

Understanding how to access the breadth and depth of our ITT curriculum:

Remembering that:




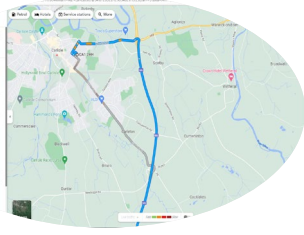
- Student teachers (trainees) are on a journey in their learning to become a teacher
- The staged expectations act as progress way markers towards the ‘end point assessment’
- The staged expectations are derived from the ITT curriculums; i.e. the things they cover before each phase of placement.
- The breadth of the ITT curriculum is outlined at the top level in our assessment grids (the modules and subjects covered- with composite knowledge outlined)- Column 3.
- Student teachers have 2 types of learning- **(knowledge) ‘learn that’ & (skills) ‘learn how to’**.
- Progress on placement should be seen through high quality targets (built from the curriculum) and reflective weekly reviews.

In order that our trainees remember more of what they have learnt and that you as expert colleagues (mentors) can best support their journey through effective target setting we have **included depth to the ITT curriculums**. This depth outlines the **‘essential’ knowledge (components)**.

For simplicity in accessing this information we have created this fully e-linked document; that allows you to work down from the staged expectation breath and explore the essential knowledge depth (displayed in knowledge organiser formats).

Below we show you the full range of ITT curriculum documents available (noting that as mentors we steer you towards 2 keys parts of this- green highlighting)

The purpose is to outline how a student journey through their curriculum is achieved with taught input and your mentor support along the way.

			
<p>Top level course documents- inc. Programme specification & module descriptor forms.</p> <p>We display this overview to you as a grid of the modules and sequence throughout the Programme- ‘course overview’</p>	<p>The progression of the ITT Curriculum.</p> <p>We display this to you as the ‘Staged Expectations’</p> <p>These give you a clarity of what modules broad content and subjects have occurred and how they relate to the staged expectation- the point at which most students will be at the end of the</p>	<p>We display these to you as ‘Knowledge Organisers’</p> <p>New for 2022/23 You will be able to click through any module or subject link in the staged expectations to discover the depth of the curriculum learnt by the point in the training.</p>	<p>Subject- Session steps of knowledge & Sequence</p> <p>For our PGCE programmes we are able to share Subject input via curriculum subject Sequence steps.</p> <p>Please refer to knowledge organiser explanation.</p>


Module code and title: PGPC9070: The Cumbria Teacher of Reading			
Beginning	In this phase students engage with the Simple view of reading, and Rose’s principles of effective SSP. This is followed by early phonics, the importance of speaking and listening, phonics for EAL. Students understand the importance of a phased scheme and explore Letters and Sounds. Students understand the structure of a phonics lesson in phases 2/3 and how to assess. They learn how to segment and blend and use the alphabetic code. They learn key language (phoneme, grapheme etc). They learn to plan and structure a phonics lesson in phases 2/3, how to identify best practice and engage in a mini teach	<p>Rationale for sequencing</p> <p>This phase provides knowledge and understanding of the key terminology and concepts that students require to make sense of what they are seeing in school. The 1st seminar introduces students to the precursors to successful learning in phonics. Phonics will be one of the key areas of the curriculum that students will come across when they engage in school based learning. It is important that they are aware of how and why phonics schemes are used in schools to plan for children’s learning. Students reflect on learning in school and how their understanding of the teaching of phonics has developed through their teaching and assessment of children. Their knowledge of the children’s learning journey is extended to consider the importance of focusing on the skill of segmenting words with adjacent consonants. Students are then ready in their learning and development to go deeper into intervention support for reading, assessing individual need and gaining some tools to support this process.</p>	<p>Links to CCF</p> <p>High Expectations:Teacher expectations (3) Impact of high quality teaching (6)</p> <p>How Pupils Learn: students learn that the way they structure and support learning in phonics draws directly from theories around working memory, activating prior knowledge etc. (all statements)</p> <p>Subject and Curriculum: students are regularly checking their own subject knowledge. Teacher subject knowledge is crucial (2-5,7,9,10)</p> <p>Classroom practice: students learn to plan effective opportunities (all statements)</p> <p>Adaptive Teaching: teaching small group and whole class phonics, how to respond to the needs of all (1-4,5,6)</p> <p>Assessment: using different kinds of assessment, understand prior learning to support next steps. (1,2,4-6)</p>
	Developing	After beginning placement, students continue to explore children’s phonological progression into phases 4,5 and 6. There is more focus on phase 5, phonics into spelling and teaching tricky words. They explore statutory phonics assessment in KS1. They move on to consider transition to KS2, ‘word reading’ requirements and key terms such as ‘morpheme’. Students learn how to teach children adjacent consonants, use phoneme frames and teach encoding and decoding. They learn how to assess at phase 5, plan a spelling session and use morphemic knowledge.	<p>Examples of research and evidence</p> <p>Jolliffe, W., Waugh, D. and Carss, A. (2019) <i>Teaching systematic synthetic phonics in primary schools</i>. 3rd edition. London: Learning Matters.</p> <p>Quigley, A. (2018) <i>Closing the vocabulary gap</i>. London: Routledge https://educationendowmentfoundation.org.uk/school-themes/literacy/</p> <p>Moran, E. and Moir, J. (2018) ‘Closing the vocabulary gap in early years: Is “Word Aware” a possible approach?’, <i>Educational & Child Psychology</i>, 35(1), pp. 51–65.</p> <p>Duff, F. J., Mengoni, S. E., Bailey, A. M. and Snowling, M. J. (2015) ‘Validity and sensitivity of the phonics screening check: implications for practice’, <i>Journal of research in reading</i>. Blackwell Publishing Ltd, 38(2), pp. 109–123</p>
Extending		After developing placement students develop familiarity with phonics and reading assessment and tracking. They develop their use of teaching assistants in the classroom and look at how to identify and support a range of reading abilities. Following this, students carry out a miscue analysis running record on a child’s reading and explore some of the implications for them in terms of book choice and support moving forward, particularly around comprehension. The module finishes by looking at reading interventions, catch up programmes and a closer look at reading recovery.	

Module code and title: PGPC9130: Being a Teacher			
Beginning	The module begins looking at their vision and values as teachers. We look at empirical research by John Coxhead (Head at one of our former school direct partner schools) around values that our 20/21 cohort took part in. This is followed by some professional skills that outwork from that: working with others, mentoring and coaching. We finish this phase by exploring teacher professionalism, this supports school embedded learning and prepares them for placement. This includes working with TAs for maximum impact.	<p>Rationale for sequencing</p> <p>The design of this module is based, like the other PGPC modules on the student learning journey and design choices have been made to support students at each phase of their learning. We open with vision and values as we see this as the cornerstone of everything else the student does in their teaching.</p> <p>We include our first applying for jobs session early in the developing phase as this (for our September students) is when job adverts begin to appear. For all students, having had some school experience they feel more ready to start thinking about this. Into extending phase, we look at the wider role of the teacher and making a contribution, as they are now developmentally ready to consider Ofsted and implications as well as interview preparation.</p>	<p>Links to CCF</p> <p>High expectations: Teachers as role models (2), well-being and motivation (1)</p> <p>Adaptive Teaching: Working with others (SENCO, DSL) (7), effective use of TAs (7)</p> <p>Assessment: work with colleagues to deliver effective assessment (2) (4), efficient approaches (7)</p> <p>Managing Behaviour: emotion regulation (3), influencing resilience (4).</p> <p>Professional Behaviours: Coaching and collaboration (2), building relationships with parents/carers (4), effective use of TAs (5), working with colleagues (SENCO/ Pastoral lead) (6).</p>
	Developing	Following beginning placement, students return to the idea of values and link back to session 1 in beginning phase. They discuss experiences in school and consider if their values and vision have changed in the light of this. They explore vision and values as helping with resilience when the job is challenging. Following this students start to engage with the process of applying for jobs, with a focus look at where to look, the process and writing an effective letter of application. This phase ends by exploring the role of the subject leader in preparation for placement.	<p>Examples of research and evidence</p> <p>Newland, A. (2021). <i>Becoming A Teacher</i>. London. Crown House Publishing.</p> <p>Vaughn, M. Faircloth, B. (2013). <i>Teaching With a Purpose in Mind: Cultivating a Vision</i>. Available at: https://files.eric.ed.gov/fulltext/EJ1025687.pdf</p> <p>Van Kan, C. Ponte, P. Verloop, N. (2013). How do teachers legitimize their classroom interactions in terms of educational values and ideals? <i>Teachers and Teaching: Theory and Practice</i>. Issue 6. Available at: https://www.tandfonline.com/doi/full/10.1080/13540602.2013.827452</p> <p>Fox, G. (2017). <i>A handbook for teachers and teaching assistants working together</i>. London. Routledge.</p>
Extending	Following developing placement, students move from thinking about their own practice to their contribution to the wider life of the school and the other responsibilities teachers have. They develop their subject leader experiences and explore Ofsted curriculum deep dives and share their experiences and planning around this. Then prior to extending placement students engage with sessions on preparing for job interviews		

Module code and title: PGPC9140: Learning Teaching & Subject Pedagogy (pedagogy)			
Beginning	The students begin with a welcome lecture introducing them to the module, the approach to learning and teaching and school embedded learning. Students then explore how children learn, with a focus on learning science, working memory, schema and cognitive load. This provides a foundation for exploring the impact of ACEs on cognition and brain architecture, the impact of behaviour on learning and how to manage it, assessing learning & identifying misconceptions, planning lessons, objectives and activities and the phase ends with a focus on supporting learners with SEND prior to beginning placement.	<p>Rationale for sequencing</p> <p>The design of this module is based, like the other PGPC modules on the student learning journey and design choices have been made to support students at each phase of their learning. The module starts with a focus on the child as a learner and factors that support and hinder learning. Having considered this the module moves into areas where the teacher can take these into account – planning, managing behaviour etc which connect into the staged expectations to support beginning placement. Key themes are then developed into the next phase. For example, behaviour management is moved onto behaviour for learning, lesson planning is moved onto weekly and unit planning. Some of the themes then develop incrementally again as assessment moves into summative assessment and using data. Layers of development in each theme are mapped onto staged expectations of placement.</p>	<p>Links to CCF</p> <p>High expectations: clear expectations (4), mutual trust (5) How pupils learn: working memory (3), prior knowledge (2), purposeful practice and worked examples (7) Subject and curriculum: misconceptions (4), critical thinking (6) Classroom Practice: scaffolds (4), questioning (6), steps (2), talk (7), practice (8) Adaptive Teaching: SEND code (7), pupil difference (2), responsive teaching (3) Assessment: assessment decisions (3), feedback (5), informing planning (4) Managing Behaviour: Routines (1), environment (2), regulation (3), motivation (6) Professional Behaviours: Professional Relationships (4), communication (1)</p>
	Developing	Following beginning placement, students continue their learning journey by building on what they have learnt in beginning phase. They explore the importance of quality talk for learning then move that into questioning and developing critical thinking and greater depth learners. Behaviour for learning is developed out of managing behaviour and lesson planning is expanded into the weekly planning process, annotating existing plans and creating planning for progression. Students consider inclusive pedagogy in terms of supporting EAL learners. Students engage with key pedagogies in teaching PSHE and RSE. This set of learning moves students on into developing placement	<p>Examples of research and evidence</p> <p>Cremin, T. Burnett, C. (2018). <i>Learning to teach in the Primary School. 4th ed'n</i>. London. Routledge. Kirschner, P. Hendrick, C. (2020). <i>How Learning Happens</i>. London. Routledge. Goepel, J. Childerhouse, H. Sharpe, S. (2014). <i>Inclusive primary Teaching</i>. Northwich. Critical Publishing. Sherrington, T. (2019). <i>Rosenshine's Principles in Action</i>. Woodbridge. John Catt Educational. Rogers, B. (2015). <i>Classroom Behaviour</i>. London. Sage. Poultney, V. (Ed)(2017). <i>Evidence-based Teaching in Primary Education</i>. Northwich. Critical Publishing.</p>
Extending	Following developing placement, students are now developmentally ready to explore more high level skills and understanding a class teacher must have; students engage here with whole school issues such as data handling, developing their work on assessment by looking at how data is used in school and how it can develop their teaching. This supports them towards extending placement.		

Module code and title: PGPC9140: Learning Teaching & Subject Pedagogy (Mathematics)			
Beginning	Students start with considering what effective mathematics teaching looks like. They understand the importance of a practical and discussion-based approach to the development of children’s mathematical understanding. This supports their understanding of learning theories and the role they play in learning. This opening session provides a foundation for the remaining beginning phase sessions, that take a concrete, pictorial, abstract approach and applies it to key aspects of the mathematics curriculum – place value followed by the four number operations, addition, subtraction, multiplication and division. These sessions focus on terminology, subject knowledge, addressing misconceptions, pedagogic approaches and resources.	Rationale for sequencing	Links to CCF
		<p>The sessions in beginning phase provide the building blocks helpful to make sense of what they are observing in school and provides the understanding to start planning and teaching. This makes sense developmentally for the students to begin with effective pedagogy and practice, underpinned by evidence.</p> <p>Students begin by exploring the foundations of numeracy which enables them to explore their own subject knowledge and attitudes to mathematics. At the start of the programme, they use this session to audit their own strengths and areas for development. Following this underpinning knowledge and exploration they explore the four number operations. The reason for exploring number first is that place value is the concept often at the root of mathematical understanding and an understanding of number operations is required to apply these to teaching shape and measures.</p> <p>Having developed this understanding, it makes sense developmentally to apply this knowledge to problem-solving and understanding of mastery approaches</p>	<p>How Pupils Learn: Working memory (3), purposeful practice (7), retrieval (8), worked examples (9)</p> <p>Subject and curriculum: subject knowledge (2), misconceptions (4), explicit teaching (5), linking ideas (schemata) (7), critical thinking (6)</p> <p>Classroom Practice: model (3), guide (4), scaffold (4), metacognitive strategies (5), questioning (6), high quality talk (7), practice (8), paired/group work (9)</p> <p>Adaptive teaching: targeted support (1)</p> <p>Assessment providing and using information (1) and (3)</p> <p>Professional Behaviours: Reflective Practice (2), CPD (7)</p>
Developing	Following work on the four number operations and beginning placement, students now engage with the remaining elements of the mathematics curriculum – shape, space and measures. Through these sessions students develop their deployment of practical resources, apply and embed formative assessment techniques into their practice. In this phase students engage with a range of mastery techniques and understand what is meant by the term 'mastery'. They explore a range of resources available to develop mathematics problem-solving.	Examples of research and evidence	Other useful information and links
		<p>Garry, T. (2020) <i>Mastery in Primary Mathematics</i> [electronic resource] <i>A Guide for Teachers and Leaders</i>. London: Bloomsbury Education</p> <p>Haylock, D. (2019) <i>Mathematics explained for primary teachers</i>. 6th edition. Los Angeles: SAGE</p> <p>Hansen, A. (ed.) (2020) <i>Children’s errors in mathematics</i>. 5th edition. London. Learning Matters</p> <p>Cheung, P. and Ansari, D. (2021) ‘Cracking the code of place value: The relationship between place and value takes years to master’, <i>Developmental Psychology</i>. United States: American Psychological Association, 57(2), pp. 227–240</p>	<p>Students have an English focus as part of their reflective scrapbook/journal, through which they respond to their experiences in light of their university input.</p> <p>The sequencing of the sessions is intentionally designed to align to the generic elements of the PGPC9140 Learning Teaching and Subject Pedagogy module so that connections can be made specifically in a timely manner to developing understanding of working memory, lesson planning, unit planning and assessment in particular.</p> <p>Alongside the subject and curriculum audit from PGPC9150 module, students are asked to engage with an enhanced mathematics audit and tracking file.</p>
Extending			

Module code and title: PGPC9140: Learning Teaching & Subject Pedagogy (English)			
Beginning	Students start with considering what effective English teaching looks like, exploring theoretical underpinning such as scaffolding and reports outlining effective English pedagogy including the role of talk in learning, effective teacher modelling and the importance of subject knowledge. This provides a foundation for exploration and modelling of key teaching approaches in the remaining sessions in this phase. These are shared reading and writing, guided reading (or small group focused reading and writing and teaching spelling, grammar and punctuation, all as part of the writing process. Through this phase sessions have a context of fiction, non-fiction or poetry.	Rationale for sequencing	Links to CCF
	Developing	Following beginning placement, students move into developing phase and sessions here are designed to help students synthesise and apply their learning into planning for progression through the writing process and places more of a focus on assessment. Students spend time exploring the requirements for Key Stage 1 and 2 testing and use these to benchmark understanding of age-related expectations at the end of key stages 1 and 2. They engage with the test materials, reporting arrangements and use the teacher assessment criteria to assess a range of children's writing. The interrogate data and use it to identify intervention required.	The sessions in beginning phase provide the building blocks helpful to make sense of what they are observing in school and provides the understanding to start planning and teaching. They align to sessions in PGPC9140 generic sessions on cognitive load, planning and assignment and links are made to these sessions. Following beginning placement, where students enact their beginning phase curriculum, students are ready developmentally to engage with summative assessment requirements. They can focus on applying their experiences to DfE age-related expectations and their growing understanding of assessment to standardised tests and using the data they produce. Into extending phase, students prepare for extending placement by applying their knowledge to innovative approaches that connects to their reading in their second masters' module 'enhancing professional practice'
Extending		Learning in this phase concludes with an exploration of creative approaches to teaching English which includes a critical exploration of how the approaches impact upon planning and children's writing attainment	Examples of research and evidence
		Siraj, I. & Taggart, B. (2014). Exploring Effective Pedagogy in Primary Schools: Evidence from Research Copping, A. (2016). <i>Being Creative in Primary English</i> . London. Sage DfE (2021) The Reading Framework. Teaching the foundations of literacy. Graham, S. (2019) 'Changing How Writing Is Taught', Review of research in education. Los Angeles, CA: SAGE Publications,43(1), pp. 277–303. Waugh, D. (David G., Warner, C. and Waugh, R. (2019) Teaching grammar, punctuation and spelling in primary schools. 3rd edition. London: Learning Matters.	Students have an English focus as part of their reflective scrapbook/journal, through which they respond to their experiences in light of their university input. The sequencing of the sessions is intentionally designed to align to the generic elements of the PGPC9140 Learning Teaching and Subject Pedagogy module so that connections can be made specifically in a timely manner to developing understanding of working memory, lesson planning, unit planning and assessment in particular. Alongside the subject audit in PGPC9150 module, students undertake an enhanced grammar and punctuation subject knowledge audit which is explored in a session and used to inform placement target setting.

Module code and title: PGPC9150 – Subject Knowledge and Pedagogy Enrichment General Primary			
Beginning	Students will be introduced to and begin work on a curriculum subjects audit. Following this, students will identify 3-4 areas from the audit they would benefit from further support on, and the following session will involve workshops providing that support. Following this, students will have some input on subject and pedagogical target setting using SPAR documentation. The final session in this phase provides supported opportunity to work on actions to meet targets.	<p>Rationale for sequencing</p> <p>This module follows a ‘developing learning’ cycle, connecting to the developmental model of the programme. It is intentionally designed to support students identify their gaps in knowledge, skills and understanding and address them in stages over the year. This takes place through a cycle which directly links into target setting for each placement. This cycle (right) has three iterations for each phase.</p> 	<p>Links to CCF</p> <p>How pupils learn: Prior knowledge (2) Subject and Curriculum: secure subject knowledge (2), foundational concepts (3), misconceptions within subjects (4), critical thinking skills through subjects (6), linking ideas to existing knowledge (schema development) (7), concrete and abstract examples (8). Professional behaviours: Reflective practice (2), learning from educational research (7)</p>
	Following beginning placement, students share their developing learning using their reflective scrapbooks – with focused discussion questions. Following this they reflect on their developing audits and set subject knowledge targets for their developing placements. The following session provides input on places of support to meet their actions towards targets and students start on key actions.	<p>Examples of research and evidence</p> <p>Metzler, J & Woessmann, L. (2010). The impact of teacher subject knowledge on student achievement: Evidence from within-teacher within student variation. <i>CESifo Working Paper, No. 3111</i>.</p> <p>Coe R, Aloisi C, Higgins S, et al. (2014) <i>What Makes Great Teaching? Review of the Underpinning Research</i>. London: Sutton Trust.</p> <p>Chartered College advice: https://impact.chartered.college/article/ensuring-maintaining-subject-knowledge/</p>	<p>Other useful information and links</p> <p>This module relies upon student engagement with their curriculum audit, which is a developing document across their whole PGCE year.</p> <p>The tutor acts as facilitator and students draw on work from their reflective scrapbook in the timetabled sessions. (Lancaster) - This module is where the specialist pathway students meet in their pathway groups and work with specialist staff, whilst General primary students work together; Early Years, Environmental and Experiential Education, PE, Maths.</p>
Developing	Following developing placement this learning cycle continues with reflecting on placement learning, sharing new learning and developing targets and actions for extending placement		
Extending			

Module code and title: PGPC9150: Environmental and Experiential Learning pathway			
Beginning	<p>Students begin with a 'Hitting the Ground Running: Williamson Park Activity Session. This is followed by an all-day event: 'Introducing a canvas for learning: Morecambe Bay Trip'. This provides a foundation for 'Exploring the Case for Outdoor Experiential Learning'. This leads to an Outdoor Learning Practical Skill Development session.</p> <p><u>Students will learn:</u></p> <ul style="list-style-type: none"> a variety of exemplar ways in which outdoor and experiential learning can be approached across the curriculum a wide variety of academic opinion of the value of EEL what the Morecambe Bay Curriculum is (and what it hopes to achieve), how it has been inspired by The Eden Project, how it aims to benefit the children living around the Bay, how and the ways in which it has influenced this specialism 	<p>Rationale for sequencing</p> <p>The structure the associated thinking in a way that moves the participant from interested 'novice', to a confident independent practitioner capable of making and justifying their own EEL related pedagogical decisions. This module runs parallel to the student's own school-based journey and allows for tutor input, tutor modelling, exploration of related philosophy, expert opinion and examples of good practice, whilst also allowing the students to experiment and reflect upon their own approaches to learning in this area. The later sessions allow students to develop subject advocacy, pedagogical discourse and consider curriculum design and school-based EEL related opportunities.</p>	<p>Links to CCF</p> <p>High Expectations: role models who can influence the attitudes, values and behaviours of their pupils (2) Subject and curriculum: helps teachers motivate pupils and teach effectively (2), foundational concepts (3). Pupils learn new ideas by linking to existing schema (7) Classroom practice: introduce new material in a structured manner (2), effective questioning (6), talk (7) Behaviour Management: motivation and engagement (6) Professional Behaviours: Contributions to the wider life of school (3)</p>
	<p>Following beginning placement, students focus on 'Exploring Academic Perspectives' on their pathway. This provides a foundation for working with key local schools to develop a School – based activity. Students have time for preparation and then go into the schools for delivery of their school – based activity.</p> <p><u>Students will learn:</u></p> <ul style="list-style-type: none"> A wider variety of academic opinion regarding the pros and cons of EEL approaches with children – students will consider the support of EEL from such perspectives as health and well-being, raising children's achievement, increasing pupil interest 'in' and motivation 'to' learn, the ways in which EEL learning can help combat nature deficiency, can make learning real and meaningful and the ways in which such learning can be a catalyst to creative and cross-curricular learning opportunities. How a local school and key teacher (involved in the Morecambe Bay Curriculum) values and utilises EEL How to plan, resource, safely deliver, assess and reflect upon an EEL of their own design. 	<p>Examples of research and evidence</p> <p>Beames, S., Higgins, P. J. and Nicol, R. (2012) Learning outside the classroom: theory and guidelines for practice. New York, N.Y: Routledge. Beard, C. (Colin M. Beard, C. and Wilson, J. P. (2006) Experiential learning a best practice handbook for educators and trainers. 2nd ed. London: Kogan Page.</p>	<p>Other useful information and links</p> <p>The course allows students to see and reflect upon good practice from two experienced tutors, to receive input from school-based me colleagues dedicated to development of a bespoke Morecambe Bay Curriculum, to meet with Professor Robert Barratt (from the Eden Project) and to have the opportunity to work in pairs to plan, deliver and reflect upon their</p>
Developing			

Extending	<p>Following developing placement and with their school-based activities behind them, students take a critical approach to the work they have completed and experiences they have engaged in. This includes a session titled ‘Arguing the case, Critical Perspectives, Successful Implementation’, The module concludes with an opportunity to apply their learning to curriculum design through a session titled ‘Moulding the Curriculum, Seeking Opportunities and Celebrating EEL’.</p> <p>Students will learn:</p> <ul style="list-style-type: none"> • How to reflect upon, seek learning and to identify key personal development points from their school-based activity • A wide variety of academic concerns and caveats regarding the use of EEL in schools and how to plan to reduce such obstacles to regular and successful EEL • How EEL learning has been introduced to a selection of schools within England • What are the current key policy documents that support the use of EEL • How to articulate the use of EEL in preparation for job applications and interviews in support of aspects of the PGPC9130 Being a Teacher Module (preparation for interviews and job applications, fulfilling wider school responsibilities, teacher beliefs and values, being the best teacher, you can be and having vision for how you see yourself as a professional educator working within a school setting) • How EEL learning can be championed by the EEL minded-class teacher as an EEL ‘influencer’ within school and how this notion fits within the roles and responsibilities of a subject leader in this area of the curriculum as explored in the PGPC9130 Being a Teacher Module • How (in the guise of a subject leader) EEL can be championed across the whole school and how EEL might be injected into existing school planning – students will revisit the Badger Lane School scenario (as use in the PGPC9130 Being a Teacher Module) and will suggest ways in which EEL might support the school improvement plan as well as the needs of the teachers, the children and the community. 	<p>Prince, H. (2019) Changes in outdoor learning in primary schools in England, 1995 and 2017: lessons for good practice. Taylor & Francis)</p> <p>Prince, H. (2018) School-based outdoor education: lessons in enabling good practice for children 3-11 years</p>	<p>own planned activity with children drawn from local schools.</p> <p>Students on this pathway have their developing placement in a school that is working toward the Morecambe Bay Curriculum and Outdoor Learning. Students use their reflective scrapbook to document their development and add to their ongoing subject knowledge in their developmental audit.</p>
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Module code and title: PGPC9150: Special Educational Needs & Disability pathway			
Beginning	<p>Students begin this pathway by reflecting on their own and exploring others' knowledge, understanding, expertise and experience around working with Special Educational Needs and Disability. They go on to explore the SEND code of practice in detail and develop understanding of the practical outworking of teaching SEND through a personalised learning task.</p> <ul style="list-style-type: none"> • What the SEND code of practice is and how is it implemented in the primary phase. • How is disadvantage challenged in specific settings. 	<p>Rationale for sequencing</p> <p>The SEND subject pathway is split into two parts Part A. Professional Knowledge and Understanding This looks at the SEND code of practice and the 5 areas of the Engagement Model (Exploration, realization, anticipation, persistence, and initiation. This provides a foundation of understanding before moving onto leadership. Part B. Leading and Coordinating Provision This is linked specifically to the role of a SENDco. Students will have now had more school experience and will be ready to consider this enhanced role. This is also intended to link with possible future interest in the National SENDco award.</p>	<p>Links to CCF</p> <p>High Expectations: A culture of mutual trust / relationships (5) How Pupils Learn: Prior knowledge (2)/ worked examples (9) / overload (4) Classroom practice introduce new material in a structured manner (2), foundational concepts (3), effective questioning (6), talk (7) Adaptive teaching: all aspects (1-7) Assessment: purpose (3) and working with colleagues (7) Professional Behaviours: Contribute to the wider life of school (3)</p>
	<p>As the students return from beginning placement, they reflect on their placement experiences and the practice in school and discuss their learning from the variety of schools they have been working in. They move from this focus on learning and teaching to assessing SEND learners and how to support other teachers with this. This would include the knowledge and use of diagnostic testing (Yarc, BPVS etc)</p> <ul style="list-style-type: none"> • How are individual needs identified and assessed. • What provision is available and how this links to individualised learning. • Practical learning sessions on identification of more common SpLD. 	<p>Examples of research and evidence</p> <p>The Engagement Model. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/903458/Engagement_Model_Guidance_2020.pdf</p> <p>The SEND code of Practice. Available at: https://www.gov.uk/government/publications/send-code-of-practice-0-to-25</p> <p>Smith, M. Broomhead, K. (2019). Time, expertise and status: barriers faced by mainstream primary school SENCOs in the pursuit of providing effective provision for children with SEND. NASEN journals: Available at: https://nasenjournals.onlinelibrary.wiley.com/doi/epdf/10.1111/1467-9604.12237</p>	<p>Other useful information and links</p> <p>The sessions in the beginning phase, build on and develop the input received by all students on working with children with SEND and the implications of the code of practice for classroom teachers. The sessions develop the reflective questions and activities that all students engage with in their reflective scrapbooks.</p> <p>Personalised Learning Task (PLT) in brief</p> <ul style="list-style-type: none"> • Begin to work with a child identified as having SEND (or additional needs). • Plan for them and teach them (Students are expected to work with the child for around 6-8 hrs). • This needs to be written up in some format as our session after beginning placement will draw on this for reflective work. • This task is linked to the staged expectations
Developing	<p>Following this and moving into extending phase, leading to extending placement students start to look at leadership and role of the SEND Co-ordinator in schools and settings in more detail. On extending placement, students on this pathway are encouraged to shadow the SEND Co-ordinator where appropriate and take part in some of their meetings and activity.</p> <ul style="list-style-type: none"> • What is the role of a SENDco • When and how to involve the SENDco in challenging disadvantage for our classes • Succession management and moving forward into qualifying as a SENDco 		
Extending			

Module code and title: PGPC9150: Physical Education (PE) pathway			
Beginning	Students begin this pathway by focusing on safety in PE teaching and its centrality to this subject. Following this student develop their knowledge from curriculum PE sessions and explore progression in skills, knowledge and understanding. They look at the components of fitness and how these elements underpin planning and ensure progress. Students are set up for beginning placement to focus on core elements of effective PE.	<p>Rationale for sequencing</p> <p>The PE pathway follows a developmental structure, building a foundation of knowledge and understanding that complements and builds on PGPC9140 curriculum PE sessions. This is taught with a focus on leadership and looks forward to developing phase where more advanced leadership skills to do with leading assessment and measuring impact of pedagogy on progress. Having built this foundation in beginning and developing phases, students are asked to apply this knowledge on their developing placement and this provides a springboard to exploring curriculum design – intent, implementation and using their developing assessment skills, measure impact on progress.</p>	<p>Links to CCF</p> <p>High Expectations: A culture of mutual trust / relationships (5) How Pupils Learn: Prior knowledge (2)/ worked examples (9) / overload (4) Classroom practice introduce new material in a structured manner (2), foundational concepts (3), effective questioning (6), talk (7) Adaptive teaching: all aspects (1-7) Assessment: purpose (3) and working with colleagues (7) Professional Behaviours: Contribute to the wider life of school (3)</p>
	Developing	As the students return from beginning placement, they reflect on PE post-covid. They reflect on how schools have adapted PE and how subject leaders have responded to it in their placement schools. Following this, leading to developing placement, students focus on a deeper look at assessment in PE, supporting colleagues in ensuring progress and building confidence in non-specialists.	<p>Examples of research and evidence</p> <p>PE leadership in https://www.pescholar.com/insight/subject-leadership-of-physical-education/ Preparing for an Ofsted deep dive in PE, in: https://www.peresourcesbank.co.uk/physical-education-deep-dive-preparation-ofsted-inspection-curriculum/ Primary PE audit tool. Available at: https://www.afpe.org.uk/physical-education/professional-learning-model-a-auditing-tools/</p>
Extending		Following this and moving into extending phase, leading to extending placement students link into their PGPC9130 module by focusing on Ofsted and the subject leader role and curriculum intent, implementation and measuring impact on progress.	

Module code and title: PGPC9150: Early Years pathway			
Beginning	<p>Students begin by considering characteristics of effective learning. In so doing they explore the underpinning principles of the Early Years Foundation Stage (EYFS) statutory guidance. This is followed by a focus on play and sustained shared thinking. Following this, students explore the prime and specific EYFS areas of learning, planning within them and the seven features of effective practice.</p>	<p>Rationale for sequencing</p> <p>The learning starts with foundation principles of good quality EY practice for learning. This provides a foundation for the exploration of key areas of learning in the EYFS statutory guidance. is structured in this way to align with themes that are being explored in other modules during the same phases: for example cognitive load, structuring learning and planning. These areas are often looked at together in sessions through the lenses of the specific areas of learning. This is to develop students’ understanding of the holistic nature of learning in EYFS. Alongside this, other key aspects of learning are developed: the learning environment and the role of adults. This helps provide a strong holistic picture of EYFS practice.</p>	<p>Links to CCF</p> <p>High Expectations: Teachers as role models (2) How Pupils Learn: Prior knowledge (2) / working memory (3), structure (5), retrieval practice (7) Subject and curriculum: foundational concepts (3) Classroom practice introduce new material in a structured manner (2), effective questioning (6), talk (7) Adaptive teaching: understanding pupil difference (2) Assessment: purpose (3) and working with colleagues (7) Professional Behaviours: classroom environment (3), teamwork (4 and 5)</p>
		<p>Examples of research and evidence</p> <p>DFE: Statutory guidance for the Early Years Foundation Stage 2021 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974907/EYFS_framework_-_March_2021.pdf Early Education: Birth to Five Matters 2021 https://www.birthto5matters.org.uk/wp-content/uploads/2021/04/Birthto5Matters-download.pdf Forrester, G. Pugh, J. Hudson, R. & Rowley, J. (2021) Understanding the World in the Early Years Foundation Stage: practitioners’ perspectives of best practice and effective provision, Education 3-13,</p>	<p>Other useful information and links</p> <p>The sessions in this module for these pathway students are intentionally designed to develop knowledge and understanding gained from other modules students are studying at the same time. These include PGPC9130 ‘Being a Teacher’ and PGPC9140 ‘Learning Teaching and Subject Pedagogy’ which these EY pathway students also work on together as a group. This brings significant cohesion to their learning. Their learning and development is developed through their reflective scrapbook which helps them connect university and professional learning in their placement settings. Learning and teaching together with the other modules mentioned here wrap around beginning and developing placement and support extending placement.</p>
Developing	<p>Following beginning placement students start an in depth focus on each of the specific areas of EYFS framework: expressive arts and design, understanding the world, communication and language., personal, social and emotional development. physical development. Literacy and mathematics.</p> <p>This includes key principles that apply to all of the areas;</p> <ul style="list-style-type: none"> • The importance of a high quality learning environment; • The role of the adult in moving learning on; • The role of explicitly teaching children the skills they need; • Supporting young children to read their world; • The natural world and sustainability • Helping children represent interests in ways that are meaningful for them; • Planning and assessment of learning 		
Extending			

Module code and title: PGPC9150: Mathematics pathway			
Beginning	As students begin this pathway, they engage with an Introduction to module, The nature of mathematics and discussion of implications for their practice. Follow this, students on this pathway focus in on problem-solving and maths mastery which provides a foundation for a maths subject knowledge prior to their beginning placement.	Rationale for sequencing	Links to CCF
		The main overall aim is to consider mathematics, particularly problem solving, in some more depth than the curriculum sessions and particularly consider the support for children becoming problem solvers. This entails trainees analysing their own subject knowledge. There is also an exploration of effective planning and subject leadership in a primary school setting. The principles of Mathematics mastery are examined and considered in relation to effective pedagogical approaches. This is all done developmentally – beginning with the foundational concepts in the beginning phase, applying these to learning and teaching in the developing phase and then into wider school issues and making a contribution in extending phase.	High Expectations: role models who can influence the attitudes, values and behaviours of their pupils (2) Subject and curriculum: helps teachers motivate pupils and teach effectively (2), foundational concepts (3). Pupils learn new ideas by linking to existing schema (7) Classroom practice: introduce new material in a structured manner (2), effective questioning (6), talk (7) Behaviour Management: motivation and engagement (6) Professional Behaviours: Contributions to the wider life of school (3)
Developing	Following beginning placement and with some experience behind them, students focus in a little deeper into some key areas of planning and teaching: creative approaches to teaching and learning in mathematics, algebra and then placement preparation. This involves exploring how their enhanced maths knowledge and learning from the module can be applied on developing placement.	Examples of research and evidence	Other useful information and links
		Vignoles, A; Jerrim, J; Richard Cowan, R. (2015) Mathematics Mastery Primary Evaluation Report (EEF). Available at: https://dera.ioe.ac.uk/29369/ Mason, J. Burton, L Burton, Stacey, K. (2010). <i>Thinking Mathematically</i> . Pearson Education. Ofsted (2021). A review of research into factors that influence the quality of mathematics education in schools in England. Available at: https://www.gov.uk/government/publications/research-review-series-mathematics	The sessions in this module for these pathway students are intentionally designed to develop knowledge and understanding gained from PGPC9140 Learning and Teaching Subject pedagogy Mathematics sessions. Students have focused thinking to do on placement, this will often involve discussion with Mathematics subject leaders on placement Learning and teaching together with the other modules mentioned here wrap around beginning and developing placement and support extending placement
Extending	Into this last phase of the module, students focus on the wider role of the maths subject lead in school. These final sessions focus on curriculum design – intent, implementation and impact. Linking to that, the importance of assessment to evaluate impact and an in depth look at the role of the subject lead for maths, including their role in Ofsted subject scrutiny.		

Module code and title: PGCE7003: Building Professional Understanding			
Beginning	<p>Students begin the module by considering the difference between teaching and learning and by considering the range of factors that contribute / impact upon children's learning. They learn about the relationship between learning theories and classroom practice, effective approaches to planning/teaching/assessing, the importance of structuring learning to support schema development and how this applies to core subjects. This is taught alongside theories including cognitive load and Rosenshine's principles.</p> <p>Students subsequently build on this to explore effective ways to structure sequences of learning to support children's development of schema.</p> <p>Prior to the Beginning placement, students submit their formative assessment for the module</p>	<p>Rationale for sequencing</p>	<p>Links to CCF</p>
		<p>This module is structured to introduce students to some key ideas at the outset. These are addressed at an early stage in to support students to generate potential foci for their assignment.</p> <p>Students then engage with ideas relating to planning, teaching and assessing learners. These are designed to support learning that takes place on PGPC9140 LTSP and raise awareness of the importance of research informed approaches.</p> <p>They then combine these elements by planning learning activities for each other that combine all these elements and relate them to core subjects. This is designed to encourage deep learning of these topics by revisiting them and encouraging students to re-present their understanding.</p>	<p>How pupils learn: learning (1), prior knowledge (2), memory (3), working memory (4), long term (5), worked examples (9)</p> <p>Classroom practice: effective teaching (1), modelling (3), scaffolds (4), questioning (6), paired activities (9), grouping (10)</p> <p>Assessment: assessment (1), over influence (2), clarity (3), self regulation (6)</p> <p>Managing behaviour building effective relationships (5), pupils' investment in learning (7)</p>
Developing	<p>Following Beginning placement, students engage with their formative assessment feedback and reflect on how to respond to this in their summative assessment. This is submitted prior to Developing placement.</p>	<p>Examples of research and evidence</p>	<p>Other useful information and links</p>
		<p>Hattie, J. (2012) Visible learning for teachers: maximizing impact on learning. London: Routledge.</p> <p>Principles of Instruction: Research-Based Strategies That All Teachers Should Know, by Barak Rosenshine; American Educator Vol. 36, No. 1, Spring 2012, AFT (teachertoolkit.co.uk)</p> <p>Cognitive Load Theory and its application in the classroom impact.chartered.college</p> <p>Lockyer, S. (2016) Lesson planning for primary school teachers. London: Bloomsbury.</p> <p>The Science of Learning.pdf (deansforimpact.org)</p> <p>A Complete Guide To Schema Theory And Its Role In Education (teacherofsci.com)</p> <p>Machin, S., McNally, S. and Viarengo, M. (2018) 'Changing how literacy is taught: Evidence on synthetic phonics', American economic journal. Economic policy. American Economic Association, 10(2), pp. 217–241.</p> <p>Allen, M. (2014) Misconceptions in primary science. 2nd ed. Berkshire, England: Open University Press.</p> <p>Guzzetti, B. J. (2000) 'LEARNING COUNTER-INTUITIVE SCIENCE CONCEPTS: WHAT HAVE WE LEARNED FROM OVER A DECADE OF RESEARCH?', Reading & writing quarterly. Informa UK Ltd, 16(2), pp. 89–98.</p> <p>Loewenberg Ball, D., Thames, M. H. and Phelps, G. (2008) 'Content Knowledge for Teaching: What Makes It Special?', Journal of teacher education. Los Angeles, CA: SAGE Publications, 59(5), pp. 389–407.</p>	<p>Students are supported in their academic skills as part of this module. They also have a formative discussion to help them select a suitable foci for their assessment.</p>
Extending	<p>The module is complete before the Extending phase begins</p>		

Module code and title: PGCE7004: Enhancing Professional Practice			
Beginning	The module does not begin until after the end of Beginning phase. This is to minimise overlap with PGCE7003 BPU	Rationale for sequencing <p>This module is structured to introduce students to some key ideas about high quality professional practice. This is intended to stimulate their selection of a suitable assignment topic. Students are expected to engage in a reflective enquiry for their assessment of the module to emphasise the role of research informed practice. Students are expected to draw on the outcomes of their reflections in their assignment to demonstrate their understanding of the way that reflection supports improvement. Consequently, they are supported to do this through their learning about assessment and reflection: both of which will be the evidence they will use to evaluate the foci of their assessment activity they undertake on Developing placement.</p> <p>As not every student's learning journey will be the same, the choice to include bespoke content has been included in response to this. This includes tutor-led as well as student-led sessions. Students have commented on the value of student-led learning.</p>	Links to CCF <p>How pupils learn: learning (1), prior knowledge (2), memory (3), working memory (4), long term (5), worked examples (9)</p> <p>Classroom practice: effective teaching (1), modelling (3), scaffolds (4), questioning (6), talk (7)</p> <p>Assessment: assessment (1), over influence (2), clarity (3), self regulation (6)</p> <p>Managing behaviour: pupils' resilience (4), building effective relationships (5), pupils' investment in learning (7)</p> <p>Professional behaviours: Reflection (2) high quality professional development (7)</p>
		Examples of research and evidence <p>Petty, G. (2009) <i>Evidence-based teaching a practical approach</i>. 2nd ed. Cheltenham: Nelson Thornes.</p> <p>Coe, R. (2015). What makes great teaching?: review of the underpinning research. https://www.suttontrust.com/wp-content/uploads/2014/10/What-Makes-Great-Teaching-REPORT.pdf</p> <p>Paul Black, Christine Harrison, Clare Lee, Bethan Marshall and Dylan William (2004) 'Working Inside the Black Box: Assessment for Learning in the Classroom', Phi Delta Kappan. Los Angeles, CA: Phi Delta Kappa Inc, 86(1), pp. 8–21.</p> <p>John Hattie and Helen Timperley (2007) 'The Power of Feedback', Review of educational research. Thousand Oaks, CA: SAGE Publications, 77(1), pp. 81–112</p> <p>Brookfield, S. (2017) <i>Becoming a critically reflective teacher</i>. 2nd ed. San Francisco, CA: Jossey-Bass.</p> <p>Pollard, A. (2019) <i>Reflective teaching in schools</i>. 5th edition. London: Bloomsbury Academic.</p>	Other useful information and links <p><i>Students are supported in their academic skills as part of this module. They also have a formative discussion to help them select a suitable foci for their assessment.</i></p>
Developing	<p>Students begin the module by considering what constitutes high quality professional practice. They build on their previous learning by revisiting effective assessment practices.</p> <p>Students explore the importance of reflective practice and develop an understanding of several key models including Kolb's learning cycle, Gibbs cycle, Brookfield's Lenses and Rolfe's model. The module is designed to respond to students' learning needs by including sessions led by the tutor and students themselves which are based on content that is agreed by the students.</p>		
Extending	<p>Following the developing phase, students reflect on the Developing placement and how their experience related to their learning in this module and how they will draw on it when completing their assignment.</p>		

PGCE Primary QPU title: PGPC9140 Art and Design				
Session	Learn that (Subject knowledge)	Learn how to (Pedagogical knowledge)	Evidence base	Rationale
1	<p>The purpose of art and design, as defined by the National Curriculum, EYFS Framework and National Society of Educators in Art and Design (NSEAD)</p> <p>There is a sequence of knowledge and skills within art and design that requires refining and revisiting for children to make progress</p> <p>Drawing is a key explorative tool in art and design</p> <p>Explicit teaching of the four pedagogies - make, ideas, knowledge and evaluate is beneficial to children's art and design understanding</p> <p>To provide high quality art and design education that engages, inspires, and challenges pupils planned experiences must provide opportunities to experiment, invent and create their own works of art</p>	<p>Use drawing and sculpture as a tool for communication and self expression</p> <p>Apply key vocabulary colour, pattern, texture, line, shape, form and space to drawing and sculpture</p> <p>Plan for responding to the work of other artists and crafts makers and designers</p> <p>Apply knowledge of the process of art and design into developing a sketchbook</p> <p>Evaluate and adapt published learning experiences against the expectations of the National Curriculum</p>	<p>National Curriculum for Art and Design. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239018/PRIMARY_national_curriculum_-_Art_and_design.pdf</p> <p>NSEAD Available at: https://www.nsead.org/</p> <p>EYFS Framework Available at: https://www.gov.uk/government/publications/early-years-foundation-stage-framework--2</p> <p>Barnes, R. (2006) <i>Teaching art to young children 4-9</i>. 2nd edn. Abingdon: Routledge Falmer Gregory</p> <p>Hope, G. (2008) <i>Thinking and Learning Through Drawing</i>. London: Sage.</p> <p>Key, P. & Stillman, J. (2009) <i>Teaching Primary Art And Design</i>, Exeter: Learning Matters.</p>	<p>In the first seminar we define the foundations of art and design using the National Curriculum, EY Goals with additional support from the NSEAD. We define the key pedagogies within the subject and explore the need for refining and revisiting through well sequenced progressive learning experiences. Drawing and sculpture are used to model the learning expectations and to make links with key vocabulary. Students are encouraged to keep a sketchbook throughout the process and respond to the work of other artists. Students then use their learning to evaluate and adapt a published scheme against the expectations of the National Curriculum.</p>
2	<p>Effective art and design teaching should acknowledge how art and design both reflect and shape our history and contribute to the culture, creativity of our nation</p> <p>Creating a safe art and design environment encourages pupils to take risks</p>	<p>Use painting as a tool for communication and self expression</p> <p>Apply key vocabulary colour, pattern, texture, line, shape, form and space to painting</p> <p>Extend learning in art and design through observation, imagination and expression</p>	<p>Hallam, J., Das Gupta, M. and Lee, H. (2011) 'Shaping children's artwork in primary classes insights from teacher child interaction during art activities' in <i>International Journal of Early Years Education</i>, 19 (3-4) pp 193-205.</p> <p>Hearne, S, Cox, S. and Watts, R. (2014) <i>Readings in Primary Art Education</i>. London: Intellect Books.</p>	<p>Following on from the first seminar this session revisits drawing and extends understanding of explicit skills teaching through painting. Students experience the process of art and design by producing expressive responses to a stimulus through paint. This experience is then used to</p>

	<p>Effective art and design teaching values observation, imagination and expression</p> <p>The role of the teacher within the art and design lesson is key to achieving high quality art and design</p> <p>The value and assessment of art and design should be on the sequential process as opposed to a final outcome</p>	<p>Use knowledge of the art and design process to develop a lesson plan</p> <p>Assess the process of art and design</p> <p>Define the teacher role within an art and design lesson</p>	<p>Ogier, S. (2017) <i>Teaching Primary Art and Design</i>. Learning Matters</p> <p>Access Art. Available at: https://www.accessart.org.uk/</p>	<p>evaluate and model the assessment process.</p> <p>Using their learning from the two seminars students develop their own lesson plan considering the varying roles they may have within an art and design lesson.</p>
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PGCE Primary QPU title: PGPC9140 Computing				
Session	Learn that (Subject knowledge)	Learn how to (Pedagogical knowledge)	Evidence base	Rationale
1	<p>There is an aim and three strands of the Computing curriculum with key concepts that underpin each.</p> <p>There are learning expectations for children at the end of KS1 and KS2 in each strand of the Computing NC; through these we are aiming to support the development of computational thinkers.</p> <p>There is a progression of computing knowledge, skills and understanding developed in the primary school and how individual lesson planning fits into this learning journey.</p> <p>Computing planning can be held as long term and medium-term plans/Schemes of Work.</p> <p>The Digital Literacy strand is designed to help children understand the role of technology in our lives and how they can be responsible and safe digital citizens.</p> <p>Children should be taught the societal obligation to be a responsible and safe user of technology by understanding the risks and harms that irresponsible use of technology (by self or others) can present.</p> <p>The Education for a Connected World research offers concepts that should be addressed in a school's Computing SoW.</p> <p>The trainee teacher's current computing abilities are important and where to find support for CPD.</p>	<p>Align lessons with the progression of knowledge, skills and understanding developed in the primary school and how individual lesson planning fits into this learning journey.</p> <p>Adapt a lesson from a SoW into an inclusive and manageable activity with clear DLOs and success criteria for a mixed ability class.</p>	<p>Beauchamp, G. (2017) Computing and ICT in the primary school: from pedagogy to practice. Second edition. London, [England]. Routledge.</p> <p>Caldwell, H. and Cullingford-Agnew, S. (2017) Technology for SEND in primary schools: a guide for best practice. London: Learning Matters.</p> <p>Kaye, L. (2017) Young children in a digital age: supporting learning and development with technology in early years. London: Routledge.</p> <p>Savage, M. and Barnett, A. (2015) Digital literacy for primary teachers. Northwich, England: Critical Publishing.</p> <p>Turvey, K., Potter, J., Burton, J., Allen, J. and Sharp, J. (2016) Primary Computing and Digital Technologies: Knowledge, Understanding and Practice. Seventh Edition. Los Angeles: Learning Matters.</p> <p>Younie, S., Leask, M. and Burden, K. (2015) Teaching and learning with ICT in the primary school. Second edition. Oxfordshire, [England]: Routledge.</p> <p>https://www.barefootcomputing.org/</p> <p>https://www.gov.uk/government/publications/education-for-a-connected-world</p> <p>https://www.computingatschool.org.uk/</p> <p>https://teachcomputing.org/</p> <p>TPEA – Technology, Pedagogy and Education Association</p>	<p>In the Beginning phase students are firstly asked to consider their own attitude to computing. Throughout the module they work on their confidence and an understanding of the value of computational thinking to a child and the world they inhabit.</p> <p>The students are introduced to the aim of and the three strands of Computing curriculum and their characteristics alongside the expectations for children at the end of KS1 and KS2 in each strand of the Computing NC. As preparation for their Beginning placement, we also look at the progression of knowledge, skills and understanding developed in the primary school and how individual lesson planning fits into this learning journey. Students are shown what a Computing SoW looks like and where to find exemplars. They also see a demonstration of how to adapt a lesson from a SoW into an inclusive and manageable activity with clear DLOs for a mixed ability class.</p> <p>They consider Digital Literacy in more detail and look at examples of how this can be addressed in school. On Beginning placement the trainees then observe and reflect on Computing lessons and evaluate how the school's curriculum maps to the National Curriculum for computing..</p>
2	<p>Digital technology should be evaluated to make informed professional decisions about its use to support teaching and learning.</p>	<p>How to evaluate digital technology and make informed professional decisions about</p>	<p>Bird, J., Caldwell, H. and Mayne, P. (2017) Lessons in teaching computing in primary schools. Second edition. London: Learning Matters.</p>	<p>In the Developing phase we look to build on the confidence and understanding the students have with a focus on digital</p>

	<p>Children should be taught that technology plays an important role in modern life and it should not be a mystery. By understanding the range of technologies and some of the underlying principles of how they work, helps to demystify them and to better understand the world we live in.</p> <p>Children should be taught the key concepts in the IT strand:</p> <ul style="list-style-type: none"> • Computers can be used to create a wide range of media • Information can be stored and retrieved • Media can be modified and edited • Different media can be combined • Content is owned, and there are rules around when and how it can be used <p>The types of software available that can be used to foster creativity in children.</p>	<p>use of technology to support teaching and learning.</p> <p>How to deliver an IT lesson from a SoW using a mixture of management strategies to accommodate children’s existing skills, the equipment and staff available.</p> <p>Teach using approaches such as WAGOLL, tinkering, guided practice, etc</p>	<p>Raspberry Pi The Big Book of Computing Pedagogy https://helloworld.raspberrypi.org/issues/0</p>	<p>technology across the curriculum and the Information Technology strand.</p> <p>We discuss how to evaluate digital technology and make informed professional decisions about use of technology to support teaching and learning. We then dig a bit deeper into the key concepts and skills that need to be taught in the IT strands of the Computing curriculum.</p> <p>We revisit the use of Schemes of Work and look at how to deliver an IT lesson using a suitable pedagogical approach.</p> <p>Students consider the range of software they have observed in use in school and share thoughts on approaches used and how these foster creativity in children</p>
3	<p>Computational thinking underpins the Computing NC.</p> <p>There are key CT concepts which include logic, evaluation, algorithms, patterns, decomposition and abstraction.</p> <p>Children should be taught the CS concept which involves programming / giving instructions to computers in a language they can understand to make things happen</p> <p>Programming is addressed via the additional concepts of sequence, selection, repetition and variables.</p> <p>The teaching of computer science can be addressed through subject specific pedagogical approaches eg unplugged, Semantic Waves and PRIMM.</p> <p>There is a range of apps/hardware that can be used to teach CS concepts.</p>	<p>Teach the logical underpinning of instructions/ algorithms as well as the languages that can be used to communicate these instructions to computers.</p> <p>Use unplugged activities to teach key concepts in CS.</p> <p>Deliver Computing activities that foster computational thinking skills.</p> <p>Use different computing specific pedagogical approaches such as unplugged activities, the use of Semantic Waves with familiar contexts and teaching code through the process of reading, writing, testing and debugging it, exemplified by PRIMM.</p>	<p>Bell T., Vahrenhold J. (2018) CS Unplugged—How Is It Used, and Does It Work? In: Böckenhauer HJ., Komm D., Unger W. (eds) Adventures Between Lower Bounds and Higher Altitudes. Lecture Notes in Computer Science, vol 11011. Springer, Cham. https://doi.org/10.1007/978-3-319-98355-4_29 Available at https://link.springer.com/chapter/10.1007/978-3-319-98355-4_29#enumeration</p> <p>Busuttil, L. and Formosa, M (2020) ‘Teaching Computing without Computers: Unplugged Computing as a Pedagogical Strategy’, Informatics in education. Vilnius University, 19(4), pp. 569–587. Available online through One Search</p> <p>Caldwell, H. and Smith, N. (2017) Teaching computing unplugged in primary schools: exploring primary computing through practical activities away from the computer. London: Learning Matters.</p> <p>Delal, H. and Oner, D. (2020) ‘Developing Middle School Students’ Computational Thinking Skills</p>	<p>The final phase is used to address what is usually the least favourite area for students and the session is aimed to build on the confidence already developed and to demystify Computational Thinking (CT) and Computer Science (CS), as well as demonstrate how accessible they are to teach.</p> <p>We explore CT Concepts such as algorithms, abstraction, decomposition, and approaches such as debugging and collaborative working. CS concepts such as sequence, selection, repetition and variables are also addressed as well as ways in which CT and CS concepts can be taught through, for example, unplugged activities. Students are introduced to a range of</p>

			<p>Using Unplugged Computing Activities', Informatics in education. Vilnius University, 19(1), pp. 1–13. doi: 10.15388/infedu.2020.01.</p> <p>Grover, S., Jackiw, N. and Lundh, P. (2019) 'Concepts before coding: non-programming interactives to advance learning of introductory programming concepts in middle school', Computer science education. Routledge, 29(2-3), pp. 106–135.</p> <p>DOI: 10.1080/08993408.2019.1568955doi: Sentence, S, Waite, J. and Kallia, M. (2019) Teachers' Experiences of using PRIMM to Teach Programming in School, SIGCSE Journal: Proceedings of the 50th ACM Technical Symposium on Computer Science Education Available at https://core.ac.uk/download/pdf/237088209.pdf</p> <p>Waite, J., Curzon, P., & Marsh, W., & Sentance, S. and Hadwen-Bennett, A. (2018). Abstraction in action: K-5 teachers' uses of levels of abstraction, particularly the design level, in teaching programming. International Journal of Computer Science Education in Schools. Vol 2 No 1. Available at https://files.eric.ed.gov/fulltext/ED581486.pdf</p> <p>Waite, J., Maton, K., Curzon, P. and Tuttiett, L. (2019). Unplugged Computing and Semantic Waves: Analysing Crazy Characters. 10.1145/3351287.3351291. Available at https://www.researchgate.net/publication/335527816_Unplugged_Computing_and_Semantic_Waves_Analysing_Crazy_Characters</p>	<p>apps/hardware that can be used to teach key concepts. They learn to read, write, test and debug code using Logo and Scratch.</p> <p>Students draw on current placement experience to discuss the manageability of delivering CS activities and the use of suitable pedagogical approaches.</p>
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PGCE Primary QPU title: PGPC9140: Design and Technology				
Session	Learn that – subject knowledge	Learn how to – pedagogical knowledge	Evidence Base	Rationale
1	<p>Introduction to Design Technology Topic area: Paper engineering Pop-up mechanisms</p> <ul style="list-style-type: none"> Design Technology is a process which supports and harnesses creative thinking, The stages of a DT enquiry can be applied to the creation of any DT project in the primary school (Disciplinary knowledge); The process is not always strictly linear and that this will impact on planning and delivery; There are DT making skills specific to different projects Paper Engineering projects allow children to develop and perfect knowledge of Structures (strengthen, stiffen, reinforce) and Mechanisms. 	<ul style="list-style-type: none"> Use card, paper and tools to develop confidence and subject knowledge skills (Substantive knowledge); Use paper engineering skills and knowledge to create a quality product. Plan DT activities for pupils related to the National Curriculum. Use the DT audit to reflect on your own skill development needs Use personal experience to understand how to build resilience in learners Use personal experience to understand sequencing and realistic timing when planning DT activities <p>Use Design technology materials and tools safely for example;</p> <p>Key Tools In a primary Class Ruler Glue Spreader PVA Glue / Glue Stick Stapler Metal safety ruler Craft knife Paper drill</p>	<p>Design and technology programmes of study: key stages 1 and 2 National curriculum in England. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239041/PRIMARY_national_curriculum_-_Design_and_technology.pdf</p> <p>Journals Baynes, K. (2008) Design education: what's the point?. <i>Design and Technology Education: An International Journal</i>, [S.l.], v. 11, n. 3, Available at: <https://ojs.lboro.ac.uk/DATE/article/view/Journal_11.3_1006_R></p> <p>Eggleston, J. (2009) Design & Technology Teaching. <i>Design & Technology Teaching</i>, v. 24, n. 2, Aug. Available at: <https://ojs.lboro.ac.uk/DTT/article/view/889></p> <p>Lawson, B. (2006), <i>How Designers Think: The Design Process Demystified</i>, 4th ed., Oxford; Burlington, MA: Elsevier/Architectural.</p> <p>Lim S, Lim-Ratnam C, Atencio, M. (2012) <i>Understanding the Processes Behind Student Designing: Cases from Singapore</i>. National Institute of Education, Nanyang Technological University, Singapore.</p>	<p>This seminar provides an overview of the DT process in the National Curriculum and introduces key terminology that students require in order to be able to engage with session 2</p> <p>The sessions leads trainees swiftly through the Design, make and evaluate process itself, as it is recognised that nor all trainees have prior experience as learners themselves.</p> <p>Trainees are supported in planning learning activities linked directly to NC expectations.</p>
2	<p>Review of the Design process. Topic area: Moving Vehicles: Wheels and Axles</p> <ul style="list-style-type: none"> Wood based projects can allow children to develop and perfect knowledge of Structures and Mechanisms; specifically: <u>Structures</u>: strengthen, stiffen, reinforce <u>Mechanisms</u>: levers, sliders, wheels, axels (KS1) 	<ul style="list-style-type: none"> Consolidate your understanding of the stages of a DT enquiry which can be applied to the creation of any DT project in the primary school (Disciplinary knowledge); Experience and practice the subject specific DT skills linked to the use of woodworking tools (Substantive knowledge); Specifically learn different methods for strengthening structures and attaching axles to a wooden chassis. 	<p>Websites DT Institute Global, https://dt-global.com/company/dt-institute, UK Design Council https://www.designcouncil.org.uk/</p> <p>Books Hope, G. (2004) <i>Teaching Design and Technology 3 – 11: the Essential Guide for Teachers</i>. London: Continuum</p> <p>Hope, G. (2006) <i>Teaching Design and Technology at Keys Stages 1 and 2</i>. Exeter: Learning Matters</p>	<p>This session revisits the central philosophy of Design, Make and Evaluate process as the ultimate value of DT teching and learning activities.</p> <p>For many trainees, this will be their first experience of using woodworking tools and time and space is created for the development of competence and</p>

	<p>gears, pulleys, cams, levers, linkages (KS2)</p>	<p>Use Design technology materials and tools safely for example;</p> <p>Key Tools In a primary Class Hack Saw Bench Hook Ruler Glue Spreader PVA Glue Card Triangles Section timber Dowel Glue Gun Goggles Sanding Block Set Square Drills and drill bits Screws, nails, pins Hammer</p>	<p>Hope, G. (2018) <i>Mastering Primary Design and Technology</i>. London: Bloomsbury Academic</p> <p>Design and Technology Association. (1999) <i>Developing language through design and technology</i>. Wellesbourne.</p> <p>Design and Technology Association (UK). (2000) <i>Developing mathematics through design and technology</i>. Wellesbourne.</p> <p>Design and Technology Association (U.K.); Kendall, Sandie; (2007) <i>The design and technology primary subject leaders' file</i>. Design and Technology Association (U.K.).</p> <p>Design and Technology Association (UK). (1998) <i>The national framework for supporting design and technology in primary schools: incorporating the DATA guide to design and technology resources primary</i>.</p>	<p>confidence. Trainees are encouraged to reflect upon both as they consider their progress towards meeting Standard 3.</p> <p>Wood working has been selected as, unlike other topics within DT, it is very unlikely trainees will have easy access to Primary age phase appropriate tools in their own homes.</p> <p>Time constraints mean that a complete vehicle is unlikely to be made. Instead trainees are encouraged to experiment with different forms of axels and wheel attachment.</p>
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PGCE Primary QPU PGPC9140 English				
	Learn that/about	Learn how to	Evidence Base	Rationale
1	<p>The breadth, scope and structure of the National Curriculum for English</p> <p>The fundamental importance of talk to children’s learning</p> <p>The teaching sequence</p> <p>The importance of teacher modelling and scaffolding learning.</p> <p>Subject knowledge – Kennings and descriptive language.</p>	<p>Reflect on their own learning experience to consider how they used their prior knowledge.</p> <p>Understand and apply their own experience of having their learning scaffolded.</p> <p>Use the learning about cognitive development from 9140 and 7003 to know how to plan for scaffolding of new learning.</p>	<p>Excellence in English, Ofsted 2011</p> <p>Independent Review of The Primary Curriculum: Final Report, Rose, J. (2009)</p> <p>Effective Primary Pedagogical Strategies in English and Mathematics in Key Stage 2 (2011)</p> <p>Moving English Forward, Ofsted 2012</p> <p>Siraj, I. & Taggart, B. (2014). Exploring Effective Pedagogy in Primary Schools: Evidence from Research</p> <p>Copping, A. (2016). <i>Being Creative in Primary English</i>. London. Sage</p> <p>Edwards, A. (1995) ‘Teacher education: Partnerships in pedagogy?’, <i>Teaching and teacher education</i>. Oxford: Elsevier Ltd, 11(6), pp. 595–610. doi: 10.1016/0742-051X(95)00015-C.</p>	<p>What does Effective English Teaching Look like? Links to the theme of the week in 9140 – How children learn.</p> <p>This is the first session and it introduces students to some of the key aspects of subject pedagogy. There are opportunities to look at video footage as well as reflect on what they may have experienced in the classroom. The session is underpinned by evidence from a range of recent studies and students are required to engage with these.</p> <p>Students are introduced to the concept of modelling in English, as we demonstrate how to move through the teaching sequence and are required to reflect on the ways that their learning was scaffolded. This links to work that students have done in 9140 about ‘how children learn’.</p> <p>The concept of working memory is introduced and linked to pedagogy and teaching strategies and also to the way that we teach them as students.</p> <p>Students are introduced to the National Curriculum for English and encouraged to consider how planning for a specific aspect (poetry) can incorporate different targets from the programme of study.</p>
2	<p>Text types and features of non-fiction texts</p> <p>EXIT models</p> <p>Characteristics of shared work and its role in the teaching of Literacy.</p> <p>How children develop literacy skills through shared work.</p>	<p>Begin to implement the teaching sequence</p> <p>Use different approaches to shared work to develop children’s learning.</p> <p>Use modelling to support children’s learning by watching sections of a modelled lesson.</p> <p>Plan a short activity using these strategies.</p>	<p>Victoria State Government (2018) Shared Reading https://www.education.vic.gov.au/school/teachers/teachingresources/discipline/english/literacy/readingviewing/Pages/teachingpracshared.aspx [last accessed 9th September 2020]</p> <p>Vygotsky, L (1978) <i>Mind in Society: the development of higher psychological processes</i>. London: Harvard University Press</p> <p>National Literacy Trust (2013) <i>Transforming Writing</i> https://literacytrust.org.uk/research-services/research-reports/transforming-writing-final-evaluation-report/</p> <p>DfE (2021) <i>The Reading Framework. Teaching the foundations of literacy</i>.</p>	<p>This session builds on from the last, deepening the understanding of the ‘shared’ process and where this sits at the beginning of the teaching sequence. Students are introduced to ‘guided’ learning with a focus on guided writing. This is an activity that is often given to student teachers to support with. Student’s familiarity with the NC is built on with students using it to plan a short activity together. The session ends with a brief look at SPAG which is developed further in the next session. A further session on guided reading follows shortly.</p>

	<p>Reflect on the purposes behind shared work.</p> <p>How children develop literacy skills through guided work.</p> <p>Vygotsky's ZPD and its link to shared and guided learning in Literacy.</p>		<p>Graham, S. (2019) 'Changing How Writing Is Taught', Review of research in education. Los Angeles, CA: SAGE Publications, 43(1), pp. 277–303. doi: 10.3102/0091732X18821125.</p> <p>https://cumbria.primo.exlibrisgroup.com/permalink/44UOC_INST/136jqkg/cdi_crossref_primary_10_3102_0091732X18821125</p>	
<p>3</p>	<p>The place of Spelling, Grammar and Punctuation in the NC</p> <p>The interplay between subject knowledge, curriculum knowledge and pedagogical knowledge in the context of teaching SPAG</p> <p>Approaches to teaching grammar eg, discrete or context situated.</p>	<p>Plan a grammar activity from a learning objective</p> <p>Evaluate different approaches to teaching SPAG</p> <p>Make decisions on the best way to teach SPAG using knowledge of cognitive load</p>	<p>Chapter 5 Waugh, D. (2021) Primary English for Trainee Teachers. 3rd Edition. SAGE Publishing.</p> <p>https://cumbria.primo.exlibrisgroup.com/permalink/44UOC_INST/gmm4hj/alma99366567402701</p> <p>Waugh, D. (David G. ., Warner, C. and Waugh, R. (2019) Teaching grammar, punctuation and spelling in primary schools . 3rd edition. London: Learning Matters.</p> <p>Gilbert, Francis. 2020. 8 Ways To Teach spelling, punctuation and grammar. Teaching English, 22, pp. 49-52. ISSN 2051-7971 [Article] https://research.gold.ac.uk/id/eprint/29618/</p> <p>Higgins, S (2015) 'Research-based approaches to teaching writing' in Waugh, D, Bushnell, A and Neaum, S (eds) <i>Beyond Early Writing</i>. Northwich: Critical Publishing</p> <p>https://cumbria.primo.exlibrisgroup.com/permalink/44UOC_INST/1s7kqjn/alma99164238702701</p> <p>DAFFERN, T., MACKENZIE, N.M. and HEMMING, B., 2017. Predictors of writing success: How important are spelling, grammar and punctuation? <i>Australian Journal of Education</i>, 61(1), pp. 75-87.</p> <p>https://cumbria.primo.exlibrisgroup.com/permalink/44UOC_INST/136jqkg/cdi_rmit_collectionsjats_search_informit_org_dois_10_3316_ielapa_341436270151843</p> <p>Watson, A. (2015) 'The problem of grammar teaching: a case study of the relationship between a teacher's beliefs and pedagogical practice', <i>Language and education</i>. Routledge, 29(4), pp. 332–346. doi: 10.1080/09500782.2015.1016955.</p> <p>https://cumbria.primo.exlibrisgroup.com/permalink/44UOC_INST/136jqkg/cdi_informaworld_taylorfrancis_310_1080_09500782_2015_1016955</p>	<p>Today's session draws on learning done in PGPC9140 and PGCE7003 on cognitive load and applies it to the teaching and learning of SPAG. It helps students to evaluate different approaches and make decisions about their own planning.</p> <p>Students have had to develop their own subject knowledge in this area and this builds confidence prior to going out into school on placement and gives opportunities for further subject knowledge development where necessary.</p> <p>It follows well from the session on shared to guided writing where there was a focus on modelling the teaching of SPAG in the context of shared reading and writing.</p>

			<p>https://www.suttontrust.com/wp-content/uploads/2014/10/What-Makes-Great-Teaching-REPORT.pdf</p> <p>Loughran, J., Berry, A. and Mulhall, P. (2012) Understanding and developing science teachers' pedagogical content knowledge. 2nd ed. Rotterdam: Sense Publishers. doi: 10.1007/978-94-6091-821-6.</p> <p>https://cumbria.primo.exlibrisgroup.com/permalink/44UOC_INST/1s7kqjn/alma99105146502701</p>	
4	<p>The purpose of, and key principles that, underpin the teaching of small group focused reading</p> <p>Different approaches to small group reading that are found in the classroom.</p>	<p>Develop organisational techniques and ideas for the elements of small group reading</p> <p>Plan and choose assessment strategies for small group focused reading.</p>	<p>Burkins, J. and Croft, M. M. (2017) <i>Preventing Misguided Reading : Next Generation Guided Reading Strategies</i>. Portland: Stenhouse Publishers. Available at: https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=e000xww&AN=1658639&site=ehost-live (Accessed: 6 September 2021).</p> <p>https://www.judsonu.edu/uploadedFiles/Judson_Public/Academics/Graduate/Master_of_Education_in_Literacy/Burkins%20and%20Yaris%20-%20Preventing%20Misguided%20Reading.pdf</p> <p>Vygotsky, L.S. (1978). <i>Mind in Society: The development of higher psychological processes</i>. Cambridge, MA: Harvard University Press.</p> <p>https://www.education.vic.gov.au/school/teachers/teachingresources/discipline/english/literacy/readingviewing/Pages/teachingpracguided.aspx</p> <p>Palincsar, Annemarie & Brown, Ann. (1984). Reciprocal teaching of comprehension-fostering and monitoring activities. <i>Cognition and instruction</i>. 1. 117-. 10.1207/s1532690xci0102_1. (Accessed: 6 September 2021)</p> <p>Reciprocal Reading -- 'Our teacher gives us the responsibility to lead our reading lessons'.</p> <p>Wheeler, Judith1, Clarke, Sam1 Source: <i>English 4--11; Summer2016, Issue 57, p17-18, 2p</i></p> <p>Jane Oakhill, Kate Cain, Carsten Elbro · 2014 <i>Understanding and Teaching Reading Comprehension A Handbook</i>, Taylor & Francis https://educationendowmentfoundation.org.uk/public/files/Metacognition_and_self-regulation_review.pdf</p> <p>https://educationendowmentfoundation.org.uk/school-themes/literacy/</p>	<p>Students have been in school now and were asked to find out about the school's approach to guided reading. This session builds on this information to support students in understanding what they are seeing and to enable them to plan for children's learning in reading.</p> <p>Students are able to link their school based learning to the theoretical frameworks explored in university. The students will more readily understand how to support the teaching of reading adjacent to the teaching sequence.</p> <p>Using observation and practical learning from school they are now able to develop planning and assessment skills</p>

			https://www.tes.com/news/why-whole-class-reading-beats-carousel-and-seven-ways-ensure-it-successful	
5	<p>End of Key Stage 1 and Key Stage 2 Assessments in Reading and Writing</p> <p>The Teacher Assessment Framework including children not yet working towards the expected standard in Key Stage 1</p>	<p>Analyse a selection of children's writing and match to TAF justifying decision.</p> <p>Analyse and discuss summative data in terms of context, next steps, future teaching and learning etc</p>	<p>https://www.gov.uk/government/publications/2021-early-years-foundation-stage-assessment-and-reporting-arrangements-ara</p> <p>https://help-for-early-years-providers.education.gov.uk/literacy/writing</p> <p>https://www.gov.uk/education/primary-curriculum-key-stage-1-tests-and-assessments</p> <p>https://www.gov.uk/government/publications/2022-key-stage-1-assessment-and-reporting-arrangements-ara</p> <p>https://www.gov.uk/government/publications/2022-key-stage-2-assessment-and-reporting-arrangements-ara</p> <p>https://www.gov.uk/education/primary-curriculum-key-stage-2/#/education/primary-curriculum-key-stage-2-tests-and-assessments</p> <p>https://www.gov.uk/government/publications/key-stage-2-teacher-assessment-guidance/key-stage-2-teacher-assessment-guidance</p>	<p>Students have completed their beginning placement and will have experienced some forms of assessment. In preparation of future placements this session focuses on statutory summative assessments and the analysis and use of data.</p> <p>To ensure that you have an understanding of the range of statutory assessments. To enable you to identify the information given to support your teaching and learning To support your ability to analyse data and reflect, in consultation with colleagues if appropriate, how to best support the learning of the pupil's. To consider how assessment data may inform your professional development.</p>
6	<p>Effective teaching can transform pupils' knowledge, capabilities and beliefs about learning</p> <p>Modelling helps pupils understand new processes and ideas</p> <p>Guides, scaffolds and worked examples can help pupils apply new ideas</p>	<p>Use modelling, explanations and scaffolds</p> <p>Enable critical thinking and problem solving by first teaching the necessary foundational content knowledge</p> <p>Plan to connect new content with pupils' existing knowledge</p>	<p>Writing Process Model Page 102 Copping A (2016). <i>Being Creative in Primary English</i>. London. Sage</p> <p>Hayes and Flower 1981</p> <p>Kellogg 1999</p> <p>MacArthur 1999</p>	<p>Having completed the developing phase of the programme, you now have more experience to apply and put together the building blocks from beginning phase: shared reading, writing, guided work and grammar and punctuation. This session looks to put all of these building blocks together to develop effective teaching sequences for progression. Alongside this, the session looks at research into creative thinking and writing pedagogy, suggesting ways to work at cementing the building blocks and suggests a creative thinking framework 'think for writing' as an aid to thinking and planning.</p>

PGCE Primary QPU title: PGPC9140 Geography				
	Subject Knowledge	Pedagogical Knowledge	Evidence Base	Rationale
1	<p>Students will learn what 'geography' is, it's connections to everyday life, the nature' of the subject, the 7 key concepts of geography and that primary geography should be, 'a fascinating, invigorating and exciting subject - the rationale for teaching geography.</p> <p>that is fundamental to our appreciation of the world in which we live' Simon Catling (2010)</p> <p>Students will learn about the Geography National Curriculum,</p> <p>will learn about Catling's 10 threads of geographical learning,</p> <p>will be introduced to geographical skills. Students will learn about:</p> <p>the importance of widening children's experiences and horizons, to learn about people and places,</p> <p>the importance of child centred learning,</p> <p>the importance of place-based learning,</p> <p>celebrating diversity and the promotion of positive attitudes towards home location, the environment, the world, to other people and cultures.</p> <p>Students will learn the importance of basing high quality geography on foundations of 'good' teaching.</p>	<p>Students will:</p> <p>learn how to conduct fieldwork,</p> <p>how to promote enquiry learning,</p> <p>how to inject thinking and problem-solving skills into geographical planning.</p> <p>Students will learn:</p> <p>a variety of ways of approaching the use of and making of maps</p> <p>a variety of ways in which photographs can used to support children' learning</p> <p>the use of artefacts, written sources and real people.</p>	<p>Barlow, A and Whitehouse, S. (2019) Mastering Primary Geography. London: Bloomsbury Academic</p> <p>Catling, S and Willy, T. (2010) Teaching Primary Geography: Learning Matters</p> <p>Catling, S and Willy, T (2018) Understanding and Teaching Primary Geography: London: Sage</p> <p>Cooper, H {Ed} (2006). Geography 3-11 A Guide for Teachers. London: Fulton</p> <p>Pike, S (2015) Learning Primary Geography. London: Routledge</p> <p>Rowley, C and Cooper, H (2009). Cross-curricular Approaches to Teaching and Learning. London: Sage</p> <p>Scoffham, S (2013) Teaching Geography Creatively: Routledge. London</p> <p>Scoffham, S (2010) The Primary Geography Handbook. Geographical Association</p> <p>My work in leading a Geographical Association TESIG (Teacher Education Special Interest Group) sub-group advising on the desired content of geography ITT using the Winchester Criteria – this</p>	<p>These sessions offer a rich introduction to primary geography by introducing knowledge and understanding of the nature of the subject, of key geographical concepts and learning expectations (including notions of high quality geography and the requirement to adapt teaching where necessary), whilst also focussing on informing and enthusing student teachers, something which my work with the Geographical Association's Teacher Education Special Interest Group showed to be of great importance to a continued positive attitude towards the teaching of the subject. The sessions aim to move from 'informing' and 'inspiring' to 'empowering' students with the skills, knowledge and confidence to be able to plan, teach and assess geography confidently on placement and beyond. Upon completion of the course students should feel ready to apply concepts of high-quality teaching to notions of high-quality geography and feel confident to be able to independently plan, resource, teach, assess and critically reflect on the teaching of geography on their Extending placement and beyond. Students will critically reflect on their own experiences as learners, will examine the wide power and potential of the subject and will consider their role in the future success of geography in schools - students are given the</p>
2	<p>Students will learn essential aspects of geographic planning, including the need to cater for all children's ability levels and needs</p>	<p>Students will learn how to;</p>		

	<p>and will learn a selection of ways of how geography can be assessed. Students will learn the planning connections between geographical skills, concepts, themes, place study and key questions and will learn the importance of structuring a sequence of geographical learning in a logical and meaningful manner, incorporating a variety of approaches to learning. Students will learn about a variety of 'hook's to children's learning, will learn about a variety of effective ways of using geographical sources and the use of cross-curricular links to enrich and amplify geographical learning and subject value. Students will be introduced to the notion of creativity withing geographical learning and will learn about a variety of examples of such practice.</p>	<p>sequence a series of geographical learning experiences and ways in which geographical learning might be adapted and assessed.</p> <p>apply creative and cross-curricular approaches to the teaching of geography and will learn how to apply a variety of teaching methods as a way of 'hooking' children's interest.</p> <p>a number of ways in which geographical learning can be amplified by the teacher and how geographical learning can be made more personal and motivational for the pupils in their care</p> <p>ways in which the students own interests and experiences might offer exciting routes for geographical learning.</p> <p>apply concepts of high-quality teaching to their own teaching of geography and what to include in a good geography lesson / medium-term plan.</p> <p>use a variety of ways of communication to show geographical learning and will learn how to inject thinking skills and problem-solving into their teaching.</p> <p>Students will be taught how to use mind-mapping (alongside a good geography success-criteria) to explore the learning potential for a geography topic.</p> <p>In this session students will learn how to inject further fieldwork techniques into planning and ways in which the teaching about distant places may be done so as to avoid stereotype and tackle misconceptions.</p>	<p>has included working with a variety of other institutions and speaking on two occasions at GA conferences regarding high quality ITT for geography.</p>	<p>tools and ways of thinking for this quality 'geography journey' to begin.</p>
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On beginning placement, all students will: observe a wide selection of subjects being taught and will hopefully have the opportunity to discuss and observe geographical teaching. Students will be learning how to plan and deliver a successful learning experience to children the learning of which can then be applied to their teaching of geography when that happens. Some students might plan, teach and reflect upon the teaching of geography All students should discuss the geography provision and the approaches to the teaching of the subject with their class teacher

On developing placement students may have the opportunity to plan, teach and reflect upon the teaching of geography as well as the opportunity to discuss geographical provision with the class teacher and other colleagues. Students may have the opportunity to see good geography teaching from their class teacher and expected to be-proactive in the development of their understanding of how geography may be taught, resourced and assessed. Students will be continuing to refine their general abilities as a teacher and will be able to apply such professional growth to the teaching of geography as and when it may occur.

On extending placement it is expected that those students who have not yet taught geography are proactive in seeking opportunities to do so – some students may have the opportunity to plan, teach, assess, receive feedback on and reflect upon the teaching of a sequence of geographical experiences as outlined in a geography 'topic'. It is expected that students on this placement seek support to advance their skill, their knowledge of geographical resource use and general understanding and confidence in the subject, by seeking advice from colleagues in school and to contact the university for support if necessary.

PGCE Primary QPU title: PGPC9140 History

Session	Learn that (Subject knowledge)	Learn how to (Pedagogical knowledge)	Evidence base	Rationale
1	<p>Introduction to Primary history and working as an historian (Disciplinary Subject knowledge)</p> <p>Working as an historian should form part of your planning and thinking about how to teach history well;</p> <p>Such skill forms an historian's toolkit</p> <p>We can progress children's historical skills through careful planning and effective use of resources</p> <p>Teaching students that he effective teaching in history means making use of primary and secondary historical evidence.</p> <p>Teaching students about the difference between primary and secondary historical evidence.</p>	<p>Recognise that historical tools (Disciplinary Knowledge) can help children make sense of distinct historical periods (Substantive knowledge)</p> <p>Generate historical activities to support learning about distinct historical periods.</p> <p>Generate historical activities which support the learning of key historical second order concepts; chronology, change (cause) similarity, difference and understand how an historian works from evidence.</p>	<p>Ofsted Research Review: History - https://www.gov.uk/government/collections/curriculum-research-reviews</p> <p>Cooper, H (2020) in ARCHAEOLOGICAL heritage and Education : an international perspective on history education edited by Danijela Trškan and Špela Bezjak. - 1st ed. - Ljubljana : Slovenian National Commission for UNESCO, 2020 pp.93-115</p> <p>Cooper, H. (2014) Writing History 7-11. Historical Writing in different genres. London and New York. David Fulton.</p> <p>Barca and Reberio, (2020) in ARCHAEOLOGICAL heritage and Education : an international perspective on history education edited by Danijela Trškan and Špela Bezjak. - 1st ed. - Ljubljana : Slovenian National Commission for UNESCO, 2020 pp.93-115</p> <p>Blyth, J. (1989) History in Primary Schools. Milton Keynes. Open University Press.</p> <p>Harnett, P. Whitehouse, S. (2017) Interesting Activities using Sources at Key Stage 1. pp. 31-44. In Cooper, H. (ed) Teaching History Creatively. London. Routledge.</p> <p>Hoodless, P.A. (2008) Teaching History in Primary Schools. Exeter. Learning Matters.</p> <p>Moore, H.G. (2020) in ARCHAEOLOGICAL heritage and Education : an international perspective on history education edited by Danijela Trškan and Špela Bezjak. - 1st ed. - Ljubljana : Slovenian National Commission for UNESCO, 2020. pp.51-69</p> <p>Moore, H. (2017) Using Artefacts and Sources Creatively, in H. Cooper (ed.) Teaching History Creatively, 2nd edition. London: Routledge, pp. 1-87.</p> <p>Nichol, J. (2017) Creative Teaching with Prehistoric Sources. pp.53-57. In Cooper, H. (ed) Teaching History Creatively. London. Routledge.</p> <p>O'Hara, L. O'Hara, M. (2001) Teaching History 3-11. The Essential Guide. London. Continuum.</p> <p>Temple, S. (2017) Using Archives Creatively. pp 87-104. Cooper, H. (ed) Teaching History Creatively. London. Routledge.</p>	<p>This seminar provides an overview of working with the National Curriculum and introduces key vocabulary that the students require in order to be able to engage with later seminar sessions. The students are given information about the way the module works and its scope.</p> <p>At this very early stage the students are supported in thinking about how to plan historical activities and link them directly to NC PoS.</p> <p>Three key second order concepts are introduced at this stage; firstly; that an historian works from historical evidence. Secondly; that an understanding of chronology underpins learning in history. Thirdly; That it is essential to think about chronology and change over time.</p>
2	<p>Adaptive Planning : The Romans (an example theme)</p> <p>To an historian, conceptual thinking skills (disciplinary</p>	<p>This session introduces and reaffirms a number of key concepts in the teaching of history:</p>	<p>Ofsted Research Review: History - https://www.gov.uk/government/collections/curriculum-research-reviews</p> <p>Cooper, H (2020) in ARCHAEOLOGICAL heritage and Education : an international perspective on history education edited by</p>	<p>Whereas the focus in session 1 was the teaching and theory of history, the focus moved this session to how this disciplinary knowledge can be applied to the teaching and learning of</p>

<p>knowledge and skills such as using enquiry and working from evidence) have limited value without substantive knowledge i.e. subject knowledge of different historical periods.</p> <p>That regurgitated and dry ‘factual’ knowledge is of limited value without applying disciplinary knowledge.</p> <p>Assessment of pupils’ conceptual thinking skills informs teachers’ planning for classes, groups and individuals (Adaptive planning) – doing the right thing, at the right time, in the right way.</p> <p>Formative assessment and misconceptions.</p>	<p>History is based upon evidence and a variety of evidence may be used in the teaching of history. This can be explored in a variety of ways.</p> <p>Historical subjective knowledge (substantive knowledge) is a vital component of teaching history. That imaginative strategies which promote false empathy (such as writing fictitious diaries) do not form effective strategies in the teaching of history.</p> <p>That the best teaching in history is achieved through a variety of different (and challenging) activities which can be adapted to meet the needs of all students. We model some ways in which this may be done.</p> <p>We model enquiry learning and problem solving in history.</p>	<p>Danijela Trškan and Špela Bezjak. - 1st ed. - Ljubljana : Slovenian National Commission for UNESCO, 2020 pp.93-115</p> <p>Cooper, H. (2014) Writing History 7-11. Historical Writing in different genres. London and New York. David Fulton.</p> <p>Barca and Reberio, (2020) in ARCHAEOLOGICAL heritage and Education : an international perspective on history education edited by Danijela Trškan and Špela Bezjak. - 1st ed. - Ljubljana : Slovenian National Commission for UNESCO, 2020 pp.93-115</p> <p>Blyth, J. (1989) History in Primary Schools. Milton Keynes. Open University Press.</p> <p>Harnett, P. Whitehouse, S. (2017) Interesting Activities using Sources at Key Stage 1. pp. 31-44. In Cooper, H. (ed) Teaching History Creatively. London. Routledge.</p> <p>Hoodless, P.A. (2008) Teaching History in Primary Schools. Exeter. Learning Matters.</p> <p>Moore, H.G. (2020) in ARCHAEOLOGICAL heritage and Education : an international perspective on history education edited by Danijela Trškan and Špela Bezjak. - 1st ed. - Ljubljana : Slovenian National Commission for UNESCO, 2020. pp.51-69</p> <p>Moore, H. (2017) Using Artefacts and Sources Creatively, in H. Cooper (ed.) Teaching History Creatively, 2nd edition. London: Routledge, pp. 1-87.</p> <p>Nichol, J. (2017) Creative Teaching with Prehistoric Sources. pp.53-57. In Cooper, H. (ed) Teaching History Creatively. London. Routledge.</p> <p>O’Hara, L. O’Hara, M. (2001) Teaching History 3-11. The Essential Guide. London. Continuum.</p> <p>Temple, S. (2017) Using Archives Creatively. pp 87-104. Cooper, H. (ed) Teaching History Creatively. London. Routledge.</p>	<p>substantive (subject) knowledge. It supports students in reflecting on what they have learned in school and patterns they may have fallen into without noticing. It especially discusses strategies which may have been ineffective.</p> <p>This session builds upon the experience trainees will have had of planning for and observing historical teaching and activities and progresses their understanding of assessment. adaptation and feedback.</p> <p>Recognise features of pupils’ response which indicate their stage of conceptual thinking in history.</p> <p>Understand the link between ‘challenging teaching’ and effective and enthusiastic participation in history.</p> <p>Understand the broad range of activity which may be used in the effective teaching of substantive knowledge in history.</p>
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Independent activity:

Engage in reading centred around historical skills and the role of pedagogically sound practical activity in supporting children’s learning of history.

Engage with the National Curriculum for history ensuring they are familiar with layout, purpose and an overview of the content.

Begin to develop own subject knowledge support by engaging with the variety of learning materials provided in addition to the course materials.

Read, Cooper. H (2017) (ed.) Teaching History Creatively. London: Routledge

On placement, students will:

Plan and teach history to their allocated class demonstrating that they have substantive subject knowledge.

Use historical evidence (such as written evidence and artefacts) in support of their teaching.

Use a variety of challenging approaches such as problem based enquiry learning in their teaching.

Avoid the use of teaching activity which promote false empathy (such as writing fictitious diaries) and do not form effective strategies in the teaching of history.

If possible students will seek approval to visit other years groups or look at history books to widen their understanding of progression in conceptual thinking.

PGCE Primary QPU title: PGPC9140 Languages				
Session	Learn that (Subject knowledge)	Learn how to (Pedagogical knowledge)	Evidence base	Rationale
1	<p>Introduction To Primary Languages: The National Curriculum requirements for Languages (DfE).</p> <p>Introduction to the KS2 framework for Languages (Language Progression for Oracy, Literacy, KAL, LLS, Intercultural Understanding) and Programme of study.</p> <p>Planning for progression: A language curriculum needs to be planned carefully for pupils' progress by considering the building blocks of the subject (the sounds, words and rules about how these connect to create sentences and meanings) and the sequence of these blocks</p> <p>Focus: Oracy (Sounds and words) Teacher models lesson using the topic of clothes: introduction to the pillars of progression Phonics/Vocabulary</p>	<p>Structure of a language lesson: importance of the stages and their order</p> <p>1. Contextualisation</p> <p>2. Introduction of vocabulary: reference to cognitive Learning Theories to support memory when introducing vocabulary/ Use of strategies (visual support, actions, colour coding, voice, etc.) to memorise language and structures.</p> <p>3. Recognition: strategies to help learners to match words to concepts</p> <p>4. Repetition of language (individual/pair work/group work)</p>	<p>Ellis, P. & Harris, L. (2018) Approaches to Learning and Teaching MFL: a toolkit for international teachers. Cambridge university press.</p> <p>Jones, J. & Coffey, S. (2012) Modern Foreign Languages from 5 to 11 London: David Fulton : Chapter 8-9</p> <p>Kirsh, C. (2008) Teaching Languages in the Primary School. Continuum books, London</p> <p>Sharpe, K. (2001) Modern Foreign Languages in the primary school London: Kogan Page</p> <p>Ofsted Research Review: languages https://www.gov.uk/government/collections/curriculum-research-reviews</p>	<p>The sessions are aimed at giving students an overview of the KS2 curriculum content with a focus on structuring language learning (from words -sounds and vocabulary- to sentence building to simple paragraph building) following the different stages of language acquisition. Tutor models a Language Lesson (on clothes/French), deconstructing learning and demonstrating activities to be used for each stage.</p>
2	<p>Focus on Sounds, words, and grammar</p> <p>Oracy, Literacy and KAL</p> <p>Continuation of lesson modelling: Moving from the use of simple words to sentence building</p> <p>Introduction to grammatical concepts (masculine /feminine/singular/plural/word order/adjective agreements.</p> <p>Pupils need to embed grammar in their memory so that they do not get confused or demotivated as structures and concepts gradually become more complex.</p>	<p>5. Practice (cementing knowledge) Using modelling, explanations, and scaffolds</p> <p>Removing scaffolding only when pupils are achieving a high degree of success in applying previously taught material.</p> <p>Providing sufficient opportunity for pupils to consolidate and practise applying new knowledge and skills</p> <p>Adapt teaching to the different needs of children (examples for speaking/reading writing).</p> <p>Assessment: Using assessments to check for prior knowledge and pre-existing misconceptions.</p> <p>Recording data: examples of templates (European Language portfolio/The Language Ladder)</p>	<p>British Council (no date): Primary Languages Starter pack</p> <p>Connor, J. (2017) Addressing needs and disability in the curriculum Modern Foreign Languages, London, Routledge.</p> <p>Mitchell, R. & Myles, F. (2019) Learning French in the UK setting: Policy, classroom engagement and attainable learning outcomes. Apples – Journal of Applied Language Studies Vol. 13, 1, 2019, 69–93</p> <p>Watts, C., Forder, C., Phillips, H. (2012) Living Languages: an integrated approach of teaching Foreign Languages in Primary Schools. London, Routledge.</p>	<p>A range of pedagogical approaches are modelled and then enacted by students, with opportunities for pair work and group work to practice learning.</p> <p>The building blocks of the subject (Phonics/Vocabulary and Grammar) and how to sequence them are considered throughout.</p> <p>References to the teaching of children with EAL are made during these sessions</p>

PGCE Primary QPU title: PGPC9140 Mathematics

Session	Learn that (Subject knowledge)	Learn how to (Pedagogical knowledge)	Evidence Base	Rationale
1	<p>Introduction to Maths:</p> <p>a raised awareness of the impact of teacher beliefs on effective mathematics teaching and considered the implications for your own learning</p> <p>a raised awareness of the features of good practice in primary mathematics</p> <p>Introduce students to the requirements of the NC and the EYFS</p>	<p>They will have mathematics activities modelled to them and consider what and how they would help the children to learn.</p> <p>Learning theories and the role they play in practice – links to working memory high quality teaching & learning</p> <p>Planning for learning</p> <p>Understand the importance of a practical and discussion based approach to the development of children’s mathematical understanding</p> <p>Identify the elements such as questioning, use of resources, subject knowledge, models and images etc involved in good practice in primary mathematics and evaluate the appropriateness of different learning and teaching approaches within those elements</p>	<p>Boaler, J. (2016) <i>Mathematical mindsets : unleashing students’ potential through creative math, inspiring messages</i>. San Francisco, California :: Jossey-Bass</p> <p>Garry, T. (2020) <i>Mastery in Primary Mathematics</i> [electronic resource] <i>A Guide for Teachers and Leaders</i> . London :: Bloomsbury Education</p> <p>Garry, T. (2020) <i>Mastery in Primary Mathematics</i> [electronic resource] / <i>A Guide for Teachers and Leaders</i> . London. <i>Bloomsbury Education Statutory framework for the early years foundation stage Setting the standards for learning, development and care for children from birth to five</i>. (2021) <i>Mathematics programmes of study: key stages 1 and 2</i> (2013)</p> <p>Ofsted Research Review: mathematics https://www.gov.uk/government/collections/curriculum-research-reviews</p>	<p>The mathematics is sequenced to help students become confident, enthusiastic and capable teachers of the subject. By starting with the students own attitudes and fears we can start to help the students to develop a love of the subject, as we work on their own understanding and address misconceptions.</p>
2	<p>Foundations of Numeracy: Introduced to the Audit, Tracking Document and Maths File</p> <p>To understand the principles of counting and representing number.</p> <p>To identify progression in children’s counting skills.</p> <p>To be aware of children’s difficulties in counting and representing number.</p>	<p>Apply learning theories such as Bruner and Vygotsky and the role they play in practice</p> <p>Apply learning from session 1 regarding working memory</p> <p>Apply a Concrete, Pictorial, Abstract approach to teaching and sequencing mathematics.</p>	<p>Haylock, D. (2019) <i>Mathematics explained for primary teachers</i>. 6th edition. Los Angeles :: SAGE</p> <p>Hansen, A. (ed.) (2020) <i>Children’s errors in mathematics</i>. 5th edition. London. Learning Matters</p> <p>Drews, D. and Hansen, A. (2007) <i>Using resources to support mathematical thinking : primary and early years</i>. London. Learning Matters.</p>	<p>The key features and the theories that underpin effective teaching are modelled and developed with practical ideas linked to school placements throughout. These are initially developed alongside, and through, an exploration of the fundamentals of mathematics (as in the 1st aim of the mathematics NC), with particular focus on conceptual understanding of counting, calculation and shape</p>

	Learn about a concrete/pictorial./abstract approach (CPA)			
3	<p>Place Value: To begin evaluate the place of resources in primary mathematics teaching</p> <p>To consider what is meant by place value</p> <p>To be introduced to some activities to develop an understanding of place value with children</p> <p>To be introduced to some resources which can support teaching of place value</p>	<p>to select and use a range of resources to support learning in place value</p> <p>to learn how to break down the concept of place value into component chunks to teach it effectively and understand progression in place value understanding from Rec to Yr6</p>	<p>Broadbent, A. (2004). 'Understanding Place Value. A Case Study of the Base Ten Game.' <i>Australian Primary Mathematics Classroom</i>. Vol. 9 Issue 4, p454-6.</p> <p>Bruner, J. (1966). <i>Toward a Theory of Instruction</i>. London: Oxford University Press.</p> <p>Cheung, P. and Ansari, D. (2021) 'Cracking the code of place value: The relationship between place and value takes years to master', <i>Developmental Psychology</i>. United States: American Psychological Association, 57(2), pp. 227–240</p>	<p>Place Value is an important foundation to put in place prior to exploring number operations and other features of Mathematics teaching. It provides the foundation for regrouping, multiple-digit multiplication, and more in the decimal system, as well as a starting point for the understanding of other base systems.</p>
4	<p>Addition and Subtraction: Understand the inverse relationship between addition and subtraction, and be introduced to some representations of these calculations.</p> <p>Be aware of the variety and progression of mental calculations and understand the importance of developing fluency with these.</p> <p>Develop conceptual understanding of written methods of addition and subtraction</p> <p>Have evaluated the efficiency and effectiveness of addition and subtraction written methods</p>	<p>break down addition and subtraction into component parts</p> <p>Represent the calculation processes in the ways that align to various schools written calculations policies</p> <p>Teach fluency in addition and subtraction processes</p> <p>children can be supported to learn these written methods of addition and subtraction, including effective use of resources</p>	<p>Haylock, D. (2019) <i>Mathematics explained for primary teachers. 6th edition</i>. Los Angeles. Sage.</p> <p>Hansen, A. (ed.) (2020) <i>Children's errors in mathematics</i>. 5th edition. London. Learning Matters</p>	<p>Following the foundational work in sessions on understanding place value, in this session we look at two operations, addition and subtraction. We explore the concept, how one is the inverse of the other and developing fluency and written methods.</p>

<p>5</p>	<p>Multiplication and Division:</p> <p>Consider the skills, knowledge and understanding to equip children to competently multiply and divide</p> <p>Recognise the progression from mental calculations, through expanded methods to compact methods.</p> <p>Be aware that mental calculations continue to play a vital role in written calculations.</p> <p>Identify areas for personal development of mathematics knowledge and understanding</p>	<p>break down multiplication and division into component parts</p> <p>Represent the calculation processes in the ways that align to various schools written calculations policies</p> <p>Teach fluency in multiplication and division processes, especially mental calculations</p> <p>Recognise common errors and misconceptions</p> <p>Recognise the need for children to approximate answers in order to prevent errors</p>	<p>Haylock, D. (2019) <i>Mathematics explained for primary teachers. 6th edition.</i> Los Angeles. Sage.</p> <p>Hansen, A. (ed.) (2020) <i>Children's errors in mathematics.</i> 5th edition. London. Learning Matters</p>	<p>Following the foundational work in sessions on understanding place value, in this session we look at the next two inverse operations, multiplication and division. We explore the concept, how one is the inverse of the other and developing fluency and written methods. We also spend significant time focusing on recognising and addressing misconceptions</p>
<p>6</p>	<p>3D Shape: The use of 3D mathematical apparatus and activities as an aid to mathematical understanding.</p> <p>There is precise terminology related to 3D and shape and construction.</p> <p>2D Shape: There is precise terminology related to 3D and 2D shape and construction</p> <p>There are significant implications for personal Subject Knowledge development.</p>	<p>Embed formative assessment in mathematics, with a focus on 3D shape</p> <p>To explore the use of 3D and 2D mathematical apparatus and activities as an aid to mathematical understanding.</p> <p>To utilise 2 and 3d shape terminology in teaching so as to promote and develop understanding</p>	<p>Haylock, D. (2019) <i>Mathematics explained for primary teachers. 6th edition.</i> Los Angeles. SAGE</p> <p>Hansen, A. (ed.) (2020) <i>Children's errors in mathematics.</i> 5th edition. London. Learning Matters</p> <p>William, D. (2017), <i>Embedded Formative Assessment: (Strategies for Classroom Assessment That Drives Student Engagement and Learning)</i>, Solution Tree, Bloomington, Indiana. Available from: ProQuest Ebook Central. [22 December 2021].</p>	<p>Following sessions on the four key number operations, this session focuses on another aspect of mathematics teaching, 3D shape. In this session we focus on the use of practical apparatus to support teaching and build on the CPA approach from earlier sessions. We explore terminology and conceptual knowledge around shape. We explore how to teach shape construction and explore implications for subject knowledge development</p>
<p>7</p>	<p>Measures: There is a development of progression in understanding through measures and what that is.</p> <p>The later development of subject knowledge and understanding in shape and measures is through problem solving</p>	<p>To use a range of practical measurement activities to understand the concepts in measures and how to use them to solve mathematical problems.</p> <p>To apply mastery approaches to the concept of measures</p>	<p>https://mathsnoproblem.com/blog/teaching-tips/tips-for-teaching-measure-in-ks1/</p> <p>Camilla R. Otte, Mads Bølling, Peter Elsborg, Glen Nielsen & Peter Bentsen (2019) <i>Teaching maths outside the classroom: does it make a difference?</i>, <i>Educational Research</i>, 61:1, 38-52, DOI: 10.1080/00131881.2019.1567270</p>	<p>In this session we explore the remaining element of the mathematics curriculum, measures. Understanding in measures requires conceptual understanding gained from other sessions. We explore practical approaches and revisit mastery approaches to measures and problem solving.</p>

PGCE Primary QPU title: PGPC9140 Music				
Session	Learn that (Subject knowledge)	Learn how to (Pedagogical knowledge)	Evidence base	Rationale
1 Developing phase	<p>National Curriculum requirements for music through the lens of the DfE 2021 Model Music Curriculum.</p> <p>The four strands are: singing, listening, composing and musicianship.</p> <p>There is a progression of learning in each strand from Year 1- Year 6 and how the skills, knowledge and understanding are developed systematically</p> <p>Explicitly teaching pupils the knowledge and skills they need to succeed within Music is beneficial;</p> <p>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 important</p>	<p>teach progression in singing; vocal warm-ups, vocal soundscapes, chants simple songs and rounds;</p> <p>develop simple harmonies and move onto understanding triads.</p> <p>Use the pentatonic scale to develop harmonies and how it links to triads.</p> <p>apply key vocabulary: dynamics, forte, piano to the context of singing</p> <p>use simple chants to understand key concepts of pulse, ostinato, and layering and use this knowledge to apply to developing planning a lesson</p>	<p>Research Review series – Music. Available at: https://www.gov.uk/government/publications/research-review-series-music</p> <p>Burnard, P and Murphy, R. (2013). <i>Teaching Music Creatively</i>. London. Routledge.</p> <p>https://musiceducationsolutions.co.uk/what-does-an-excellent-primary-music-lesson-look-like/</p> <p>Beach, N. Evans, J. Spruce, G. (2011). <i>Making Music in the Primary School</i>. London. Routledge.</p>	<p>In this first seminar, we set the foundation of the National Curriculum and 2021 Model Music Curriculum. We also provide a theoretical underpinning to effective pedagogy. We then provide helpful sources of subject knowledge including progression of skills from Y1-Y6 and a vocabulary mat for their own subject knowledge and to use in school-based learning.</p> <p>We begin musical skills by looking at progression in teaching singing which provides a helpful springboard to then look at listening, composing and musicianship in session 2. we then bring their learning together into principles for lesson planning.</p>
2	<p>effective questioning builds critical thinking and draws out musical concepts from a piece of music.</p> <p>composition follows on and provides a stimulus for listening</p> <p>Effective musicianship involves playing with accuracy, fluency, control and expression.</p> <p>Trainees learn basic symbolic and staff notation;</p> <p>Effective planning for progression involves developing a systematic, scaffolded progression of skills, knowledge and understanding in music.</p>	<p>apply their knowledge of vocabulary to ‘listening’</p> <p>respond to the music through graphic visualisation.</p> <p>use tuned and untuned percussion to develop compositions,</p> <p>how to use symbolic and staff notation to communicate their compositions.</p> <p>apply their understanding to planning for progression of learning in Music.</p> <p>adapt published planning for the needs of a range of learners</p>	<p>Burak, S. (2019). Self-efficacy of pre-school and primary school pre-service teachers in musical ability and music teaching. <i>International Journal of Music Education</i>. 37. (2). https://doi.org/10.1177%2F0255761419833083</p> <p>Daubney, A. (2017). <i>Teaching Primary Music</i>. London. Sage</p> <p>Primary Music Toolkit. https://www.ism.org/professional-development/resources/primary-music-toolkit</p>	<p>Building on the first seminar, this seminar takes the skills, knowledge and understanding learned through progression in singing, into listening. This is then used as a stimulus for composing and communicating through symbolic and staff notation. This theme of progression is taken into exploring published planning, deconstructing it to pick out principles of planning and then applying to developing a plan from material undertaken in the seminar.</p>

PGCE Primary QPU: PGPC9140 Physical Education				
Session	Learn that/about – subject knowledge	Learn how to – pedagogical knowledge	Evidence Base	Rationale
1	<p>Introduction to Physical Education What physical Education is trying to achieve in KS1 and Developing own justification for the teaching of physical Education</p> <p>The definition of physical literacy and its importance in the primary classroom.</p> <p>The coverage of the Physical Education National Curriculum</p> <p>There are a range of reasons that children love or hate PE, and strategies to change this.</p> <p>Teaching of Locomotion FMS skills:</p> <p>The range of Fundamental motor skills at key stage one.</p> <p>Locomotion, balance and manipulation and how these link to different sports/activities. An introduction to locomotion and it's links to EYFS gross motor skills.</p> <p>Introduction to the teaching of dance</p> <p>Country dancing is a good start to teaching dance.</p> <p>Developing basic dance motifs to utilise locomotion skills already learnt.</p>	<p>Develop your own rationale for the teaching of physical education.</p> <p>Plan a range of activities covering locomotion skills</p> <p>Utilise a range of activities in order to develop pupil's physical literacy</p> <p>Ensure coverage of the curriculum at the correct level.</p> <p>Plan whole class activities that allow pupils to work individually and develop a foundation of Physical skills.</p> <p>How to assess fundamental motor skills</p>	<p>Barnett, L, Stodden, D, Cohen, K, Smith, J, Lubans, DR, Lenoir, M, Livonen, S, Miller, A Laukkanen, A, Dudley, D, Lander, N, Brown, H and Morgan, P.(2016) 'Fundamental movement skills: an important focus', in 'Journal of Teaching in Physical Education', Volume 35, 2016, pp 219 to 225</p> <p>Dobell, A, Pringle, A, Faghy, M and Roscoe, C (2021) 'Educators perspectives on the value of physical education, physical activity and fundamental movement skills for early years foundation stage children in England', in 'Children', Volume 8, 2021.</p> <p>Duncan, M, Roscoe, C, Noon, M, Clark, C, O'Brien W and Eyre, EL (2019) 'Run, jump, throw and catch: how proficient are children attending English schools at the fundamental motor skills identified as key within the school curriculum?', in 'European Physical Education Review', Volume 26, 2019, pp814 to 826.</p> <p>Eddy, L, Hill, L, Mon-Williams, M, Preston, N, Daly-Smith, A, Medd, G and Bingham, D (2021) 'Fundamental movement skills and their assessment in primary schools from the perspective of teachers', in 'Measurement in Physical Education and Exercise Science', Volume 25, Issue 3, 2021, pages 236 to 249.</p> <p>Petrie, K, Pope, C and Powell, D. (2021) 'Grappling with complex ideas: physical education, physical literacy, physical activity, sport and play in one professional learning initiative', in 'The Curriculum Journal', Volume 32, 2021, pp103 to 117.</p> <p>Young, L, J O'Connor, J and Alfrey, L (2021) 'Mapping the physical literacy controversy: an analysis of key actors within scholarly literature', in 'Physical Education and Sport Pedagogy', 2021.</p>	<p>The first session is based around developing an understanding of the key differences between physical education, physical literacy, and sport. Fundamental motor skills are identified as the underlying competence. This first session gives the students an opportunity early on to teach their peers.</p>

			Ofsted research review: PE - https://www.gov.uk/government/collections/curriculum-research-reviews	
2	<p>The Principles of STEP: The approach to adapting PE in order to ensure participation by all is related to changing Space, Task, Equipment and People.</p> <p>Mosston and Ashworth spectrum of teaching styles in Physical Education:</p> <p>The spectrum of teaching styles cover a range of approaches to teaching Physical Education and that these approaches link to the main paradigms of learning theory.</p> <p>That these teaching styles vary depending on the level of input from the teacher.</p>	<p>Adapt games teaching approaches through utilising STEP to ensure all make progress.</p> <p>Utilise the STEP principles to ensure a safe learning environment.</p> <p>Develop Manipulation FMS at Key stage 1, both in isolation and in whole class activities.</p> <p>Plan simple learning episodes to develop a variety of games activities, making use of command, Practice, Reciprocal, and guided discovery elements of the spectrum.</p>	<p>Coates, J Mason, C Sharpe, L and Drew, K (2020) 'Inclusion 2020 evaluation final report', Loughborough University.</p> <p>Dixon, K, Braye, S and Gibbons, T (2021) 'Still outsiders: the inclusion of disabled children and young people in physical education in England', in 'Disability & Society', 2021.</p> <p>Morley, D, Banks, T, Haslingden, C, Kirk, B, Parkinson, S, Van Rossum, T, Morley, I and Maher, A (2021) 'Including pupils with special educational needs and/or disabilities in mainstream secondary physical education: a revisit study', in 'European Physical Education Review', Volume 27, 2021, pages 401 to 418;</p> <p>Mosston. M and Ashworth. S (2002) Teaching Physical Education. Pearson</p> <p>Vickerman, P and Maher, A (2019) 'Teaching physical education to children with special educational needs and disabilities', Routledge,</p> <p>Wright, S, McNeill, M, Fry, J and Wang, J. (2005) 'Teaching teachers to play and teach games', in 'Physical Education and Sport Pedagogy', Volume 10, 2005, pp 61 to 82;</p>	<p>In the second session, the concept of STEP is introduced for lessons/ activities to be adapted. The idea of Mosston and Ashworth's spectrum of teaching styles gives students the opportunity early on to consider a range of approaches to meet learning outcomes.</p>
3	<p>High Quality Physical Education:</p> <p>What good physical Education teaching looks like.</p> <p>How to develop a range of good questions.</p> <p>Making good use of the time available especially at the beginning and the end of lessons.</p>	<p>How to demonstrate, question, explain and give feedback to children during practical Physical Education lessons.</p> <p>Organise a safe learning environment where children feel safe and are able to learn.</p> <p>Manage behaviour through planning an engaging range of tasks and supporting equipment.</p>	<p>Castle, N, Little, R, Howells, K and Carney, A (2017) Mastering Primary Physical Education. Bloomsbury Academic</p> <p>Kretchmar, RS (2006) 'Ten more reasons for quality physical education', in 'Journal of Physical Education, Recreation & Dance', Volume 77, 2006, pp 6 to 9.</p> <p>Lawrence, J (2018) Teaching Primary Physical Education (2nd Ed). Sage Publications</p>	<p>This third session looks at a range of areas that need to be considered for high quality PE to be achieved. Having this after a few sessions gives students the opportunity to reflect on good practice so far.</p>

	<p>Behaviour management in a practical/outside setting. The teaching of gymnastics:</p> <p>The safety implications of teaching gymnastics both on the floor and on apparatus.</p> <p>What quality looks like in Gymnastics</p>	<p>Through participation feel confident in demonstrating the qualities of an Olympic gymnast. To plan simple apparatus layouts suitable for the task set which allows all to progress.</p>	<p>Pickard, A and Maude, P (2021) Teaching Physical Education Creatively (2nd Ed) Routledge</p> <p>Powell, E, Woodfield, L, Nevill, A, Powell, A and Myers, T (2019) “‘We have to wait in a queue for our turn quite a bit’”: examining children’s physical activity during primary physical education lessons’, in ‘European Physical Education Review’, Volume 25, 2019, pp 929 to 948.</p> <p>Rose, J. (2017) Bloomsbury Curriculum Basics; Teaching Primary PE: Everything you need to teach Primary PE. A and C Black.</p>	
4	<p>Assessment in Physical Education:</p> <p>Assessment in Physical Education is largely subjective.</p> <p>What do we want our pupils to be able to do after 468 hrs (6 yrs)?</p> <p>Current thinking looks at assessing Heart, Head, Hands.</p> <p>The Teaching of Athletics: How athletics links to the FMS</p> <p>How to incorporate competition in a variety of ways in order to maintain enthusiasm</p> <p>How to organise athletic activities in a safe manner ensuring maximum levels of participation</p> <p>The Teaching of Dance Why dance is a compulsory element of PE</p> <p>Motif development Using What, where who and how to develop motifs</p>	<p>Identify what it is that we want to assess and work out a way to do this that does not take time away from being physically active.</p> <p>Plan a range of different competitive athletic activities, identifying key teaching points and safety considerations.</p> <p>Develop a range of dance motifs using a range of stimuli. Able to utilise a range of resources in order to plan dances around different themes.</p>	<p>Mattsson, T and Lundvall, S (2015) ‘The position of dance in physical education’, in ‘Sport, Education and Society’, Volume 20, 2015, pp 855 to 871.</p> <p>Moura, A, Graça, A, MacPhail, A and Batista, P.(2021) ‘Aligning the principles of assessment for learning to learning in physical education: a review of literature’, in ‘Physical Education and Sport Pedagogy’, Volume 26, 2021, pp 388 to 401.</p>	<p>Having had the opportunity to look at a range of Physical Education being taught on placement. The focus is now on how we assess the pupils’ have made progress</p>

<p>5</p>	<p>Competition v Collaboration:</p> <p>opportunities to develop the PIES of PE</p> <p>The range of potential in the PE curriculum in order to engage pupils into a life long interest/ participation in PE and Sport.</p> <p>Identifying activities that give pupils the opportunity to develop physical, intellectual, emotional and social skills through different physical education areas.</p> <p>Introduction to the teaching of OAA:</p> <p>The values of OAA and learning outside.</p> <p>How teachers can be involved in teaching OAA on the school site and the values that this brings.</p> <p>Links to organising school trips.</p> <p>The basic principles of teaching Orienteering at KS2.</p> <p>The value and scope of problem solving.</p>	<p>Develop a broad physical education offer to children that develops a full range of benefits to all children.</p> <p>By participating in activities, develop a range of examples of good practice in the teaching of orienteering.</p> <p>Plan simple units of work for orienteering, on school site, taking into account the key content needing to be covered.</p> <p>Set up and organise a range of problem solving tasks and be confident in what skills are being developed by solving the problems. ie communication.</p>	<p>Association for Physical Education (2015) "Health Position Paper", in 'Physical Education Matters', Volume 10, 2015, pages 87 to 90.</p> <p>Bailey, R (2006) 'Physical education and sport in schools: a review of benefits and outcomes', in 'Journal of School Health', Volume 76, 2006, pp 397 to 401.</p> <p>De Bruijn, A, Mombarg, R and Timmermans, A (2021) 'The importance of satisfying children's basic psychological needs in primary school physical education for PE motivation, and its relations with fundamental motor and PE-related skills', in 'Physical Education and Sport Pedagogy', 2021.</p> <p>Griggs, G and Fleet, M (2021) 'Most people hate physical Education and most drop out of physical activity: In search of credible curriculum alternatives' in Education Sciences 2021, Vol 11 p 701</p> <p>Iserbyt, P, Ward, P and Li, W (2017)'Effects of improved content knowledge on pedagogical content knowledge and student performance in physical education', in 'Physical Education and Sport Pedagogy', Volume 22, 2017, pp71 to 88.</p>	<p>The introduction of OAA in the final session allows students to develop a range of activities that are not driven by competition, where intellectual, social, and emotional skills can be developed.</p>
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PGCE Primary QPU: PGPC9140: Religion and Worldviews Education (RE / RWE)				
Session	Learn that (Subject knowledge)	Learn how to (Pedagogical knowledge)	Evidence base	Rationale
1	<p>Their own attitude to Religious and Beliefs Education and the baggage they bring impacts on their confidence and understanding of the value of RE. Appreciate that Subject knowledge is complex, namely</p> <p>‘substantive’ knowledge: increasing pupil’s knowledge about various religious and non-religious traditions</p> <p>‘ways of knowing’: supporting pupils to learn ‘how to know’ about religion and belief systems</p> <p>‘personal knowledge’: supporting pupils build an awareness of their own presuppositions and values about the religious and non-religious traditions they study.</p> <p>Through interactive modelled snippets of lessons students evaluate key features of an effective RE lesson. Beginning with shared human experience, developing an understanding of a traditional belief systems eg Buddhism and Humanism, learning about individual patterns of belief and learning how to apply their learning to their own context and web of belief.</p> <p>Understand what makes for effective and inclusive collective worship.</p>	<p>Begin with shared human experience, how to effectively develop an understanding of a traditional belief systems eg Buddhism and Humanism evaluating 3 contrasting pedagogical strategies – the ‘domineering’ teacher, the ‘laisse faire’ teacher and the ‘overly friendly’ teacher.</p> <p>Explore the pedagogy of the skills and concept builder teacher, learn about individual patterns of belief through use of Persona dolls and learning how to apply their learning to their own context and web of belief.</p> <p>Make links to established theorists such as Hannam, Chater, and Elton Chalcraft</p>	<p>Clarke, C. and Woodhead, L. (2018) A new settlement Revised :Religion and Belief in school available at http://faithdebates.org.uk/wp-content/uploads/2018/07/Clarke-Woodhead-A-New-Settlement-Revised.pdf</p> <p>Ofsted (2021) <i>Research review series: Religious Education</i>. Available at: https://www.gov.uk/government/publications/research-review-series-religious-education/research-review-series-religious-education</p> <p>*Elton-Chalcraft, S. ed (2015) <i>Teaching RE Creatively</i> London: Routledge (2nd edition due 2023)</p> <p>Elton-Chalcraft, S (2020) Student teachers’ diverse knowledge and experiences of religion – implications for culturally responsive teaching <i>Journal of Higher Education Theory and Practice</i>, 20 (6). pp. 35-54. Open Access availablePDF at https://articlegateway.com/index.php/JHETP/article/view/3130</p>	<p>The RE is sequenced to help students become confident, enthusiastic and capable teachers of the subject. By starting with the students’ own attitudes and barriers in the beginning phase we can work on any misconceptions and support the students to develop an enthusiasm for and understanding of the subject and its impact for learners. The key text is authored by Prof Sally Elton-Chalcraft containing 12 chapters by leading practitioners and academics at the cutting edge of research and practice in the field of Religion and Worldviews education (the second edition with some additional new authors is due 2023)</p> <p>The key features and the theories that underpin effective teaching strategies are modelled and developed with practical ideas linked to school placements. As confidence grows the importance of contained risk taking (Pace 2019) will enable students to explore a variety of Religions and belief systems. Opportunities for cross curricular approaches as well as discrete RE are discussed in the developing phase.</p> <p>Finally, the skills and knowledge gained from earlier phases is developed drawing on tutors’ research to move students from being curriculum deliverers to skills and concept builders, autonomously increasing their substantive knowledge, their understanding about ‘ways of knowing’ and their personal knowledge in order to become autonomous and creative highly skilled teachers.</p>
2	<p>In evaluating modelled lessons on Muslim worship and Sikh beliefs they learn how to facilitate a sensitive and inclusive classroom discussion which addresses bullying and discrimination drawing on the work of Pace (2019) to consider the most appropriate stance: <i>Avoiders, Containers, Risk takers, contained risk taker</i> – involving all learners, supporting ‘communities of disagreement’,</p>	<p>Learn how to facilitate a sensitive and inclusive classroom discussion which addresses bullying and discrimination drawing on the work of Pace (2019) to consider the most appropriate stance :<i>Avoiders, Containers, Risk takers,</i></p>	<p>Elton-Chalcraft, S., Copping, A., Mills, K., Todd, I. (2020) Developing research-informed practice in initial teacher education through school-university partnering. Vol 46 issue 1 <i>Professional Development in Education</i> https://doi.org/10.1080/19415257.2018.1550100</p>	

	<p>Valuing all opinions and avoiding ‘chilling’ (Pace 2019).</p> <p>They learn about the progression from curriculum deliverers to skills and concept builders (Twiselton and Elton-Chalcraft 2018, Elton-Chalcraft et al 2020), considering 1. ‘substantive’ knowledge: 2. ‘ways of knowing’: and 3. ‘personal knowledge’ in evaluating and planning for Festivals, Christianity through Art, Hindu concept of God, Food laws and Holy books and Experiential learning through re-enactment of Shabbat.</p> <p>Students recap principles and how they can use these to plan ANY series of RE and Worldviews lessons and how to utilize resources and websites appropriately.</p>	<p>contained risk taker – involving all learners, supporting ‘communities of disagreement’ Value all opinions and avoiding ‘chilling’ (Pace 2019). How to use these principles to plan ANY series of RE and Worldviews lessons and how to utilize resources and websites appropriately.</p>	<p>Chater, M. (2020) <i>Reforming RE: Power and Knowledge in a Worldviews Curriculum</i> Woodbridge: John Catt Educational Ltd</p> <p>Elton-Chalcraft, S, Revell, L. and Lander, V. (2022) Fundamental British Values: your responsibilities, to promote or not to promote? Ch 15 In Cooper, H. and Elton-Chalcraft, S. (Eds) 4th edition <i>Professional Studies in Primary Education</i> London:Sage https://us.sagepub.com/en-us/nam/professional-studies-in-primary-education/book273439</p> <p>Warner, D. and Elton-Chalcraft, S. (2022) Teaching for Race Culture and Ethnicity Awareness and Understanding Ch 14 In Cooper, H. and Elton-Chalcraft, S. (Eds) 4th edition <i>Professional Studies in Primary Education</i> London:Sage https://us.sagepub.com/en-us/nam/professional-studies-in-primary-education/book273439</p> <p>Gearon, L. (2013) <i>Master class in RE: Transforming teaching and learning</i> London: Bloomsbury</p> <p>Hannam, P. (2019) <i>Religious Education and the Public Sphere</i> Abingdon: Routledge</p> <p>Pace, J. L. (2019). Contained risk-taking: Preparing preservice teachers to teach controversial issues in three countries. <i>Theory & Research in Social Education</i>, 47(2), 228-260.</p>	
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PGCE Primary QPU title: PGPCP9140 Science				
Session	Learn that (Subject knowledge)	Learn how to (Pedagogical knowledge)	Evidence base	Rationale
1	<p>Introduction to Primary Science and Working Scientifically (Disciplinary Subject knowledge)</p> <p>Working Scientifically (Disciplinary knowledge) should form part of your planning</p> <p>These skills (observing, comparing, exploring, testing, modelling and reading, writing and talking) form a scientists toolkit</p> <p>We can progress children's skills through careful planning</p>	<p>Recognise the Working Scientifically tools (Discipline Knowledge) which can help children learn scientific concepts (Substantive Knowledge)</p> <p>Generate Working Scientifically activities to support learning of a specific scientific concept</p>	<p>Forbes a, Skamp K (2019) You actually feel like you're actually doing some science: primary students' perspective on their involvement in the My Science initiative. <i>Research in Science Education Vol 49(2)</i> pp 465-498</p> <p>Hodson D. (2014) 'Learning science, learning about science, doing science: different goals demand different learning methods', in <i>International Journal of Science Education</i>, Volume 36, Issue 15. Pp. 2543 to 2553.</p> <p>Kremer A, Walker M, Schluter K. (2007) Learning to Teach Inquiry: A Course in Inquiry-Based Science for Future Primary School Teachers <i>Bioscene Vol 33 (2)</i> pp 19-23</p> <p>Lederman, NG; Lederman, JS and Antink, A. (2013) <i>Nature of science and scientific inquiry as contexts for the learning of science and achievement of scientific literacy</i>. <i>International Journal of Education in Mathematics, Science and Technology</i>, Volume 1(3), pp 138-147</p> <p>Osborne J. (2015) 'Practical work in science: misunderstood and badly used', in <i>School Science Review</i>, Volume 96, Issue 357. Pp. 16 to 24</p> <p>Osbourne, JF. (2019). <i>Not "hands-on" but "minds-on": a response to Furtak and Penuel</i>. <i>Science Education</i>. vol 103. pp 1280 –1283</p> <p>Skamp, k. (2007). <i>Conceptual learning in the primary and middle years: the interplay of heads, hearts and hands-on science</i>. <i>Teaching Science: The Journal of the Australian Science Teachers Association</i>. 53 (3). pp18-22</p>	<p>This seminar provides an overview working Scientifically in the National Curriculum and introduces key terminology that students require in order to be able to engage with later seminar sessions. This is explicitly taught within the session. They are given information about the way the module works and its scope. At this very early stage they are supported in planning learning activities linked directly to NC PoS.</p> <p>The programme is informed by the 2021 Ofsted science review and many of the sources within this review were already a factor in planning pre 2021.</p>

<p>2</p>	<p>Assessment and Adaptive Planning: Electricity</p> <p>Within the Scientific Community, Conceptual Thinking Skills (Disciplinary Knowledge) has limited value without Substantive scientific knowledge- Professional Scientists specialise.</p> <p>Passing factual “pub quiz” style tests and scientific literacy are not the same thing, Assessment of pupils’ Conceptual Thinking skills informs teachers’ planning for classes, groups and individuals (Adaptive planning) doing the right thing, at the right time, in the right way.</p> <p>Misconceptions form barriers to learning and how to plan specific activities to challenge and overcome these.</p>	<p>Recognise features of pupils’ response which indicates their stage of Conceptual Thinking in Science,</p> <p>Adapt the dialogue you engage in and encourage for the age and scientific experience of the pupils,</p> <p>Create appropriate scaffolding for pupils’ scientific writing which allows them to show what they understand.</p> <p>Plan specific activities to directly challenge and overcome scientific misconceptions.</p>	<p>Guo Y, Wang S, Hall AH, Breit-Smith A and Busch J. (2016) ‘The effects of science instruction on young children’s vocabulary learning: a research synthesis’, in <i>Early Childhood Education Journal</i>, Volume 44, pp. 359 to 367.</p> <p>Lederman, NG; Lederman, JS and Antink, A. (2013) <i>Nature of science and scientific inquiry as contexts for the learning of science and achievement of scientific literacy</i>. International Journal of Education in Mathematics, Science and Technology’, Volume 1(3), pp 138-147</p> <p>Morgan PL, Farkas G, Hillemeier MM and Maczuga S. (2016) ‘Science achievement gaps begin very early, persist and are largely explained by modifiable factors’, in <i>Educational Researcher</i>, Volume 45, Issue 1 pp. 18 to 35</p> <p>Newton D and Newton L (2009). Knowledge development at the time of use: a problem-based approach to lesson planning in primary school teacher training in a low knowledge, low skill context. <i>Educational Studies</i> Vol. 35, No. 3, July 2009, 311-321]</p> <p>Osbourne, JF. (2019). <i>Not “hands-on” but “minds-on”: a response to Furtak and Penuel</i>. Science Education. vol 103. pp 1280 –1283</p>	<p>Whereas the focus in session 1 was the Teaching of Science, the focus moved this lesson to the Learning of Science and how knowledge of progression can support adaptive planning which allows all pupils to be properly included. This session builds upon the experience trainees will have had of planning and observing science activities and progress their understanding to assessment, adaptation and feedback.</p> <p>The session recaps the knowledge and skills learned in the beginning phase in terms of Working Scientifically, misconception development and challenge and the constructivist principles which underpin science education.</p> <p>It supports students in reflecting on what they have learned in school and patterns they may have fallen into without noticing.</p> <p>The progression of scientific thinking is introduced and how it can be used to assess, give feedback and to plan for pupil progress is a key theme of this stage in the trainees’ programme.</p> <p>Common misconceptions related to electrical circuits is introduced and challenged. This area is chosen as experience and seminar research such as the SPACE reports show that trainees may have misconceptions themselves.</p> <p>The science substantive subject knowledge audit is introduced. Modelling as a way of Working Scientifically is revisited in more depth with the trainees developing a model to explain their findings. This develops their confidence in terms of being able to support Y6 pupils who require greater depth.</p>
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Independent Activity:
Engage in reading centred around Working Scientifically/Scientific Enquiry and the role of practical activity in supporting children’s learning of scientific concepts
Engage with the National Curriculum for science ensuring that they are familiar with layout, purpose and an overview of the content
Begin to develop own scientific subject knowledge supported by the UOC science audit. [Newton D and Newton L (2009). Knowledge development at the time of use: a problem-based approach to lesson planning in primary school teacher training in a low knowledge, low skill context. *Educational Studies* Vol. 35, No. 3, July 2009, 311-321]

On developing placement students will:
Plan and teach science to their allocated class
Assess the children’s scientific conceptual thinking through dialogue, observation and marking of written work.
Provide feedback, both written and verbal to support the development of children’s scientific conceptual thinking.
If possible, students will seek approval to visit other year groups or look at science books to widen their understanding of progression in conceptual thinking.