **+** Complete a programming project **+** Carry out a classroom investigation

BCS Certificate in Computer Science Teaching

CAS Lead School

- To be a Lead School the school must fulfil the following criteria:
  - recognise that Computing as a subject is important and it is part of the school development plan
  - develop or have developed a broad and balanced computing curriculum that shows clear, planned progression where cross curricular opportunities are identified
  - support (at least one) other (Network of Excellence, NoE) registered schools in the community through sharing good practise.
  - Run a vibrant extra-curricular programme for pupils including clubs, competitions etc.

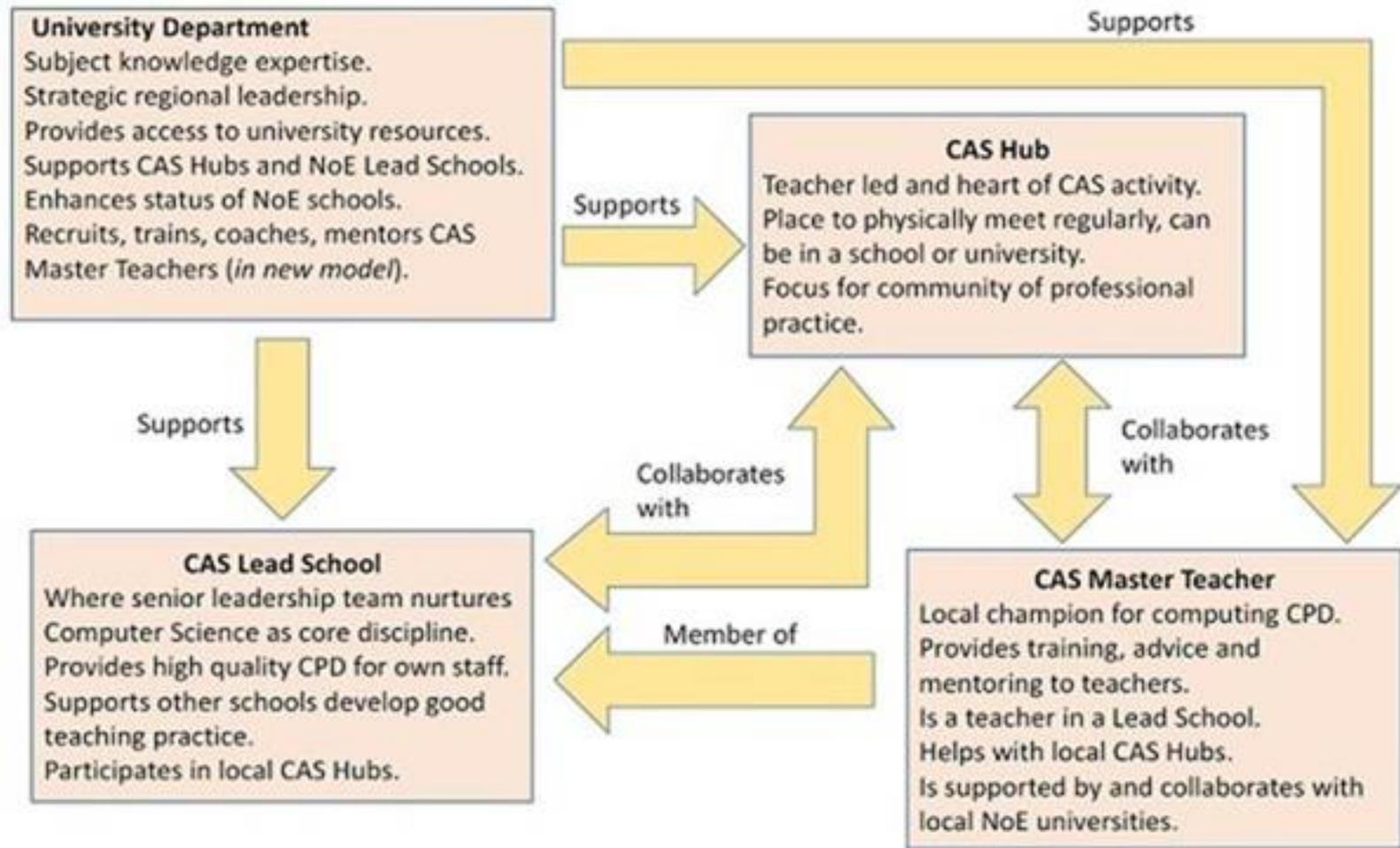Lead School status provides, amongst other benefits:
  - enhanced public recognition reflecting the teachers' expertise and commitment to Computing and Computer Science in the school curriculum;
  - provides career development for staff;
  - demonstrates a commitment to the subject for staff, pupils, parents and governors;

- Each Lead School completes an activity audit at the end of each academic year.
- It is both an internal and an external audit.

The CAS Network of Excellence offers a small grant of around £2,000 to the Master Teacher's school to fund about half a day/week during the Master Teacher's training year. After the first year a honorarium of £500/year is given, again going to the school.

University Partners

CAS Master Teachers

CAS Central

CAS Regional Centre

CAS Lead Schools

CAS Hubs

North East

Yorkshire and the Humber

East of England

South Central

West

Communities of practice are groups of people …

CAS Regional Centre

University Department
Subject knowledge expertise.
Strategic regional leadership.
Provides access to university resources.
Supports CAS Hubs and NoE Lead Schools.
Enhances status of NoE schools.
Recruits, trains, coaches, mentors CAS
Master Teachers (*in new model*).

Supports

CAS Hub
Teacher led and heart of CAS activity.
Place to physically meet regularly, can
be in a school or university.
Focus for community of professional
practice.

Supports

Supports

Collaborates
with

Collaborates
with

CAS Lead School
Where senior leadership team nurtures
Computer Science as core discipline.
Provides high quality CPD for own staff.
Supports other schools develop good
teaching practice.
Participates in local CAS Hubs.

Member of

CAS Master Teacher
Local champion for computing CPD.
Provides training, advice and
mentoring to teachers.
Is a teacher in a Lead School.
Helps with local CAS Hubs.
Is supported by and collaborates with
local NoE universities.

Scotland

1. This is a joint project between Scottish Government, BCS and CAS(Scotland) for post 16 pupils.

2. A regular face to face programme in your local area focusing on pedagogical content knowledge for effective teaching of the new senior phase Computing Science qualifications that develops deep understanding and secure progression to further study in STEM and other disciplines.

3. An online course focusing on developing computational thinking in the broad general education phase for primary and secondary teachers in the technologies curricular area.

The BCS provide £5000 towards the CAS (Scotland) annual conference.

Northern Ireland

- Computing is integrated within our UICT (using ICT) Curriculum and is a cross curricular skill.

- While assessment of UICT is statutory the teacher selects the areas for submission and therefore computing can be 'left out'.

- Demand by teachers is moving the computing agenda forward rather than the curriculum.

- We have CAS meetings which include CPD every 3 – 4 months

- We hold a CAS Conference (very successful) and have contributed to moving the computing agenda forward with government.