**Primary Early Years UG 3-7 Curriculum Map Computing**

***Year 1 Undergraduate***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **University Curriculum – Year 1** | | | | | |
| **Session Sequence** | **Session Content Subject Specific Components/s** | **Learn That**  **(CCF reference in numerics e.g. 1.1)** | **Learn How**  **(CCF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment mode** |
| **All school based** |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **School Based Curriculum – Year 1 Nursery EYFS Focus** | | | | |
| **Observing :** Observe how expert colleagues use…and deconstruct this approach in at least one lesson throughout school.  **Planning :** Observe how expert colleagues break tasks down into constituent components in ……. for one lesson  **Teaching :** Rehearse and refine particular approaches for a group/whole class. Plan for group/whole class teaching.  **Assessment :** Check prior knowledge and understanding during lessons.  **Subject Knowledge :** Discuss and analyse subject specific components with expert colleagues | | | | |
| **Subject Specific Components/s (know, understand, can do)** | **Learn That**  **(CCF reference in numerics e.g. 1.1)** | **Learn How**  **(CCF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment** |
| To understand how computing devices and toys can develop fine motor skills to enhance learning using appropriate hardware and software in a nursery and EYFS setting | Prior knowledge plays an important role in how pupils learn; committing some key facts to their long-term memory is likely to help pupils learn more complex ideas 2.2  Regular purposeful practice of what has previously been taught can help consolidate material and help pupils remember what they have learned.2.7  Ensuring pupils master foundational concepts and knowledge before moving on is likely to build pupils’ confidence and help them succeed 3.3  Explicitly teaching pupils the knowledge and skills they need to succeed within particular subject areas is beneficial.3.5 | Acknowledging and praising pupil effort and emphasising progress being made. 1i  Increasing challenge with practice and retrieval as knowledge becomes more secure (e.g. by removing scaffolding, lengthening spacing or introducing interacting elements). 2k  Providing opportunity for all pupils to learn and master essential concepts, knowledge, skills and principles of the subject.3.d | Computers Benefit Children (2010) Siraj-Blatchford J  [click here](https://www.nurseryworld.co.uk/news/article/analysis-computers-benefit-children)  Can Pre-school Children Learn Programming and Coding Through Guided Play Activities? (2021) Critten.V [click here](https://link.springer.com/article/10.1007/s10643-021-01236-8)  Enhancing Digital Literacy and Creativity: Makerspaces in the Early Years (2020) Blum-Ross, A [click here](https://books.google.co.uk/books?hl=en&lr=&id=39S8DwAAQBAJ&oi=fnd&pg=PT9&dq=nursery+computing+books&ots=ZNQ9n4PFGa&sig=0XXnKb2DvVUBJQ__ShFEw0OccSI#v=onepage&q&f=false) | Weekly Development Summary  Lesson Observations  Observation of practice throughout school and discussion with expert teachers  Link Tutor  Trainee self-assessment through discussion  Trainee reflection in portfolio from professional practice |

***Year 2 Undergraduate***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **University Curriculum – Year 2** | | | | | |
| **Session Sequence** | **Session Content Subject Specific Components/s** | **Learn That**  **(CCF reference in numerics e.g. 1.1)** | **Learn How**  **(CCF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment mode** |
| **Session 1**  **3 hours** | * Identify activities to support the various strands of computing. * Use appropriate resources to teach computing * Integrate computing across the wider curriculum. * Employ adaptive teaching principles to facilitate inclusion linked to planning * The National Curriculum for computing in relation to KS1 * To develop a greater understanding of the Digital Literacy strand in computing | Seeking to understand pupils’ differences, including their different levels of prior knowledge and potential barriers to learning, is an essential part of teaching.5.2  Adapting teaching in a responsive way, including by providing targeted support to pupils who are struggling, is likely to increase pupil success5.3 | Linking what pupils already know to what is being taught (e.g. explaining how new content builds on what is already known).2g  Ensuring pupils have relevant domain-specific knowledge, especially when being asked to think critically within a subject. 3n  Making use of formative assessment. 5c  Making use of well-designed resources (including TAs 5g) 5i | National Curriculum for Computing  [click here](https://www.gov.uk/government/publications/national-curriculum-in-england-computing-programmes-of-study/national-curriculum-in-england-computing-programmes-of-study)  Teaching Primary Computing, 2021, Burrett, M. Bloomsbury  Primary ICT Across the Curriculum 2012, Simpson/Toyn Sage Publishing  Primary Computing and ICT: Knowledge, Understanding and Practice 2014, Turvey K SAGE publications  Digital Literacy within the Computing Curriculum 2021, Teach Computing [click here](https://static.teachcomputing.org/Digital-Literacy-Within-the-Computing-Curriculum.pdf)  Computing in the national curriculum(Primary) [click here](https://www.computingatschool.org.uk/resources/2014/september/computing-in-the-national-curriculum-a-guide-for-primary-teachers)  Promoting effective computing pedagogy NCCE [click here](https://teachcomputing.org/pedagogy) | Participate in group/ class discussions, activities and Q&A  Link reading and relevant web materials to facilitate a planning activity in computing for a KS1 class. (tutor observation)  Identifying cross-curricular links with other subjects up to the point of student learning so far.  Articulate an understanding of Digital Literacy and how this can be communicated and exemplified to KS1 children |
| **Session 2**  **3 hours** | * To examine elements within the Computing Strand * Algorithms for Key Stage 1 including sequences across the curriculum Beebots and onscreen Logo programming * To develop a greater understanding of the Digital Literacy strand in computing * To look at safeguarding issues related to digital literacy in the classroom (social media, screen time, role models) * To develop a working practice and ethos in teaching children to use technology and information safely, respectfully and privately | Modelling helps pupils understand new processes and ideas; good models make abstract ideas concrete and accessible. 4.3  Questioning is an essential tool for teachers; questions can be used for many purposes, including to check pupils’ prior knowledge, assess understanding and break down problems 4.6  Setting clear expectations can help communicate shared values that improve classroom and school culture. 1.4  Explicitly teaching pupils the knowledge and skills they need to succeed within particular subject areas is beneficial.3.5 | Enabling critical thinking and problem solving by first teaching the necessary foundational content knowledge.4c  Combining a verbal explanation with a relevant graphical representation of the same concept or process, where appropriate 4h  Providing opportunity for all pupils to learn and master essential concepts, knowledge, skills and principles of the subject.3d | STEM learning KS1 Algorithms [click here](https://www.stem.org.uk/resources/community/collection/357940/ks1-algorithms)  Teach Computing, National Centre for Computing Education  [click here](https://teachcomputing.org/curriculum/key-stage-1/programming-a-robot-algorithms)  Demystifying the KS1 Computing Curriculum 2015 Goto, E [click here](https://code-it.co.uk/wp-content/uploads/2015/05/Demystifying_the_KS1_Computing_Curriculum.pdf)  Online Logo [click here](https://www.transum.org/software/Logo/) and Beebot Online [Click here](https://beebot.terrapinlogo.com/)  Barefoot Primary Computing [click here](https://www.barefootcomputing.org/primary-computing-resources)  Childnet website [click here](https://www.childnet.com/help-and-advice/4-11-year-olds)  360 Safe Website [Click here](https://360safe.org.uk/)  Keeping Children Safe Online NSPCC 2023 [click here](https://www.nspcc.org.uk/keeping-children-safe/online-safety/) | Practical tutor observation of algorithmic programming with Beebots and on screen  Discussion around safeguarding and digital media from experience and resources provided  Creating an action plan in how they might begin to teach concepts of digital literacy to young children |
|  |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **School Based Curriculum – Year 2** | | | | |
| **Observing :** Observe how expert colleagues use…and deconstruct this approach in at least one lesson throughout school.  **Planning :** Observe how expert colleagues break tasks down into constituent components over a sequence of lessons. Plan for lessons in all core and selected foundation subjects.  Plan one lesson in all remaining subjects.  **Teaching :** Rehearse and refine particular approaches in all core and selected foundation subjects.  **Assessment :** Draw conclusions about what pupils have learnt by looking at patterns of performance over a number of assessments with support and scaffolding from expert colleagues  **Subject Knowledge :** Discuss and analyse subject specific components with expert colleagues | | | | |
| **Subject Specific Components/s (know, understand, can do)** | **Learn That**  **(CCF reference in numerics e.g. 1.1)** | **Learn How**  **(CCF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment** |
| To plan and deliver a sequence of National Curriculum lessons in computing linking into other areas of curriculum as appropriate | Regular purposeful practice of what has previously been taught can help consolidate material and help pupils remember what they have learned. 2.7  Ensuring pupils master foundational concepts and knowledge before moving on is likely to build pupils’ confidence and help them succeed. 3.3  Teaching unfamiliar vocabulary explicitly and planning for pupils to be repeatedly exposed to high-utility and high-frequency vocabulary in what is taught. 3t  Effective teachers introduce new material in steps, explicitly linking new ideas to what has been previously studied and learned 4.2  Over time, feedback should support pupils to monitor and regulate their own learning.6.6 | Receiving clear, consistent and effective mentoring in how to set tasks that stretch pupils, but which are achievable, within a challenging curriculum. 1a, 2a  Providing opportunity for all pupils to learn and master essential concepts, knowledge, skills and principles of the subject. 3d  Drawing explicit links between new content and the core concepts and principles in the subject.3j  Providing sufficient opportunity for pupils to consolidate and practise applying new knowledge and skills. 4e  Monitoring pupil work during lessons, including checking for misconceptions. 6g | See above from University Based provision  Link to school policy and Local Education Authority policy also and the specific curriculum tailored to the needs of the school where the student is based | Weekly Development Summary    Lesson Observations  Link Tutor discussions and observations  Placement drop-ins online  Interim visits and joint observations  Final Report discussions |

**Year 3 Undergraduate**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **University Curriculum – Year 3** | | | | | |
| **Session Sequence** | **Session Content Subject Specific Components/s** | **Learn That**  **(CCF reference in numerics e.g. 1.1)** | **Learn How**  **(CCF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment mode** |
| **All School Based** |  |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **School Based Curriculum – Year 3** | | | | |
| **Observing :** Observe how expert colleagues use…and deconstruct this approach in at least one lesson throughout school.  **Planning :** Plan a sequence of lessons in all core and foundation subjects.  **Teaching :** Rehearse and refine particular approaches in all core and selected foundation subjects.  **Assessment :** Discuss with expert colleagues summative assessment, reporting and how data is used.  **Subject Knowledge :** Discuss and analyse subject specific components with expert colleagues | | | | |
| **Subject Specific Components/s (know, understand, can do)** | **Learn That**  **(CCF reference in numerics e.g. 1.1)** | **Learn How**  **(CCF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment** |
| For students to develop teaching practices in EYFS that facilitate the use of computing across the curriculum eg phonics, maths, art and design etc  For students to specifically (explicitly where appropriate) teach the principles of safe and respectful use of computing leading towards Key Stage 1 | In all subject areas, pupils learn new ideas by linking those ideas to existing knowledge, organising this knowledge into increasingly complex mental models (or “schemata”); carefully sequencing teaching to facilitate this process is important3.7  Setting clear expectations can help communicate shared values that improve classroom and school culture. 1.4  Requiring pupils to retrieve information from memory, and spacing practice so that pupils revisit ideas after a gap are also likely to strengthen recall 2.8  Practice is an integral part of effective teaching; ensuring pupils have repeated opportunities to practise, with appropriate guidance and support, increases success. 4.8  Pupils with special educational needs or disabilities are likely to require additional or adapted support 5.7  Working with colleagues to identify efficient approaches to assessment is important 6.7 | Using resources and materials aligned with the school curriculum (e.g. resources designed by experts that carefully sequence content). 3f  Teaching and rigorously maintaining clear behavioural expectations 1g  Breaking complex material into smaller steps (e.g. using partially completed examples to focus pupils on the specific steps). 2c  Balancing exposition, repetition, practice and retrieval of critical knowledge and skills. 2j  Working closely with the Special Educational Needs Co-ordinator (SENCO) and special education professionals and the Designated Safeguarding Lead (DSL) under supervision of expert colleagues 5d  Monitoring pupil work during lessons, including checking for misconceptions. 6g | See above from University Based provision.  Link to school policy and Local Education Authority policy also and the specific curriculum tailored to the needs of the school where the student is based | Weekly Development Summary    Lesson Observations  Link Tutor discussions and observations  Placement drop-ins online  Interim visits and joint observations  Final Report discussions |