

## BCS School Curriculum and Assessment Committee

An initial meeting took place on October 19<sup>th</sup> 2018, we took the action to put together a plan for a programme of work for the year ahead based on feedback at the meeting including to the questions posed at the workshop:

What are the key issues? What are the potential solutions? What should our remit include? What could we achieve? How can this group make positive progress? Who/What groups should also engage with this group? Who can help and how?

A complete set of responses to these questions has been included in appendix a.

Our review of the responses suggests that our overarching aim for the programme should be to articulate the aspiring vision, goals and principles of Computing Education, we have identified 4 key goals that reflect the key themes identified and used these to build out next steps:

Aim	To articulate the aspiring vision, goals and principles of Computing Education			
Goals	To explain more about what our subject is.	To help teachers to understand what and how they should teach computing.	To inform inspectorates and DfE, to support them to ask the right questions, and to know what good practice looks like.	To identify what the ideal set of qualifications is that would offer appropriate pathways for all children, especially at Key Stage 4.
Proposed Actions	Review “unpack the curriculum” document.	Connect with the NCCE to discuss how the committee could usefully review schemes of work and progression pathways.	Produce a guide to Computing Education for Ofsted.	Plan and deliver a stakeholder consultation to address key questions:  Every child has a reasonable pathway to a qualification at end of KS4, and be able to take a digitally relevant qualification that is suitable for them – what would this look like?
Next steps, owners and timeline	Commence Q1 2019 Review documents’ suggested amends at next meeting.  Share and feedback on “unpack curriculum document” in advance.  Seek volunteer working group at next meeting.	Commence Q4 2018 Liaise with NCCE to explore opportunities for cohesion.  JA to report back at next meeting.	Commence Q3 2019 Draft guidance based on revised “unpack curriculum document”.  Seek volunteer working group at next meeting.	Commence Q1 2019 Discuss approach and plan for specific activities at next meeting.  Seek volunteer working group at next meeting.

### Details of next meetings:

w/c 25 February 2019

2pm – 4pm Tuesday 4 June 2019 (date of Needham lecture at RS)

Date to be confirmed October 2019

## Appendix a

The following questions & answers were shared at the BCS School Curriculum and Assessment Committee meeting in October 2018:

### What are the key issues?

- Autonomy and Influence
- Qualification Resources PR
- Teacher training and support
- Lack of consensus of what CT is particularly in terms of programming
- Poor quality CPD – often ‘content focused’ with poor pedagogy
- Too many people creating resources and delivering CPD who are **not** informed by research or education or CS understanding
- Break between CT in unplugged activities and “coding”
- Poor quality resources, often over ambitious with poor pedagogy
- Lack of underlying progression objectives to inform teachers and curriculum resource creation
- Lack of Research
- Lack of government expertise in computing education
- Loss of ICT skills and too bright a light shone on CS compared to DL and ICT
- Issues of transition between key stages. ‘Turn off’ to the subject from KS2 – KS4
- Headteachers not understanding subject (it’s all computer stuff)
- eBacc – false dawn of the ‘science’ status
- Lack of clear routes in secondary tech-based roles other than via CS
- AFL + curriculum content. Progression in the subject
- Replacement for ICT
- Educating Ofqual and DfE
- Improving the image of Technical Awards at KS4
- Teaching time at KS3
- Lack of basic digital skills for all young people
- How can teachers inspire pupils if they are either not inspiring about/or inspired by the subject
- Motivations are critical – for pupils and parents
- Teachers all have different concerns
- All schools are different
- More teachers input needed to define issues
- Digital divide – GCSE CS versus nothing 14-18?
- Psychology of making choices
- We don’t have a clear interpretation of the programme of study in England – this group can do this
- Engaging more females into the sector. Addressing the fall in KS4 IT subjects
- Not enough time for a balanced computing offer at KS3 (+ pressure of quals)
- Pressures on headteachers
- Teacher confidence
- Poor development of mental models and over focus on “creativity” and open ended tasks. Blend needed in creative contexts

- Lack of government strategy on digital (incl CS) for schools. Digital, as well as CS, needed in schools

### **What are the potential solutions?**

- Some level of compulsory computing through to 18 as with Maths and English
- What should I be teaching and when I should be teaching it
- Creation of guidance on pedagogy
- Develop KS3 scheme of work
- One qualification for IT and computer science
- Guide on CS for Ofsted
- Relationship with Ofsted and DfE
- Review and then share the 'guide to the curriculum' written by SPJ
- Wider selection of qualifications at KS4 to include and inspire a wider range of students
- Cross-curricular embedding of digital skills
- Creation of a detailed progression of learning objectives
- Marketing strategy – image & perception issues needs to be tackled
- Solutions to increase uptake by girls already exist – lets share and use them
- Detailed progression of teacher CPD including reference to pedagogy standards and objectives progression grid
- New ICT GCSE – reformed, modernised & dealing with shortcomings of the past
- Reduced timetable for all CS teachers
- Identify what the ideal situation for digital skills looks like

### **What should our remit include?**

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|---|--|
| <ul style="list-style-type: none"> <li>• Advise and provide recommendations</li> </ul>  | <ul style="list-style-type: none"> <li>• To liaise with and involve DfE, Ofqual, Ofsted</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Curriculum Understanding:             <ul style="list-style-type: none"> <li>- Intended curriculum</li> <li>- Implemented curriculum</li> <li>- Achieved curriculum</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Work with maths, science etc to get CS into their goals</li> <li>• Looking at new qualifications which support different competencies in computing/ICT</li> </ul> |

- Get the evidence and hard data
- Convening decision makers around CS changes
- Influencing curriculum in IT and computing, particularly KS4
- Ensuring all young people have the opportunity to learn the digital skills necessary for life and work
- Need to establish boundaries with other subjects e.g. Control technology (DET), Data science (Maths) and Sensing (Science)
- What is the capability young people
- Split duties for devolved nations – needs more thought – there are differences in curricular – work with appropriate bodies

### What could we achieve?

- Elaboration and explanation of KS3
- Appeal to minorities (**not** just girls)
- Might have to be by stealth!
- Equip young people with relevant skills and computer qualifications
- Influence & educate policy makers
- Unpick what the POS means for the implemented curriculum – particularly at KS3
- Improve the understanding (of teachers and government) as to what computing actually involves (it is not just CS)
- Publish guidance/support - development of future curricular/assessment
- Ensure NC is implemented over next 3 years
- KS4 opportunity for all
- Provide/enable teaching resources for KS3
- Develop KS3 scheme of work
- Increase uptake of CS GCSE for girls and minorities
- Highlight importance of more KS3 time in order to increase GCSE uptake for all
- Get excellent foundations in teaching this subject at all phases of education
- Influence decision makers at DfE, Ofqual and Ofsted about the direction of travel required
- Exemplify KS3 – using the experiences of 11-14 year olds?

### How can this group make positive progress?

- Great opportunity to publish guidance and make recommendations about the breadth and depth of our subject
- Break down the priority areas to address and for each identify both the North Star and the Year 1 target/vision e.g. Curriculum, ICS3
- Teacher capability uplift
- Pupils inspiration around the subject

- Medium term – review programme of study
- We succeed if and only if government believes we are the voice of all the computing community
- Talk to Ofsted. How can we work together for excellence in computing teaching?
- Good representation of teachers in this group
- Make a difference to computing education
- Recommendations for production of pedagogy guidance. Detailed progression objectives
- Recommendations for upskilling of Ofsted, Ofqual etc on CS
- Focus on small number of high impact goals
- Uniting to communicate the message about the value of this subject area
- Educate the decision makers
- Everyone needs equal input and platform for thoughts
- DfE engagement (run a workshop at DfE for DfE officials on computing)
- Teacher voice
- “Articulate the underlying architecture of the PoS”. Make sure to include teachers so that the result is useful to them
- Review content of all relevant KS4 qualifications: GCSE CS, Tech awards, IB?, IGCSE? – are they fit for purpose?
- Create, publish and circulate reports and resources to stakeholders and the wider community
- We need to have some way of gathering opinion from the teachers at the ‘chalkface’ to make sure they are heard
- KS3
- Investigate issues and opportunities at KS3, identify potential solutions and owners – goal 5 (DfE report KS3 the wasted years)
- Task groups focussed on key stages

### **Who/What groups should also engage with this group?**

- |                                 |                          |
|---------------------------------|--------------------------|
| • More Teachers                 | • Google, Microsoft etc. |
| • More Universities             | • Other AOS              |
| • School Leaders SLT, Governors | • WCIT                   |

- ITTE
- IT in Teachers Education
- Pupils & Parents
- CAS

- Research
- Those who pay for research
- Other digital champions (eg IDEA)
- Across Subjects

### **Who can help and how?**

- Other subject groups eg maths, sciences
- Wider consultancy with teachers (not in public forum)
- Headteachers (understand their reasons & choices re computing)
- Industry funding and expertise
- AOS - assessment
- MATS – resources
- NCCE
- CAS (to gather information and feedback)
- Code for Life
- National STEM Learning
- Research – gathering & analysing data/what works
- IOP, RSC etc championing computing
- Developing the qualifications and changes we want
- Reaching out to schools for market research and feedback
- Atif khan, Pearson
- Cyber Discovery
- Raspberry Pi Foundation
- CERC
- UK Bebras