


Section 2: Getting started with confidence

Where do I start?

Begin by reflecting on what the changes to the National Curriculum mean to you, using the *Time to reflect* planning sheet.

		Book	CD-ROM	Website
	<p>Planning sheet: <i>Time to reflect</i> <small>© Crown Copyright 2015. This content is free to use under the Open Government Licence v3.0.</small></p>	<p>✓ Page 11</p>	✓	✓

I have so many questions. Where do I find the answers?



You are probably asking yourself:






- How has the National Curriculum changed?
- When do I need to start teaching the 2014 National Curriculum Programmes of Study for Computing?
- Why is the inclusion of Computer Science important?
- How do Computer Science, Information Technology and Digital Literacy differ and fit together?
- What does the terminology used in the National Curriculum Programmes of Study for Computing mean?

Watch the *Introducing the 2014 National Curriculum* video and Simon Peyton Jones' inspirational TEDxExeter talk, the *Teaching creative computer science* video, as a way in to answering these fundamental questions. If you haven't already, take a good look at the *National Curriculum Programmes of Study for Computing*, which are provided as information sheets.

In the *Introducing the 2014 National Curriculum* video, Mark Dorling mentions the Computing At School primary and secondary guidance documents. *Computing in the National Curriculum: a guide for primary teachers* explains where students are coming from and *Computing in the National Curriculum: a guide for secondary teachers* explains where they are going. Both guides, which are provided as information sheets, are a useful starting point if you are struggling to understand the new terminology being used. *QuickStart Computing: A CPD toolkit for primary teachers* also contains valuable subject knowledge, which you may find useful, and a link is provided.



Return to the *Time to reflect* planning sheet and complete it again, this time in a different colour. Hopefully you'll be able to see that your confidence has developed in a very short period of time.

		Book	CD-ROM	Website
	<p>Video: <i>Introducing the 2014 National Curriculum</i> <small>© Hodder Education 2014. This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.</small></p>		✓	✓
	<p>Video: <i>Teaching creative computer science</i> <small>© TEDxExeter 2014. This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License.</small></p>		✓	✓

		Book	CD-ROM	Website
	Information sheet: <i>National Curriculum in England: computing programmes of study – Key Stages 1 and 2</i> © Crown Copyright 2013. Content is available under the Open Government Licence v2.0.		✓	✓
	Information sheet: <i>National Curriculum in England: computing programmes of study – Key Stages 3 and 4</i> © Crown Copyright 2013. Content is available under the Open Government Licence v2.0.		✓	✓
	Information sheet: <i>Computing in the National Curriculum: a guide for primary teachers</i> © Computing At School 2013. This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.		✓	✓
	Information sheet: <i>Computing in the National Curriculum: a guide for secondary teachers</i> © Computing At School 2013. This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.		✓	✓
	Link: QuickStart Computing: A CPD toolkit for primary teachers		✓	✓



What are the Progression Pathways?

The *What are the Progression Pathways?* information sheet explains why we have presented the Progression Pathways in terms of topics and strands and describes how they can be used to help you assess students' progress in computing. Both versions of the Progression Pathways are provided as information sheets for you to use.

		Book	CD-ROM	Website
	Information sheet: <i>What are the Progression Pathways?</i> © Crown Copyright 2015. This content is free to use under the Open Government Licence v3.0.	✓ Pages 12-13	✓	✓
	Information sheet: <i>Progression Pathways: topics</i> © 2014 Mark Dorling and Matthew Walker. This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.	✓ Pages 14-15	✓	✓
	Information sheet: <i>Progression Pathways: strands</i> © 2014 Mark Dorling and Matthew Walker. This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.	✓ Pages 16-17	✓	✓


What is the significance of Computational Thinking (CT) and what role does problem solving play in CT?

Watch the *Developing computational thinking in the classroom* video and take a look at *Developing computational thinking in the classroom – a framework*, also known as the 'Computational Thinking Framework', which is provided as an information sheet.

		Book	CD-ROM	Website
	Video: <i>Developing computational thinking in the classroom</i> © Crown Copyright 2015. This content is free to use under the Open Government Licence v3.0.		✓	✓
	Link: Developing computational thinking in the classroom – a framework		✓	✓

What is the difference between 'computing' and 'coding and programming'?

This is a thorny issue and reading the *Computing ≠ coding and programming* information sheet should help clarify things for you.





		Book	CD-ROM	Website
	Information sheet: <i>Computing ≠ coding and programming</i> © Crown Copyright 2015. This content is free to use under the Open Government Licence v3.0.	✓ Page 18	✓	✓

How do I audit my skills and knowledge?

Many of you will feel very nervous about teaching computing because you do not have the background subject knowledge and skills. This is absolutely to be expected, and isn't something you should be embarrassed about or feel forced to hide. Great teaching is all about being reflective and it is important to share your experiences, both good and bad. Computing is a relatively new subject in comparison to subjects such as mathematics or physics. It is being taught at Key Stages 1, 2 and 3 for the very first time from September 2014, and it is quite likely that some aspects of the subject are being taught in your school for the first time. To tackle this problem head on, complete the interactive *Skills and knowledge audit* to identify your areas of weakness. You can use the resulting information to discuss your training needs with your Head of Department. Heads of Department can collate the information collected confidentially from each member of their department and present the Senior Leadership Team with detailed CPD requirements.

The links to the *Gatsby subject knowledge diagnosis tool for computing teachers* also provide two tests, one for primary school teachers and one for secondary school teachers, to indicate gaps in subject knowledge in the following five areas: algorithms, programming, data, computers and social informatics, communication and the Internet.

Both the *Skills and knowledge audit* and the *Gatsby subject knowledge diagnosis tool for computing teachers* are based on the *Subject knowledge requirements for entry into computer science teacher training* produced by the Teaching Agency, which is provided as an information sheet.

		Book	CD-ROM	Website
	Interactive: <i>Skills and knowledge audit</i> © Crown Copyright 2015. This content is free to use under the Open Government Licence v3.0.		✓	✓
	Link: <i>Gatsby subject knowledge diagnosis tool for computing teachers – primary</i>		✓	✓
	Link: <i>Gatsby subject knowledge diagnosis tool for computing teachers – secondary</i>		✓	✓
	Information sheet: <i>Subject knowledge requirements for entry into computer science teacher training</i> © Crown Copyright 2012. Content is available under the Open Government Licence.		✓	✓

Round off this section by preparing a presentation for your Senior Leadership Team summarising the changes to the National Curriculum and what they mean for you, for your department and for your school.