

**The Edge Hill Secondary PGCE with QTS\* Science Teacher**

Curriculum Plan 2023 – 2024

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# Curriculum Plan 2023/24

## The Edge Hill ITE vision

Our EHU ambitious curriculum in the Secondary phase exceeds the full entitlement described in the ITT Core Content Framework as a baseline and is designed around the three faculty pillars of:

1. Personal and professional attitudes, values, and beliefs.

2. Subject and curriculum knowledge.

3. The craft of teaching and pedagogy.

These faculty pillars are informed by our philosophy of education, created, and enhanced further when our partnership and our students are engaged in an ethos of debate, research and educational curiosity based on reflection and professional enquiry. This ambitious ITE curriculum includes our values of social justice, inclusion, learning outside the classroom and sustainability as key features to support our local and national communities.

#### Our ITE vision in the secondary phase is to work creatively with others to enhance life chances for all through a curriculum which enables trainees to develop as subject experts in the subject in which they are training to teach.

## Curriculum Rationale:

* **Rationale of curriculum coverage and sequence including use of pertinent research**

The curriculum for PGCE Secondary Science (Biology, Chemistry, Physics) ensures complete coverage of the ITT Core Content Framework and its associated evidence basis (Department for Education, 2019) as appropriate for Secondary ITE.

The course commences with trainees engaging critically with the nature and forms of science knowledge. Trainees identify with their subject and build a philosophical stance for the inclusion of science in the secondary school curriculum. Trainees critically analyse the contested aims and purposes of science education (OFSTED, 2021). This includes the influential ‘Big Ideas’ agenda (Harlen, 2015) and the long running ‘scientific literacy v future scientists’ tensions (Taber, 2014). This school curriculum context foreshadows the trainees’ upcoming professional placement. Trainees critically engage with the content, forms and sequencing of knowledge in the KS3/KS4 Science National Curriculum. This aligns with the assertion that ‘you cannot do science without knowledge… knowledge is an important step in progression to more complex understanding’ (Holman, 2018:24). Trainees analyse how a high-quality science curriculum carefully sequences the interplay between substantive and disciplinary knowledge (OFSTED, 2021). Trainees then critically engage with current pedagogies and debates in secondary science education. These include social justice and curriculum access (including the concept of science capital); how children learn science; effectiveness of practical work; children’s common misconceptions; questioning; numeracy and inclusion. These issues have been addressed by OFSTED (2021) as key indicators of a high-quality science education. This enables trainees to further develop their philosophy and knowledge of how science curriculum should be organised, how it can be learned in the classroom, barriers to learning science and how policy impacts on science education. The latter enables trainees to critically engage with education policy and raise their political consciousness. Trainees then critically explore how science knowledge is sequenced and developed through the key stages. This enables them to critique how science knowledge develops as children mature and links to cognitive load theory. Trainees then critically engage with issues of cross curricular links. This enables them to develop a broader perspective on science and links to subjects such as mathematics and English.

Early in the course trainees critically engage with their science teacher identity and related educational philosophies. This early point in the course will raise their identity consciousness and minimise the risk of them leaving teaching (Hammerness, 2008; Heikonen et al., 2017) A historical critique of education policy then enables the student to see their subject in a wider context of a policy and ideological struggle. Professional behaviours, safeguarding, well-being and laboratory safety are introduced before the trainees start their first placement. Later after more experience on placement the student investigates their identity as a potential researcher. Now more knowledgeable and experienced on placement, this warrants a timely focus on their future professional and academic development.

Trainees develop on earlier work on the curriculum and how pupils learn science. Key learning theories are then analysed so that trainees begin to construct their understanding of how children can learn science. These theories enable trainees to develop coherent links between science specific content earlier in the course. Then trainees can connect science pedagogical approaches with the content of the science curriculum. At this point trainees practice and apply their knowledge of science pedagogy in terms of lesson planning, assessment and adaptive teaching. Trainees learn that effective assessment is particularly relevant in science due to the prevalence of science misconceptions held by children (OFSTED, 2021). The concept of Cognitive Load Theory is critically analysed especially in a science learning context. Drawing on their earlier study, trainees now learn how to plan learning episodes in preparation for the first placement. As the student builds knowledge on placement, they will consolidate earlier themes and analyse areas such as questioning, pupil talk, feedback and behaviour management. Weekly tasks during university and placement ensure that the student is engaging academically with their increasingly wider classroom experiences and deeper pedagogical content knowledge.

From the beginning of the course, woven into the curriculum is the thread of well-being, professional self-care, and resilience. This is offered in formal lectures and smaller seminar sessions with a specific subject focus. At the heart of this learning is a focus on Mindfulness-Based-Stress-Reduction and neuroscience, to support the trainee and the young people in their classes (Kabat-Zin, 2013).

* **Delivery of curriculum outcome(s) into composite and component elements**

To ensure that trainees know that common misconceptions develop when prior knowledge is weak and scientific understanding is naïve, this is broken down into: recognition of their own misconceptions; knowledge of common misconceptions held by pupils; how to structure tasks and questions that allow teachers and pupils to easily identify misconceptions and be able to address them using concrete examples. To ensure that trainees know that science practical work is an essential element of science learning, and it should be carried out in a purposeful manner-this is broken down into: critical reading of seminal literature on practical work (Millar and Abrahams, 2009; Abrahams, 2011; Abrahams and Reiss, 2012; Osborne, 2015; Abrahams and Fotou, 2018); performing laboratory practical work; evaluation of the learning from practical work session; hands-on understanding of the strategies to ensure purposeful and effective practical work.

* **How the curriculum enables trainees to develop their sense of social justice including the importance of inclusion and representation in their subject**

Trainees critically explore the tensions behind the science curriculum with a focus on the ‘Science for All’ arguments. This approach reflects the Ambition for All agenda espoused by OFSTED (2021). Importantly this raises questions around social justice and access for all children to a high-quality science education. Equality, diversity and inclusion issues such as capital, gender, class, EAL and FBV are addressed. These are salient in science education due to the dominant historical narrative of scientists as white western men. These issues become increasingly pertinent as the student engages more deeply with the science curriculum on placement.

* **Opportunities to revisit key learning.**

In sessions, trainees drill down into subject specific components relating to specific strands such as Equality, Diversity and Inclusion with sessions being delivered on well-being, SEND, EAL and PP through the lens of science education prior to starting their professional practice and revisiting throughout building on prior learning. Early in the course, trainees are taught a range of theories linked to how pupils learn, including Cognitive Load Theory. This is revisited during the course where they develop this further and are taught strategies to reduce cognitive overload, the value of retrieval, spaced practice and interleaving to strengthen recall over time, breaking new content into smaller steps/the constituent parts and sequencing learning so pupils are secure in foundational knowledge before introducing more complex material.

##

## Delivery methods

During their training period, we use several interconnected and sequential mechanisms to support the development of our trainees’ knowledge and skills including:

* Centre based training led by Expert Practitioners.
* School based training led by expert mentors.
* Online learning and guided independent self-study.
* Managed workload and well-
* being.
* Differentiated learning support for individuals and groups of trainees.
* Coherence and consistency of the trainee teacher experience.
* High quality CPD of mentors and tutors.
* University-based assessment and QA mechanisms.

Curriculum coverage across the courses is underpinned and mapped against the ITT Core Content Framework (CCF) however our curriculum goes beyond this and is ambitious, ensuring that our trainees are equipped as critical and reflective practitioners who recognise the role that high quality teaching plays in social justice and equality.

The curriculum is the progress model. Learning is sequential, not only ensuring that trainees have opportunity to build up foundational concepts but to also assist with managing trainee workload and well-being throughout the course. Teaching utilises PiP (Present in Person) and synchronous/online methods combined with periods of structured guided independent study and periods of Intensive Training and Practice (ITP). Expert colleagues from within the school-partnership are utilised to both support and deliver elements of the curriculum. Such partnership not only allows for greater collaboration between university-based and school-based expert colleagues, but also ensures that trainees are adequately supported in ‘practising key skills as well as an opportunity to work with and learn from expert colleagues as they apply their knowledge and understanding of the evidence in the classroom’ (DfE, 2019, p.5).

##

## Student Support

A Student Support Plan (SSP) is produced by the university inclusion team with trainees who have declared a disability. These plans are shared with the inclusion lead or professional support team within each department and any relevant information relating to placements is shared with the partnership development team and Link Tutor. Trainees with SSPs are strongly encouraged to share any relevant information with their mentors at the outset of the placement so they can be support appropriately.

All trainees are able to seek support from their Link Tutor and/or the university student support team(s) and links are provided for assistance:

<https://www.edgehill.ac.uk/departments/support/studentservices/>

<https://www.edgehill.ac.uk/departments/support/studentservices/wellbeing/>

<https://www.edgehill.ac.uk/departments/support/studentservices/inclusive/>

## Assessing trainee progress in Science:

At the Secondary and FET phases, we have put the curriculum at the centre of our understanding of progression. Each distinct course has its own subject specific ITE curriculum which ensures trainees meet the relevant learning milestones over the course of their ITE journey. This ensures that, contingent on meeting the milestones in the curriculum, they can be recommended for the award of Qualified Teacher Status (QTS) at the end of the course for the subject in which they are training to teach at the Secondary phase. The ITE curriculum is purposefully sequenced on a week-by-week basis over the duration of each course so that Secondary trainees cover all aspects of the ITT Core Content Framework (CCF) and meet the necessary competencies for the award of QTS, however it also goes far beyond this. At the Secondary phase each course curriculum breaks down the required component knowledge and builds to a complex composite understanding which addresses the subject-specific pedagogical content knowledge required within each subject. The curriculum is sequenced across 3 years for our undergraduate course and one year for our PGCE.

The week-by-week curriculum for each course states what trainees should be able to know and do each week for the subject in which they are training to teach and ensures the necessary progression is made to enable QTS recommendation via the summative Professional Reflective Viva at the end of their ITE. Progress through the curriculum is monitored on a week-by-week basis via the use of ‘Weekly Development Summaries’ which capture what trainees understand and can do in line with their specific course ITE curriculum.

There is no separate curriculum for school-based experience. Instead, the specific ITE curricula for each course encompass all aspects of school-based experience and ensures trainees have opportunity to purposefully integrate their learning at university with the opportunities afforded on Professional Practice when they are mentored through their ITE curriculum by school-based colleagues who are experts in their subject. The content of the curricula is sequenced in line with the faculty approach to progression on Professional Practice; introductory, developmental, and consolidation and builds in opportunities for trainees to revisit key learning via a spiralised approach. During their Professional Practice trainees continue to be monitored on a week-by-week basis via the ‘Weekly Development Summaries’. This approach also enables university-based tutors to QA the mentoring which is taking place during the placement and to provide support/intervention to trainees or school-based mentors as appropriate.

Trainees who are not making sufficient progress through their curriculum (as evidenced via the WDS process) are supported via a Progress Support Plan. Details of which can be found in this handbook.

### How is evidence of progress gathered?

Edge Hill University adopts a holistic approach to the monitoring and assessment of trainees through the university-based curriculum. This takes place within a variety of contexts:

* Ongoing formative assessment on a weekly basis through their ITE course curriculum via the Weekly Development Summaries and/or Weekly Development Tutorials (logged on a tracker in addition to any interventions made). This is done from the outset and for the duration of the ITE journey.
* Subject Knowledge Audits.
* Trainee reflections and responses to their weekly curriculum during their Weekly Development Meeting (WDM) whilst on Professional Practice.
* Lesson observations during Professional Practice.
* Within taught university sessions (online, present in person (PiP), synchronous and asynchronous), through activities and interactions.
* Key assessment points (e.g., Progress Reports).
* Academic submissions related to the level at which the trainee is studying (L4-L7).
* Additional support for trainees who require targeted intervention to make progress.



## Progress Support Plans

Progress Support Plans (PSPs) are utilised in instances where the WDS process has indicated that a trainee is not making sufficient progress through the weekly curriculum despite additional support and intervention being put in place. Such interventions made include (but are not limited to):

* Signposting to additional material or specific content addressed in taught sessions.
* Additional tutorials and/or sessions with a relevant colleague.
* Opportunities such as observation of colleagues, team-teaching, structured support sessions, or additional mentoring (if concern relates to progression through the curriculum whilst on Professional Practice).
* Referral to the Student Support Team and the requirement that the trainee engage with their support.
* Department Progress Meetings (DPM).

The process enables the department to formally raise concerns with the trainee about their progression through their ITE curriculum, it puts in place SMART targets which the trainee needs to act on and provides an opportunity for progression towards these targets to be reviewed after one-two weeks. A PSP can lead to one of three outcomes for the trainee; sufficient progress has been made and the trainee returns to being monitored via the WDS, partial progress has been made but the trainee requires an additional week to make sufficient progress, or the trainee has not made sufficient progress and is referred to the Associate Head of Department for consideration of next steps. These next steps can include:

* A delay to the trainee undertaking their placement until such a time as progress has been made.
* A request that the trainee undertakes their placement at a second attempt (if the PSP relates to progression through the curriculum whilst on Professional Practice).
* The trainee is transferred to an alternative program which does not enable them to be recommended for QTS (Secondary) or which makes them ineligible for QTLS (FET).

For a comprehensive guide to the PSP process please see the appendix.

## Key Texts and Debates:

References

* ABRAHAMS, I., 2011. *Practical Work in Secondary Science: A Minds-On Approach.* Continuum.
* ABRAHAMS, I. and FOTOU, N., 2018. Thinking About Practical Work in: BANNER, I. and HILLIER, J., eds. *ASE Guide to Secondary Science Education.* 4th ed. Hatfield: Association for Science Education. pp. 150-160.
* BANNER, I. and HILLIER, J., eds., 2018. *ASE Guide to Secondary Science Education.* 4th ed. Hatfield: Association for Science Education.
* DEPARTMENT FOR EDUCATION (DfE), 2019. *ITT Core Content Framework* <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974307/ITT_core_content_framework_.pdf> [Accessed 3 Aug 2022].
* GREEN, J., 2021. *Powerful Ideas of Science and How to Teach Them*. Routledge.
* HAMMERNESS, K., 2008. ‘If You Don't Know Where You Are Going, Any Path Will Do’: The Role of Teachers' Visions in Teachers' Career Paths. *The New Educator*, 4(1), pp. 1
* HARLEN, W., 2015. Towards big ideas of science education. *School Science Review*, 97 (359), pp. 97-107.

* HEIKONEN, L., PIETARINEN, J., PYHÄLTÖ, K., TOOM, A. and SOINI, T., 2017. Early career teachers' sense of professional agency in the classroom: associations with turnover intentions and perceived inadequacy in teacher-student interaction. *Asia-Pacific Journal of Teacher Education*, 45(3), pp. 250-266.
* HOLMAN, J., 2018. *Improving Secondary Science- Guidance Report*. Educational Endowment Foundation.
* KABAT-ZINN, J. (2013) *Full catastrophe living: how to cope with stress, pain and illness using mindfulness meditation*. Revised and updated edn. London: Piatkus.
* MILLAR R. and ABRAHAMS, I., 2009. Practical Work: making it more effective. *School Science Review*.91 (334), pp. 59-64.
* OFSTED, 2021. *Research Review Series: Science*.GOV.UK [online]. Available from: <https://www.gov.uk/government/publications/research-review-series-science> [Accessed 9 Aug 2022].
* OSBORNE, J., 2015. Practical work in science: misunderstood and badly used? *School Science Review*.96 (357), pp. 16-24.
* ASSOCIATION FOR SCIENCE EDUCATION (ASE) ,2021. *Teaching Secondary Biology.* 3rd ed. Hodder Education.
* ASSOCIATION FOR SCIENCE EDUCATION (ASE) ,2022. *Teaching Secondary Chemistry.* 1sted. Hodder Education.
* ASSOCIATION FOR SCIENCE EDUCATION (ASE) ,2021. *Teaching Secondary Physics.* 3rd ed. Hodder Education.
* ROSS, K., McKECHNIE, J., LAKIN, L. and BAKER, J., 2015. *Teaching Secondary Science: constructing meaning and developing understanding.* 4th ed. London: Routledge.
* TABER, K., 2014. Science for All? or science education for the good of all? in: M. WATTS, ed. *Debates in Science Education*. Routledge. pp.11-27.
* TOPLIS, R., ed., 2015. *Learning to Teach Science in Secondary School: A Companion to School Experience*.4th ed. London: Routledge.
* WATTS, M., ed., 2014. *Debates in Science Education.* Routledge.
* WELLINGTON, J. and IRESON, G., 2017. *Science Learning, Science Teaching.* 4th ed. London: Routledge.
* WILLIAMS, J. M. G. and PENMAN, D. (2023) Deeper mindfulness: the new way to rediscover calm in a chaotic world. London: Piatkus.

# Weekly Curriculum Map 2023/24

| Week | For the subject they are training in trainees should know:*(max. 3 bullet points)* | For the subject they are training in trainees should be able to:*(max. 3 bullet points)* | Opportunities to demonstrate this learning could include: | Key questions *(2-3 as indicators of progress)* | CCF | Method of Assessment |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Induction |
| Key reading | TABER, K.,2014. ‘Science for All’ or science for the good of all? In: WATTS, M., ed., 2014. *Debates in Science Education*. Routledge. pp.11-27. |
| 2 | * The place of Science in the National Curriculum (2014) and the knowledge content covered. The ‘Science for All’ debate raises issues of access to the curriculum and social justice such as science capital and gender.
* What it means to be a professional in terms of standards and expectations.
* How practice is informed by evidence-based research and engage critically with research using evidence to critique.
 | * Identify substantive (conceptual) and disciplinary (procedural) knowledge content demands of the Science National Curriculum (2014).
* Understand that teachers can influence pupils’ resilience and beliefs about their ability to succeed, by ensuring all pupils have the opportunity to experience meaningful success.
* Identify science concepts which can be challenging for pupils to understand.
* to develop pupils’ schema because Science is not about memorising facts.
* Ask critical questions to enable them and pupils to develop e.g., reflect on progress made, recognising strengths and weaknesses, and identifying next steps for further improvement.
 | * Receiving clear, consistent and effective coaching in how to identify essential concepts, knowledge, skills and principles of the subject utilising subject knowledge audit.
* Receiving clear, consistent and effective coaching on the duties of a teacher. Trainees to read EHU Code of Conduct on Blackboard.
* Completing subject knowledge audit and complete action plan to showcase the importance of taking responsibility for their own professional development.
 | Small group tasks:1. Break up into small groups and brainstorm different ideas for activities that could be designed to help students develop their schema and move beyond just memorising facts. Each group could then share their ideas with the larger group and discuss the pros and cons of each approach.
2. Form small groups and discuss the ways in which teachers can influence pupils’ resilience and beliefs about their ability to succeed. Practice asking critical questions that enable pupils to reflect on their progress and recognise their strengths and weaknesses. Share your insights and discuss how these strategies can be applied in Science teaching to help students develop their resilience and belief in their own abilities to succeed.

WDS Questions:1. Reflecting on the group discussion, can you identify any potential challenges in implementing these strategies in the classroom? How might you address them?
2. How can teachers influence students' resilience and beliefs about their ability to succeed in science?
 | S&C.1S&C.2S&C.4S&C.3MB.4S&C.6PB2 | Audit and WDS |
| Key reading | CCF Reading:Ball, D. L., Thames, M. H., & Phelps, G. (2008) Content knowledge for teachers: What makes it special? Journal of Teacher Education, 2008 59: 389 DOI: 10.1177/0022487108324554 [Online] Accessible from: <https://www.math.ksu.edu/~bennett/onlinehw/qcenter/ballmkt.pdf>Science reading: TABER, K.,2014. ‘Science for All’ or science for the good of all? In: WATTS, M., ed., 2014. *Debates in Science Education*. Routledge. pp.11-27. |
| 3 | * The importance of subject knowledge in motivating pupils, teaching effectively and being able to identify gaps in the conceptual, procedural, and content demands of the current Science National Curriculum.
* Practical work in school science is an essential element of science learning but it should be planned and carried out in a purposeful and effective manner.
* How to recognise learning theory in the classroom environment and the myth of learning styles.

 * Short and long -term memory informs lesson planning and to consider why Bloom’s Taxonomy is now being questioned.
* There are many approaches and phases to planning (long term/ medium terms/ lesson planning) such as ALC.
* In science all pupils bring an understanding of natural phenomena to the classroom. A major task of the science teacher is to plan to elicit this understanding and reshape it according to the correct scientific explanation.
 | * Identify and address areas of development of subject knowledge in the Science National Curriculum.
* Exemplify planning lessons by effectively using objectives/ outcomes/ success criteria. With joint planning with colleagues, trainees will be able to deconstruct how prior knowledge, objectives and outcomes, break tasks down into constituent components, use modelling, devise explanations and scaffolds, provide sufficient opportunity for pupils to consolidate and practice applying new skills and knowledge, and how they make the abstract concrete.
* Critically discuss learning theories related to the classroom and be able to consider pupils’ prior knowledge when planning how much new information to introduce.
 | * Engaging in joint planning in the early stages showing how expert colleagues decide on prior knowledge, objectives and outcomes, break tasks down into constituent components, use modelling, devise explanations and scaffolds, provide sufficient opportunity for pupils to consolidate and practise applying new skills and knowledge, and how they make the abstract concrete.
* Engaging in joint planning trainees to develop understanding of how planned lessons contribute to schemes of learning, and how this relates to medium- and longer-term planning.
* Joint planning to support trainees by helping them plan for misconceptions, focus on key subject concepts and to receive and act on feedback in a positive way.
 | Small group tasks:1. Divide into small groups, each focused on a particular area of the subject specific National Curriculum/locally agreed syllabus. Identify areas where students may struggle or where further development of subject knowledge is necessary. Discuss strategies for addressing these areas, such as providing additional resources, differentiated instruction, or extra support.
2. Work together to deconstruct how prior knowledge, objectives, and outcomes can be used to break tasks down into constituent components. Plan a subject specific lesson together, using modelling, explanations, and scaffolds.

WDS Questions:1. How does collaborative planning and sharing of ideas among teachers contribute to the overall effectiveness of lesson design and student learning?
2. Reflecting on the group discussion and lesson planning process, what insights or new perspectives have you gained regarding the relationship between subject-specific knowledge, task breakdown, and effective instruction?
 | S&C.2S&C.3S&C.4S&C.5S&C.7AT.1AT.2HPL.6HE.1HE.3CP1. | Audit and WDS |
| Key reading | CCF Reading:Coe, R., Aloisi, C., Higgins, S., & Major, L. E. (2014) *What makes great teaching. Review of the underpinning research*. Durham University: UK. Available at: <http://bit.ly/2OvmvKO>Science Reading:OSBORNE, J., 2015. Practical work in science: misunderstood and badly used? *School Science Review*.96 (357), pp. 16-24. |
| 4 | * There are a range of theories linked to how pupils learn however Cognitive Load Theory is the predominant theory at present.
* Teachers are key role models, who can influence the attitudes, values and behaviours of their pupils.
* A culture of mutual trust and respect supports effective relationships between science teachers and their pupils using Bronfenbrenner’s ecological systems theory, especially when teaching controversial topics such as evolution.
* A positive and safe learning environment rooted in routines and the building of trusting relationships benefits all pupils but is particularly valuable for pupils with SEND.
* Micro-teaching is to help revisit and reinforce the areas of the PGCE Curriculum introduced prior such as lesson planning and theories of learning.
 | * Plan a sequence of learning to deliver to peers building on the schema and add new learning/ knowledge using retrieval practice and spiral curriculum (Bruner, 1960) which helps pupils understand science concepts and supports overcoming misconceptions and preconceptions.
* Demonstrate progression and sequencing of knowledge and skills in science, for pupils to master building on prior knowledge by organising this knowledge into increasingly complex mental models (or “schemata”).
* Use retrieval, scale switching, spaced and interweaving in planning sequentially to helps pupil improve their memories.
* Use expositions in the form of analogies, memory aids and worked examples to avoid cognitive overload.
 | * Carrying out the micro teaching to the group of trainees and tutor. Subsequent feedback will inform strengths and areas for development. Particular focus on how to break complex material into smaller steps (e.g., partially completed examples to focus pupils on the specific steps). How to design practice, generation and retrieval tasks that provide just enough support so that pupils experience a high success rate when attempting challenging work.
* Deconstruct and reflect on feedback on their mini teach to inform strengths and areas for development.
* Research some of the literature on theories of learning in preparation for a critical review discussion in groups of some of this literature.
* Deconstruct how teachers create a culture of respect and trust in the classroom that supports all pupils to succeed (e.g., by modelling the types of courteous behaviour expected of pupils) and respond quickly to any behaviour or bullying that threatens emotional safety.
* Deconstruct how teachers use inspirational and consistent language that promotes challenge, aspiration, resilience, and praises pupil effort. Set tasks which stretch pupils, but which are achievable. Scenario based learning.
* Deconstruct how teachers generate a positive and respectful learning environment in which making mistakes, resilience and perseverance are part of a daily routine using Maslow’s Hierarchy of Needs.
 | Small group activities:1. Explore the use of retrieval practice and the spiral curriculum to support understanding and overcome misconceptions. Plan a sequence of learning activities that use these strategies to teach the selected subject specific topic or theme. Share your plans with the larger group and discuss how they exemplify effective use of retrieval practice and the spiral curriculum.
2. Form small groups and discuss the importance of creating a positive and respectful learning environment. Explore how to generate a positive and respectful learning environment using Maslow's Hierarchy of Needs. Discuss feedback from mini teach sessions and make specific notes on how you could create a more positive learning environment around this.

WDS:1. How can a positive and respectful learning environment contribute to students' engagement, motivation, and overall learning outcomes?
2. What strategies can be implemented to address the identified areas for improvement and enhance the overall learning environment?
 | AT.1AT.2AT.3AT.6HPL.6HE.2HE.3HE.5S&C.4HE.4MB.6S&C.8 | WDS |
| Key reading | CCF Reading:\*Deans for Impact (2015) The Science of Learning [Online] Accessible from: https://deansforimpact.org/resources/the-science-oflearning/. [retrieved 10 October 2018].Science Reading:SCAIFE, J., 2018. Learning in Science. In: WELLINGTON, J. and IRESON, G., 2018. *Science Learning, Science Teaching.* 4th ed. Routledge. |
| 5 | * Common misconceptions develop when prior knowledge is weak.
* We are all language teachers, and science provides the perfect vehicle for teaching literacy by explicitly teaching reading, writing and oral language skills. High-quality classroom talk can support pupils to articulate key ideas, consolidate understanding and extend their vocabulary. This should also incorporate EAL learners and supporting their access to their curriculum, but not as a homogenous group.
* EAL pupils have prior experiences and learning in addition to challenges.
* That Teaching Assistants have an important role in the classroom under the supervision of expert colleagues to support EAL pupils.
* The duty of a science teacher in adhering to the Equality Act 2010.
* Micro-teaching is to help revisit and reinforce the areas of the PGCE Curriculum introduced prior such as lesson planning and theories of learning.
 | * Analyse structuring tasks and questions that allow teachers and pupils to easily identify misconceptions and knowledge-gaps and address them using concrete examples.
* Identify and address EAL pupils’ language needs utilising strategies that can support language development, for example Hester’s BEL stages.
* Demonstrate how to break tasks down into constituent components when first setting up independent practice (e.g., using tasks that scaffold pupils through meta-cognitive and procedural processes) such as model exemplar answers to pupils with rationale provided, begin to scaffold and guide pupils through work/assessments against learning outcomes and develop strategies for prior knowledge retrieval.
* Identify and reflect on approaches to eliminate discrimination and plan for a safe and inclusive learning environment especially when teaching controversial topics in Science of the Equality Act 2010 and improve the lives of pupils.
* Evaluate how to adapt lessons whilst maintaining high expectations for all, so that all pupils have the opportunity to meet expectations and deconstructing this approach.
 | * Carrying out the micro teaching to the group of trainees and tutor. Subsequent feedback will inform strengths and areas for development.
* Deconstruct and reflect on feedback on their mini teach to inform strengths and areas for development.
* Joint planning on an aspect of science and create a menu to use to explore pupil preconceptions. Group discussion on the implications for planning of these misconceptions and the implications for a teacher's own subject knowledge.
* Discussions with experts and peers on: How to teach unfamiliar vocabulary explicitly and plan for pupils to be repeatedly exposed to high-utility and high-frequency vocabulary in what is taught.
* Joint planning and practice on how to model reading comprehension by asking questions, making predictions, and summarising when reading.
* Joint planning and practice on how to model and require high-quality oral language, recognising that spoken language underpins the development of reading and writing (e.g., requiring pupils to respond to questions in full sentences, making use of relevant technical vocabulary) and how to support pupils to become fluent readers and to write fluently and legibly.
* Discussion with experts and peers on how to Identify pupils who need new content further broken down.
* Data scenario exercise to practice how to make use of formative assessment.
* Observing and reflecting on how expert colleagues adapt lessons, whilst maintaining high expectations for all, so that all pupils could meet expectations and deconstructing this approach.
 | Small group tasks:1. Identify common misconceptions and knowledge-gaps that pupils may have on this topic. Design a task or question that will allow teachers and pupils to identify these misconceptions and knowledge-gaps easily. Swap tasks/questions with another group and identify any misconceptions or knowledge-gaps that are evident. Provide feedback to the original group and suggest ways to address the identified misconceptions or knowledge-gaps using concrete examples.
2. Research Hester’s BEL stages and identify strategies that can support language development for EAL pupils. Design a task or activity that utilises these strategies to support EAL pupils' language development whilst learning about the science topic. Swap tasks/activities with another group and identify any additional strategies that could be implemented.

WDS Questions:1. Select a KS3 topic for science specialism. What are some common misconceptions and knowledge gaps that pupils may have in relation to this?
2. Reflecting on the group discussions and research, how do these strategies align with best practices for supporting language development and inclusion of EAL pupils in your subject area?
 | HPL.1HPL.2HPL.3HPL.4HPL.5HPL.6HPL.7HPL.8HPL.9S&C.9CP.7 | WDS |
| Key reading | CCF Reading:Davis, P., Florian, L., Ainscow, M., Dyson, A., Farrell, P., Hick, P., Rouse, M. (2004) Teaching Strategies and Approaches for Pupils with Special Educational Needs: A Scoping Study. Accessible from: <http://dera.ioe.ac.uk/6059/1/RR516.pdf>.Science Reading:Chapter 5. Elicitation: Pupils’ Ideas of the World in ROSS, K., McKECHNIE, J., LAKIN, L. and BAKER, J., 2015. *Teaching Secondary Science: constructing meaning and developing understanding*. 4th ed. London: Routledge.  |
| 6 | * The importance of safeguarding in schools and their safeguarding responsibilities as a teacher, for example to be vigilant, to build excellent relationships with pupils and adhere to KCSIE.
* Identify readiness for professional practice. Through attendance of Safeguarding Review and respond Seminar and lectures at EHU.
* Understand online literacy and safety as a professional in an educational setting; this includes ensuring no promises of confidentiality and not prompting a pupil during their disclosure; in addition, to only share information with key staff (e.g., DSO).
 | * Explore and discuss what Safeguarding issues to look out for and explain safeguarding strategies and explain the response to a range of behavioural/ safeguarding situations, such as Peer on peer abuse / Trauma informed Online Bullying, Radicalisation.
* Deconstruct and reflect on Safeguarding scenarios in preparation for the CPD on safeguarding and professional practice (Introductory).
 | * Whole cohort Scenarios: How to recognise where there might be a situation where safeguarding is an issue. How to respond quickly to any behaviour or bullying that threatens emotional safety.
* Engage with Safeguarding provision / CPD: safeguarding / Preventand Feminista.
 | Group tasks:* Utilising the lecture, divide the cohort into 2 areas of discussion to explore and examine the responses and approaches they might encounter safeguarding issues - Peer on peer abuse / Trauma informed Online Bullying, Radicalisation.
* Each group will present their understanding / queries to share ideas for creating a safe and inclusive learning environment that addresses the identified safeguarding issues.

 WDS Questions:* How can the strategies discussed, contribute to preventing and addressing the assigned safeguarding issues in the classroom?
* Provide a comprehensive approach towards safeguarding issues for one of the following: Peer on peer abuse / Trauma informed Online Bullying, Radicalisation.
 | AT.1AT.2AT.3AT.4AT.5AT.6AT.7HE.3HE.6 | WDS |
| Key reading | Reading:The Department for Education (2021).,Keeping Children Safe in Education (2021). Accessible at:<https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1101454/Keeping_children_safe_in_education_2022.pdf> |
| 7 | SEND Placement |
| 7 | * Pupils have a range of needs and strengths and begin to gain knowledge of the reasons for this. Teaching should be adapted to respond this these needs with a view to increasing pupil success and an awareness of social and personal developments of pupils.
* Pupils have a range of needs and strengths and recognise some of the reasons for this and the importance of high expectations to stretch and challenge all pupils.
* Seeking to understand pupils’ differences, including their different levels of prior knowledge and potential barriers to learning, is an essential part of teaching Science.
* Teaching assistants (TAs) can support pupils more effectively when they are prepared for Science lessons by teachers, and when TAs supplement rather than replace support from teachers.
* Responsibility of a teacher is to support ALL pupils including those with a range of additional needs. Utilising, for example, the SEND Code of Practice, which provides additional guidance on supporting pupils with SEND effectively. This also includes knowing the safeguarding procedures for their educational establishment and the importance of working closely with the SENCO.
* Teachers have a responsibility to know the nature of SEND pupils’ needs or disabilities and provide bespoke support for these pupils.
* A collaborative approach to supporting pupils with SEND is crucial to maximise the removal of barriers to individual learning.
* Teachers have a responsibility to ensure explicit connections are made between learning from everyday classroom teaching and structured interventions.
* Teachers have a responsibility to work collaboratively with Teaching Assistants to help pupils develop independent learning skills and manage their own learning.
 | * Explain what Adaptive Teaching is and identify barriers to learning in the Science classroom e.g., misconceptions, abstract nature of science.
* Exemplify methods to adapt planning to respond to the needs and strengths of individuals, for example using effective modelling and scaffolding. This could include how teachers use data to inform planning.
* Demonstrate how teachers identify pupils who need new content further broken down and to make use of formative assessment. Also, how to balance input of new content so that pupils master important concepts.
* Explain how teachers decide whether intervening within lessons with individuals and small groups would be more efficient and effective than planning different lessons for different groups of pupils.
 | * Expert modelling of how expert colleagues adapt lessons, whilst maintaining high expectations for all, so that all pupils could meet expectations and deconstructing this approach.
* Expert modelling of how to balance input of new content so that pupils master important concepts.
* Expert modelling of how todecide whether intervening within lessons with individuals and small groups would be more efficient and effective than planning different lessons for different groups of pupils.
* Observe and deconstruct how expert colleagues during enhancement placement make effective use of teaching assistant and other adults in the classroom.
* Observe and analyse how expert colleagues use the SEND Code of Practice to support pupils with SEND effectively.
* Observe and evaluate methods to adapt planning to respond to the needs and strengths of individuals, for example using effective modelling and scaffolding. This could include how teachers use data to inform planning.
 | 1. Provide examples of effective methods, such as modelling and scaffolding, and explain how teachers use data to inform planning.
2. Explain the concept of Adaptive Teaching and identify some potential barriers to learning in science.
 | AT.1AT.2AT.3CP.10AT.4AT.5AT.6AT.7PB.4PB.5 |  |
| Key reading | CCF Reading:Education Endowment Foundation (2021) ‘Special Educational Needs in Mainstream Schools. Five recommendations on special education needs in mainstream schools. Accessible from: <https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/send>Science Reading:BUTLER, R., 2018. Teaching Science to Students with Special Educational Needs. *School Science Review.* 99(369), pp. 35-37.  |
|  |
| 8Start of introductory phase on placement | * Teachers have a legal obligation to keep children and young people safe (KCSIE, DfE, 2022)
 | * Identity and familiarise themselves with placement setting safeguarding procedure, including the name of the Safeguarding Lead. They should know their role and responsibilities in this process to keeping children safe.
* Explain who to contact with any safeguarding concerns and having a clear understanding of what sorts of behaviour, disclosures, and incidents to report.
* Explain how to access the schools Safeguarding Policy and stress the importance to the trainee being fully aware of the contents.
* Explain how to recognise where there might be a situation where safeguarding is an issue.
* Explain how to respond quickly to any behaviour or bullying that threatens emotional safety.
 | * Read the placement school’s Safeguarding policy having a clear understanding of what sorts of behaviour, disclosures, and incidents to report.
* Undertake settings based safeguarding training (if requested) along with understanding the settings safeguarding policy.
* Familiarise yourself with the EHU safeguarding procedures.
* Introduce yourself to the DSO/DSL in your setting.
 | * What is the name of the Safeguarding Lead at your placement setting and what are your roles and responsibilities in the safeguarding process?
* Discuss the specific safeguarding challenges within science. What are they?
 | HE.1MB.2MB.4MB.5MB.7MB.1MB.3HE.5 | WDS |
| Key reading | ReadingNSPCC CASPAR update and brief over view for keeping children safe <https://learning.nspcc.org.uk/research-resources/schools/keeping-children-safe-in-education-caspar-briefing> Faculty of Education Safeguarding Process for reporting safeguarding concerns 2023-2024 (Subject to change) |
| 9 | Half Term |
| 10 | * High-quality classroom talk can support pupils to articulate key ideas, consolidate understanding and extend their vocabulary.
* Questioning can help with finding out pupils’ prior knowledge, assessing their understanding as the lesson proceeds and can help with problem solving. It also allows pupils to express their ideas and extend their vocabulary. Good questioning can lead to good quality classroom discussion and learning.
* Schools are legally required to promote FBV under the Prevent Duty and the Equality Act 2010.
* FBV encompass values like democracy, the rule of law, individual liberty, and mutual respect and tolerance of different beliefs.
* Why FBV are important in the context of education and society as a whole.
 | * Deconstruct a range of types of questions in class discussions to extend and challenge pupils (e.g., by modelling new vocabulary or asking pupils to justify answers).
* Explain the significance of concrete examples, analogies, chunking, metaphors, non-examples and storytelling to support good exposition when introducing new content to avoid overloading the working memory.
* Weave FBV into subjects across the curriculum, not just in subjects like citizenship or religious education.
* Demonstrate the ability to incorporate FBV into lesson planning, classroom activities, and interactions with students.
* Identify the legal obligations of schools and educators in promoting FBV under the Prevent Duty and the Equality Act 2010.
 | * Expert modelling of how to balance exposition, repetition and other activities making up the lesson. Discussing and analysing with expert colleagues how they balance exposition, repetition, practice of critical skills and knowledge.
* Discussing, analysing and practicing with expert colleagues how to use concrete representation of abstract ideas (e.g., making use of analogies, metaphors, examples and non-examples).
* Expert modelling of how experienced colleagues explain complex concepts to pupils across key stages.
 | 1. How might questioning be used to identify knowledge gaps and misconceptions?
2. Evaluate a subject specific example of a question that you have used/or seen used in a class discussion that extended and challenged pupils.
 | A.1A.5A.6CP.6CP.7CP.9 | WDS |
|  | CCF Reading:Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2004). Working inside the Black Box: Assessment for Learning in the Classroom. Phi Delta Kappan, 86(1), 8–21. Accessible from: <https://eric.ed.gov/?id=EJ705962>Science Reading:BAMMEKE, A., 2021. The Power of Language in Science Learning. *School Science Review*. 102(381), pp. 79-84. |
| 11 | Review and Respond week on questioning task and feedback.* Questioning is an essential tool for teachers; questions can be used for many purposes, including to check pupils’ prior knowledge, assess understanding and break down problems.
* Paired and group activities can increase pupil success, but to work together effectively pupils need guidance, support and practice.
* What extremism is and that extremism involves holding and promoting extreme or radical views that often go against the mainstream values of society. It can manifest in various forms, including political, religious, or ideological extremism.
* The UK government's Prevent strategy and its aims.
* Educational institutions, must have "due regard" to the need to prevent people from being radicalized.
 | * Analyse questions to enable the identification of knowledge gaps and misconceptions.
* Evaluate a range of target questioning techniques to enable the identification of knowledge gaps and misconceptions and reframe questions to provide greater scaffolding or greater stretch.
* Understand the importance of early intervention and how to differentiate between legitimate expressions of belief and signs of radicalization.
* Report concerns and seek guidance from designated safeguarding leads.
* Create a classroom environment that encourages critical thinking, open dialogue, and respectful discussions about sensitive topics.
 | * Practice, receive feedback and improve at: Starting expositions at the point of current pupil understanding.
* Practice and receive feedback on combining a verbal explanation with a relevant graphical representation of the same concept or process, where appropriate.
 | 1. Use the focus of discussions from mentor meetings, targets, lesson observation feedback and task to reflect on areas of focus and development.
2. Explore and reflect on how questioning is implemented in your setting.
 | A.1A.5A.6CP.6CP.7CP.9 | WDS |
| Key reading | CCF Reading:Alexander R.J. (2020) A Dialogic Teaching Companion, London: Routledge. |
| 12 | * Guides, scaffolds and worked examples can help pupils apply new ideas, but should be gradually removed as pupil expertise increases.
* Modelling helps pupils understand new processes and ideas; good models make abstract ideas accessible.
* Identify essential concepts, knowledge and skills within a carefully sequenced and coherent Science curriculum. Provide opportunity for all pupils to learn and master essential concepts, knowledge and skills in Science.
* Scaffolding tasks can also help pupils in their learning and again links with the section on theories of learning linked to the ideas of Vygotsky and Social Constructivism and the notion of a zone of proximal development.
* Have a clear understanding of what peer-on-peer abuse is.
* Various forms of peer-on-peer abuse, which can include physical abuse, verbal abuse, bullying, sexual harassment, online harassment, and other harmful behaviours. And that these behaviours can cause emotional, psychological, and physical harm to students.
* The role of educators in fostering a safe and inclusive learning environment that promotes respect, tolerance, and the well-being of all students.
 | * Exemplify modelling, explanations and scaffolds, acknowledging that novices need more structure early in a domain.
* Enable critical thinking and problem solving by first teaching the necessary foundational content knowledge.
* Remove scaffolding only when pupils are achieving a high degree of success in applying previously taught material.
* Provide sufficient opportunity for pupils to consolidate and practice applying new knowledge and skills.
* Respond appropriately when they suspect or are informed about peer-on-peer abuse within their classroom or school.
* Recognise signs of peer-on-peer abuse among their students.
* Promote a positive and respectful classroom culture, teaching empathy and conflict resolution skills, and implementing anti-bullying policies.
 | * Observing how expert colleagues break tasks down into constituent components when first setting up independent practice (e.g. using tasks that scaffold pupils through meta-cognitive and procedural processes) and deconstructing this approach.
* Discussing and analysing with expert colleagues how to make the steps in a process memorable and ensuring pupils can recall them (e.g., naming them, developing mnemonics, or linking to memorable stories).
 | 1. How do you know when it is appropriate to remove scaffolding and allow pupils to apply previously taught material independently?
2. Provide an example of how you have used modelling, explanations, and scaffolds to support students in understanding new concepts within science.
 | CP.3CP.4HPL.9S&C.1S&C.2S&C.4S&C.3CP.4CP.5 | WDSS4000 Submission 17/11/23 |
| Key reading | CCF Reading:Rosenshine, B. (2012) Principles of Instruction: Research-based strategies that all teachers should know. American Educator, 12–20. <https://doi.org/10.1111/j.1467-8535.2005.00507.x>.Science Reading:* Education Endowment Foundation, *Improving Secondary Science: Guidance Report.* pp.18-23

[*https://educationendowmentfoundation.org.uk/public/files/Publications/Science/EEF\_improving\_secondary\_science.pdf*](https://educationendowmentfoundation.org.uk/public/files/Publications/Science/EEF_improving_secondary_science.pdf) |
| 13 | Review and respond week on modelling. * What gangs are and how they can influence youth violence.
* The various factors that may lead young people to join gangs, such as social, economic, and environmental factors.
* Signs of potential gang involvement or youth violence among their students. These signs may include changes in behaviour, association with known gang members, a sudden increase in unexplained wealth, or participation in violent activities.
 | * Analyse modelling approaches used by your mentor and begin to develop your own approach and incorporate into your classroom.
* Highlight the importance of early intervention and collaboration with other professionals, such as social workers, and law enforcement, when necessary, to address potential issues related to gangs and youth violence.
* Discuss risk factors that may make students more vulnerable to gang involvement, such as a lack of positive role models, a history of trauma, substance abuse, or disengagement from school.
* Understand and implement strategies to prevent gang involvement and youth violence within their classroom and school environments.
 | * Practice and receive feedback using modelling, explanations, and scaffolds, acknowledging that novices need more structure early in a domain.
* Discussing and analysing with expert colleagues how to teach different forms of writing by modelling planning, drafting and editing.
 | 1. Use the focus of discussions from mentor meetings, targets, lesson observation feedback and task to reflect on areas of focus and development.
2. Explore and reflect on how modelling and scaffolding is implemented in your setting.
 | HPL.1HPL.2HPL.6HPL.7HPL.9 |  |
| Key reading | CCf Reading:Wittwer, J., & Renkl, A. (2010) How Effective are Instructional Explanations in Example-Based Learning? A Meta-Analytic Review. Educational Psychology Review, 22(4), 393–409. https://doi.org/10.1007/s10648-010-9136-5. |
| 14 | * Effective assessment is critical to teaching because it provides teachers with information about pupils’ understanding and needs (assessment data to inform planning).
* There are differences between Assessment *of* Learning and Assessment *for* Learning- including purpose and type. Black and William’s approach to ‘Inside the Black box’- raising classroom standards by assessment.
* Enquiries across sequences in science shape assessment e.g., cells, nutrition, energy, plants, variation and health. Why some whole school assessment strategies are problematic.
* What gun and knife violence entails.
* Risk factors that may make students more vulnerable to gun and knife violence, such as exposure to violence at home, gang involvement, or a history of trauma.
* The signs of potential involvement in gun and knife violence among their students.
 | * Exemplify spaced repetition, through planning retrieval practice and structured tasks to demonstrate assessment of prior knowledge, knowledge gaps and misconceptions.
* Evaluate Science specific progression models to assess pupils both summatively and formatively.
* Understand and adhere to school policies and procedures for reporting and addressing concerns related to gun and knife violence.
* Implement preventive measures within their classroom and school environments to reduce the risk of gun and knife violence.
* Identify signs and risk factors associated with gun and knife violence among their students.
 | * Discussing and analysing with expert colleagues how progression on forms of knowledge is sequenced in the Science curriculum.
* Discussing and analysing with expert colleagues how to plan formative assessment tasks.
* Observing how expert colleagues use verbal feedback during lessons.
* Observing expert colleagues on how to monitor pupil work during lessons, including checking for understanding.
* Observing expert colleagues on how to ensure feedback is specific and helpful when using peer- or self-assessment.
 | 1.How have you planned and implemented formative assessment tasks in your lessons, and how have you used the results to adjust your teaching and support your students' learning?2.Describe a progression model in science and how you have used this. | A.1A.2A.3A.4 | WDS |
|  | CCF Reading:Speckesser, S., Runge, J., Foliano, F., Bursnall, M., Hudson-Sharp, N., Rolfe, H. & Anders, J. (2018) Embedding Formative Assessment: Evaluation Report. [Online] Accessible from: https://educationendowmentfoundation.org.uk/public/files/EFA\_evaluation\_report.pdf [retrieved 10 August 2022].Science Reading:* Education Endowment Foundation, *Improving Secondary Science: Guidance Report.* Feedback: Use structured feedback to move on pupils’ thinking. pp.38-41.

[*https://educationendowmentfoundation.org.uk/public/files/Publications/Science/EEF\_improving\_secondary\_science.pdf*](https://educationendowmentfoundation.org.uk/public/files/Publications/Science/EEF_improving_secondary_science.pdf) |
| 15 | Review and Respond week on Assessment.* Homophobia is a prejudice or irrational fear of homosexuality or people who identify as LGBTQ+ (lesbian, gay, bisexual, transgender, queer, and other non-heteronormative identities).
* The negative impact of homophobia, including its role in fostering discrimination, bullying, and mental health issues among LGBTQ+ students.
* The importance of being an ally to LGBTQ+ students and colleagues, including actively supporting and advocating for their rights and well-being.
 | * Plan formative assessment tasks linked to lesson objectives and think ahead about what would indicate understanding (e.g., by using hinge questions to pinpoint knowledge gaps).
* Recognise signs of homophobia in their classrooms and schools. These signs may include derogatory language, exclusion or marginalization of LGBTQ+ students, or instances of bullying based on sexual orientation or gender identity.
* Create inclusive and affirming classroom environments where all students feel safe and respected, regardless of their sexual orientation or gender identity.
* Discuss strategies for promoting LGBTQ+ inclusivity and allyship within their classrooms and schools. This includes incorporating LGBTQ+ perspectives into the curriculum, using inclusive language, and displaying supportive symbols or materials.
 | * Practice and receive feedback on making use of formative assessment e.g., retrieval starter, plenary to check for prior knowledge and misconceptions.
 | 1. Use the focus of discussions from mentor meetings, targets, lesson observation feedback and task to reflect on areas of focus and development.
2. Explore and reflect on how assessment is implemented in your setting.
 | HPL.1HPL.2HPL.3HPL.4HPL.5HPL.6HPL.8AT. 1AT.2AT.3AT.4AT.5 | WDS |
| Key reading | CCF ReadingHattie, J., & Timperley, H. (2007). The Power of Feedback. Review of Educational Research, 77(1), 81–112. https://doi.org/10.3102/003465430298487 |
| 16End of Introductory Placement [15.12.23] | * PSHE is a statutory school curriculum subject that helps pupils stay healthy, safe and prepared for life and work in modern Britain as outlined in the Education Act 2022. Taught topics include physical health, mental health, growing and changing, personal safety, relationships and sex education, bullying and discrimination, money and careers, media and digital literacy, community and responsibility. When taught well, PSHE also helps pupils to achieve their academic potential.
* Effective teaching and learning strategies specific to PSHE. This includes approaches like active learning, group discussions, role-plays, case studies, and real-life examples. Also understand the importance of creating a safe and inclusive learning environment for sensitive and personal discussions.
* Understanding of safeguarding principles and procedures. With an awareness of the signs of abuse, know how to respond to disclosures, and understand their duty of care towards their students' well-being.
* CSE involves individuals, often adults, exploiting children or young people for sexual purposes, which can include grooming, coercion, manipulation, or physical abuse.
* The various forms of CSE, including online exploitation, forced prostitution, and sexual abuse within relationships of trust or authority.
* The signs and indicators of potential CSE among their students. These signs may include changes in behaviour, withdrawal from peers and family, unexplained gifts or money, age-inappropriate sexual knowledge or behaviour, or a sudden decline in school performance.
 | * Possess a solid understanding of the key topics and themes covered in PSHE at KS3 and KS4. This includes areas such as mental health and well-being, relationships and sex education, drugs and alcohol education, financial literacy, and citizenship.
* Apply effective teaching and learning strategies specific to PSHE. Utilise approaches like active learning, group discussions, role-plays, case studies, and real-life examples to engage students. Create a safe and inclusive learning environment for sensitive and personal discussions.
* Work collaboratively with other professionals, such as school counselors, external agencies, and parents/carers, to provide comprehensive support and guidance to students.
* Emphasise the importance of following school safeguarding policies and procedures, including reporting concerns to designated safeguarding leads and authorities.
* Be proactive in raising awareness about CSE among students and parents, providing age-appropriate education on healthy relationships, consent, and online safety.
* Signpost support services available for victims of CSE and know how to connect students in need with appropriate resources and professionals.
 | * Co-plan and deliver a PSHE lesson that incorporates the key topics and themes specified in the national curriculum and frameworks. They can apply appropriate pedagogical approaches, such as active learning strategies, group discussions, and role-plays.
* Actively foster a safe and inclusive learning environment.
* Evaluate the effectiveness of PSHE lessons, assessing the impact of teaching strategies, and identifying areas for improvement.
 | 1. Discuss the key topics and themes covered in PSHE at KS3 and KS4.
2. How can you create a safe and inclusive learning environment for sensitive and personal discussions in PSHE?
 | HE.1HE.2HE.3HE.4HE.5HE.6 | WDS |
| Key reading | Davies, E. L., & Matley, F. (2020). Teachers and pupils under pressure: UK teachers' views on the content and format of personal, social, health and economic education. Educational Studies, 46(1), 4-22. <https://doi.org/10.1080/02643944.2020.1713868> |
| 17 | Christmas Holidays |
| 18 |
| Key reading  |  |
| 19 | * Pupils are likely to learn at different rates and to require different levels and types of support from teachers to succeed.
* Adapting teaching in a responsive way, including by providing targeted support to pupils who are struggling, is likely to increase pupil success.
* Adaptive teaching is less likely to be valuable if it causes the teacher to artificially create distinct tasks for different groups of pupils or to set lower expectations for particular pupils.
* Teachers and additional members of staff provide valuable support with individual/ groups of pupils.
* Positive framing plays an important part in developing a growth mindset.
* How health and well-being of pupils is important in their progress.
* The teacher is able to influence the motivation, well-being and behaviour of their pupils and can improve all of these by their approach to their teaching.
* How teachers can be generators of educational knowledge and how action research can be used as a tool to help develop pupil learning.
* Reflective practice, supported by feedback from and observation of experienced colleagues, professional debate, and learning from educational research, is also likely to support improvement.
 | * Identify pupils who need new content further broken down and/or who benefit from additional adaptations.
* Support pupils with a range of educational needs including how to use guidance in the SEND code of practice.
* Ensure that all pupils have the opportunity to meet high expectations, rather than artificially creating distinct tasks for specific classes/pupils. Plan and include questions and tasks to extend and challenge pupils.
* Explain how to build a pupil’s self-esteem.
* Demonstrate how to organise and manage their time effectively to facilitate work-life balance.
* Explain what internal and external support is available to trainee teachers.
* Explain a range of strategies to support health wellbeing, for example Mindfulness.
* Strengthen and extend pedagogical and subject knowledge by participating in wider networks and lesson preparation such as Association for Science Education (ASE).
* Trial and critically evaluate new approaches in their practice with a view to developing practice.
 | * Observing how expert colleagues adapt lessons, whilst maintaining high expectations for all, so that all pupils have the opportunity to meet expectations and deconstructing this approach.
* Joint planning with expert colleagues on how to adapt teaching to meet needs of pupils. Applying high expectations to all groups, and ensuring all pupils have access to a rich curriculum e.g., parallel histories or meanwhile elsewhere.
* Discuss and analyse with expert colleagues how to make effective use of teaching assistants.
* Discussing and analysing with expert colleagues how the placement school changes groups regularly, avoiding the perception that groups are fixed.
* Discussing and analysing with expert colleagues on what research informs their practice. Trainees to engage with subject specific research and incorporate this into their planning.
 | Small group tasks:1. Identify a case study of a pupil with a specific educational need, such as dyslexia, ADHD, or autism. In small groups, discuss and share strategies that could be used to support the pupil's learning and development in the classroom. Use the guidance in the SEND code of practice to inform your strategies and ensure they are evidence-based and appropriate for the pupil's needs. Develop a plan for implementing the strategies and share with the larger group for feedback and discussion.
2. Select a topic in your subject that is of interest to you but that you feel you have limited knowledge about. In small groups, research and share resources, such as books, articles, or videos, that could help you improve your subject knowledge on the topic. Use a variety of resources and approaches, such as reading, watching videos, or attending webinars or conferences. Reflect on your learning and share your insights with the larger group, discussing how you can apply your new knowledge to your teaching practice.

WDS Questions:1. In your small group, what strategies did you discuss and share to support the pupil's learning and development in the classroom?
2. Discuss how you plan in order to take into account the pupil's individual needs, the classroom environment, and collaboration with other professionals?
 | AT.1AT.2AT.3AT.4AT.5AT.6AT.7HE.3HE.4 | WDS |
|  | CCF Reading:Education Endowment Foundation (2018) Sutton Trust-Education Endowment Foundation Teaching and Learning Toolkit: Special Educational Needs in Mainstream Schools Accessible from <https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/send>Science Reading:BUTLER, R., 2018. Teaching Science to Students with Special Educational Needs. *School Science Review.* 99(369), pp. 35-37.  |
| 20 | * Every teacher has a responsibility to develop pupils’ literacy through the promotion of systematic synthetic phonics, particularly if teaching early reading and spelling.
* To access the curriculum, early literacy provides fundamental knowledge; reading comprises two elements: word reading and language comprehension; systematic synthetic phonics is the most effective approach for teaching pupils to decode.
* High-quality classroom talk can support pupils to articulate key ideas, consolidate understanding and extend their vocabulary.
* Effective RSE supports people throughout life to develop safe, fulfilling and healthy sexual relationships, at the appropriate life stage.
* Every teacher has a responsibility in developing numeracy in the classroom. For example, collecting scientific data, drawing graphs, solving problems using science equations.
 | * Evaluate a range of strategies to teach unfamiliar vocabulary explicitly and plan for pupils to be repeatedly exposed to high-utility and high-frequency vocabulary in what is taught.
* Demonstrate how to model high-quality oral language, recognising that spoken language underpins the development of reading and writing (e.g., requiring pupils to respond to questions in full sentences, making use of relevant technical vocabulary).
* Analyse a range of strategies to promote reading for pleasure (e.g., by using a range of whole class reading approaches and regularly reading high-quality texts to children.
* Explain the RSE (2021) statutory guidance and how it would inform teaching the 4 core areas of the curriculum: Identity, gender and sexuality, Consent and healthy relationships, Anatomy, sexual health, and fertility, and RSE in a digital context within a safe space.
* Demonstrate how numeracy can be promoted in science using a range of strategies.
 | * Discussing and analysing with expert colleagues on how to address literacy issues in the subject.
* Receiving clear, consistent and effective mentoring in how to promote reading for pleasure (e.g., by using a range of whole class reading approaches and regularly reading high-quality texts to children).
* Discussing and analysing with expert colleagues how to teach different forms of writing by modelling planning, drafting and editing.
* Joint planning on strategies to incorporate numeracy into science lessons.
* Seek out the person who is responsible for teaching RSE and discuss the setting policy with them.
* Observing how expert colleagues demonstrate a clear understanding of systematic synthetic phonics, particularly if teaching early reading and spelling, and deconstructing this approach.
* Receiving clear, consistent and effective mentoring in how to provide scaffolds for pupil talk to increase the focus and rigour of dialogue.
 | Small group task: 1. Provide each group with a list of unfamiliar vocabulary words from a specific subject area. Ask each group to evaluate a range of strategies to teach these unfamiliar vocabulary words explicitly, such as using visual aids, contextual clues, and repetition. Encourage the group to discuss and plan how to repeatedly expose pupils to high-utility and high-frequency vocabulary in what is taught, using subject relevant frameworks.
2. Provide each group with a specific subject topic. Ask each group to demonstrate how numeracy can be promoted in science by identifying opportunities to incorporate algebra and measures, and handling data into their topic. Encourage the group to use a range of strategies. Have each group present their strategies and examples to the rest of the group for feedback and discussion.

WDS Questions:1. Explain how subject relevant frameworks are used to guide the selection of vocabulary words and the planning process.
2. Describe the different strategies and approaches discussed to engage students and enhance their skills.
 | CP.7S&C9S&C 10 | WDS |
| Key reading  | CCF Reading:Machin, S., McNally, S., & Viarengo, M. (2018) Changing how literacy is taught: Evidence on synthetic phonics. American Economic Journal: Economic Policy, 10(2), 217–241. <https://doi.org/10.1257/pol.20160514>.Science Reading:NAYLOR, S., 2015. Talking and thinking using concept cartoons: what have we learnt? *School Science Review.* 97(359), pp. 61-67. |
|  | Developmental placement  |
| 21 | * Good teaching and learning benefit all students.
* Identifying and overcoming barriers to learning can be transformational for all learners.
* Developing strategies to support students who are struggling within the classroom is crucial.
* Adapting teaching (rather than differentiation) to the needs of students can impact upon outcomes.
 | * Recognise and remove barriers to learning for students in the classroom.
* Develop strategies and practice to support students with their learning.
 | * Working with mentors and other colleagues to understand the learning needs of the students taught.
* Discussions with and observation of expert colleagues regarding the identification of barriers to learning.
* Receiving clear, consistent and effective mentoring in how to adapt teaching to the needs of students.
 | Small group tasks:1. Identify common barriers to progress such as literacy, SEND, social, and emotional and mental health issues. How might specific barriers be recognised and what types of adaptations might be appropriate to specific barriers?
2. Consider strategies that could be used to support students in relation to lesson preparation, the classroom environment, teaching approaches and resources. Case studies will be provided for trainees to consider what practical steps can be taken to support individual students.

WDS Questions:1. What educational barriers exist for the students you are observing and teaching?
2. Why is adaptive teaching crucial to removing those barriers?
 | AT 1, 2,3, 7 | WDS |
| Key reading | CCf Reading:Haggan, M., & McGlynn, C., (2004) Moving barriers: promoting learning for diversity in initial teacher education. Intercultural Education: [Moving barriers: Promoting learning for diversity in initial teacher education (tandfonline.com)](https://www.tandfonline.com/doi/epdf/10.1080/1467598042000262545?needAccess=true&role=button) Science Reading:HOBBS, L. & FOGG-ROGERS, L., 2019. Making STEM for everyone: reaching under-served audiences. *School Science Review*. 101(375), pp. 19-23. |
| 22 | Review and Respond week on Assessment. | * Practice proven methods of adapting teaching to raise attainment and progress for students.
 | * Adopt practical strategies to support the needs of all students.
 | 1. Use the focus of discussions from mentor meetings, targets, lesson observation feedback and task to reflect on areas of focus and development.
2. Explore and reflect on how Adaptive Teaching (using data) is implemented in your setting.

WDS Questions:1. How is teaching adapted within the lessons you are observing or teaching?
2. Describe the impact upon the students when lessons are adapted appropriately and what happens when there is a lack of adaptation within lessons.
 | AT 1, 2,3, 7 | WDS |
| Key reading | Eaton J (2022) Moving from differentiation to adaptive teachings. Education Endowment Foundation. [EEF blog: Moving from ‘differentiation’ to ‘adaptive teaching’ | EEF (educationendowmentfoundation.org.uk)](https://educationendowmentfoundation.org.uk/news/moving-from-differentiation-to-adaptive-teaching?utm_source=/news/moving-from-differentiation-to-adaptive-teaching&utm_medium=search&utm_campaign=site_search&search_term=adaptive) |
| 23 | * It is important to sequence learning, so pupils are secure in foundational knowledge before introducing more complex material.
* How to use modelling, scaffolding and explanations to assist with structuring learning, and recognise the need to remove this when pupils can apply such structures to prior learning.
* It is important to provide opportunities for all pupils to learn and master essential concepts, knowledge and skills in science.
 | * Demonstrate lessons that promote, practice and revisit key concepts and skills required in science that are taught within secondary education linked to Bruner’s (1960) Spiral Curriculum to master knowledge.
* Critique the core subject concepts and skills to allow for contemporary in-roads in science such as using interleaving, spaced practice, concrete examples, dual coding and retrieval practice.
* Demonstrate how to design practice, generation and retrieval tasks that provide just enough support so that pupils experience a high success rate when attempting challenging work.
 | * Engaging in joint planning in showing how expert colleagues decide on prior knowledge, objectives and outcomes, break tasks down into constituent components, use modelling, devise explanations and scaffolds, provide sufficient opportunity for pupils to consolidate and practice applying new skills and knowledge, and how they make the abstract concrete.
* Practice and feedback on above.
 | 1. Explain how you have designed practice, generation and retrieval tasks that provide just enough support for students to experience a high success rate when attempting challenging work. Provide an example.
2. How have you planned to revisit and reinforce key concepts and skills, within science, in line with Bruner's Spiral Curriculum?
 | CP.2CP.8S&C.1S&C.3S&C.5S&C.7 | S4001 Submission 19/1/2024WDS |
| Key reading | CCF Reading:Roediger, H. L., & Butler, A. C. (2011) The critical role of retrieval practice in long-term retention. Trends in Cognitive Sciences, 15(1), 20–27. <https://doi.org/10.1016/j.tics.2010.09.003>.Science Reading:* Education Endowment Foundation, *Improving Secondary Science: Guidance Report.* Feedback: Memory: Support pupils to retain and retrieve knowledge. pp.24-27.

[*https://educationendowmentfoundation.org.uk/public/files/Publications/Science/EEF\_improving\_secondary\_science.pdf*](https://educationendowmentfoundation.org.uk/public/files/Publications/Science/EEF_improving_secondary_science.pdf) |
| 24 | Review and respond week: Retrieval Practice. | * Draw explicit links between new content and the core concepts and principles in science.
 | Discuss and analyse how retrieval practice can be used to promote and enhance the acquisition of new knowledge at key stage 3 & 4. | 1. Use the focus of discussions from mentor meetings, targets, lesson observation feedback and task to reflect on areas of focus and development.
2. Explore and reflect on how retrieval practice is implemented in your setting.
 | CP.2CP.8S&C.1S&C.3S&C.5S&C.7HPL. 2HPL. 3HPL. 4HPL. 5HPL.6HPL.7HPL.8HPL.9 | WDS |
| Key reading | CCF Reading:Deans for Impact (2015) The Science of Learning [Online] Accessible from: https://deansforimpact.org/resources/the-science-oflearning/. [retrieved 10 October 2018]. |
| 25 | Half Term |
| 26 | * Additional members of staff provide valuable support with individual/ groups of pupils in addition to flexibly grouping pupils within a class to provide more tailored support.
* Teaching assistants (TAs) can support pupils more effectively when they are prepared for lessons by teachers, and when TAs supplement rather than replace support from teachers.
* Seeking to understand pupils’ differences, including their different levels of prior knowledge and potential barriers to learning, is an essential part of science teaching.
* It is important to work collaboratively and share the intended lesson outcomes with teaching assistants ahead of lessons.
* A predictable and secure environment benefits all pupils but is particularly valuable for pupils with special educational needs.
 | * Demonstrate activities that can stretch and challenge pupils of all abilities. This may include critically reflecting on the use of modelling and scaffolding.
* Exemplify lessons using the TA’s knowledge and skills to enhance pupil progress.
* Analyse the importance of planning ensure that support provided by teaching assistants in lessons is additional to, rather than a replacement for, support from the teacher.
 | * Practice and feedback on how to set tasks that stretch pupils, but which are achievable, within a challenging curriculum.
* Practice and feedback on using intentional and consistent language that promotes challenge and aspiration.
* Practice and feedback on reframing questions for greater stretch and challenge.
* Discuss and analyse with expert colleagues on how to work closely with the SENCO and other professionals supporting pupils with additional needs.
 | 1. How can you ensure that the support provided by teaching assistants in your lessons is additional to, rather than a replacement for, your own support as the teacher?
2. How do you adapt instruction to stretch and challenge pupils of varying abilities in your subject area? Evaluate an example of an activity that has worked well.
 | AT.3AT.5AT.7PB8.5PB8.6 | WDS |
| Key reading  | CCF Reading:Making Best Use of Teaching Assistants Guidance Report. [Online] Accessible from: [Guidance Reports | Education Endowment Foundation | EEF](https://educationendowmentfoundation.org.uk/tools/guidance-reports/)  |
| 27 | Review and Respond week on Teaching Assistants. | * Plan how TAs can support learning and improve attainment in the classroom by ensuring that during lesson preparation time TAs have the essential ‘need to knows’ such as Concepts, facts, information being taught; Skills to be learned, applied, practiced or extended; Intended learning outcomes; Expected/required feedback.
 | * Discuss and analyse with expert colleagues on how to ensure that support provided by teaching assistants in lessons is additional to, rather than a replacement for, support from the teacher.
* Practice and feedback, on adopting evidence-based interventions to support TAs in their small group and one-to-one instruction.
 | 1. Use the focus of discussions from mentor meetings, targets, lesson observation feedback and task to reflect on areas of focus and development.
2. Explore and reflect on how teaching assistants are deployed and managed in your setting.
 | CP.1CP.2CP.3CP.4CP.10PB.3PB.4PB.5PB.6 | WDS |
| Key reading  | CCF Reading:Blatchford, P., Bassett, P., Brown, P., Martin, C., Russell, A., & Webster, R. (2009) Deployment and impact of support staff in schools: Characteristics, Working Conditions and Job Satisfaction of Support Staff in Schools. https://dera.ioe.ac.uk/id/eprint/10818/ |
| 28 | * Teachers have a responsibility to strengthen pedagogical and subject knowledge by participating in wider networks such as the Association for Science Education.
* Educational research informs practice such as the effectiveness of practical work in science.
* Teachers understand the importance of being secure in their subject knowledge.
* Research suggests that the pedagogy of the subject can only be fully understood if the subject knowledge is secure. This combination of subject knowledge and pedagogical knowledge is likely to lead to effective teaching and motivated pupils
 | * Explain the essential concepts, knowledge, skills and principles of science.
* Describe and exemplify how expert colleagues ensure pupils’ thinking is focused on key ideas within the subject and deconstructing this approach, for example substantive knowledge.
* Exemplify how to accumulate and refine a collection of powerful analogies, illustrations, examples, explanations and demonstrations.
* Demonstrate how to sequence content in the topics they teach ensuring progression of knowledge.
* Exemplify how to be aware of common misconceptions and preconceptions.
* Demonstrate how to revisit the big ideas of the subject over time and teach key concepts through a range of examples.
 | * Practice and feedback on how to break complex material into smaller steps (e.g., using partially completed examples to focus pupils on the specific steps).
* Discussing and analysing with expert colleagues on how toidentify pupils who need new content further broken down.
* Practice and feedback on how to balance input of new content so that pupils master important concepts.
 | Small group tasks:1. Divide the group into pairs/small groups. Ask each pair to choose one essential concept, knowledge, skill, or principle of the specific subject. Instruct each pair to create a presentation or poster explaining their chosen concept, knowledge, skill, or principle. Encourage the pairs to use a range of examples and analogies to illustrate their chosen concept, knowledge, skill, or principle.
2. Ask each pair to choose a topic from the subject specific curriculum. Instruct each pair to create a plan for sequencing the content in their chosen topic, ensuring progression of knowledge and planning for residual knowledge. Encourage the pairs to consider the key concepts, knowledge and skills that need to be covered, and how these can be developed and built upon over time.

WDS Questions:1. Evaluate the logical progression and coherence of their content sequencing, based on the principles outlined by Counsell (2012).
2. Describe how your expert colleagues ensure that pupils' thinking is focused on key ideas within science.
 | S&C.1S&C.2S&C.4S&C.3 | SKAWDSEnd of Developmental |
|  | CCF Reading:Cordingley, P., Higgins, S., Greany, T., Buckler, N., Coles-Jordan, D., Crisp, B., Saunders, L. & Coe, R. (2015) Developing Great Teaching. Accessible from: https://tdtrust.org/about/dgt. [accessed 18 October 2018]. |
| 29 | * Metacognition can help pupils to become independent learners which in turn will help them succeed academically as they become resilient and independent learners (Flavell, 1979; Norman, 2016; Nelson, 2021).
* What metacognition is and how they can teach pupils metacognitive strategies that will help them develop their knowledge of a subject.
* The duty of a teacher to contribute positively to the wider school culture and develop a feeling of shared responsibility for improving the lives of all pupils within the school (e.g., by supporting expert colleagues with their pastoral responsibilities, such as careers, health, economic and wellbeing advice) as per Children and Social Work Act (2020) in the delivery of PSHE/ RSHE education.
* Transition from primary to secondary is a pivotal point in a child’s life and a phase in the educational journey and can lead to a stagnation in progress.
 | * Demonstrate how teachers promote Metacognition in the classroom with their thinking through modelling through the use of live demonstration to share the teacher’s learning process with pupils using the method of model, teach, practice and connect using a wide range of strategies such as visual maps, think, write, pair, share, checklists, exit tickets, metacognitive talk, exam wrappers, reciprocal teaching, reflexive thinking.
* Have knowledge for and be responsive to the needs of their school community.
* Exemplify the wide range of strategies that focuses on pupils’ academic and pastoral needs.
 | * Practice and feedback on explicitly teaching pupils metacognitive strategies linked to subject knowledge, including how to plan, monitor and evaluate, supports independence and academic success.
* Discussing and analysing with expert colleagues the strategies used to support transition in science
 | Small group tasks:1. Ask each person in the group to discuss a concept or topic they recently learned or taught. Then get them to model their thinking process, sharing how they approached the concept or topic. The others should take notes and provide feedback on the clarity and effectiveness of the model. Ask pairs to switch roles and repeat the process. As a group, discuss the effectiveness of different metacognitive strategies used by each person during the modelling process.
2. Provide each group with a case study of a fictional student with academic and pastoral needs. Instruct each group to discuss and develop a plan for supporting the student, including strategies for both academic and pastoral support. Each group should present their plan to the larger group and provide a rationale for each strategy chosen.

WDS Questions:1. Describe specific examples of metacognitive strategies that were identified as particularly effective or insightful.
2. Provide examples of the strategies and interventions you have utilized to support pupils in your lessons.
 | CP.11CP4.5S&C3.3S&C3.5CP4.3CP4.8CP4.9PB8.3 | WDS |
| Key reading  | CCF Reading:Education Endowment Foundation (2017) Metacognition and Self-regulated learning Guidance Report. [Online] Accessible from: https://educationendowmentfoundation.org.uk/tools/guidance-reports/ Science Reading:KAISER, N., 2023. Helping students to help themselves. *Education In Chemistry.* Royal Society of Chemistry. [Why metacognition is vital for successful independent learning | Feature | RSC Education](https://edu.rsc.org/feature/why-metacognition-is-vital-for-successful-independent-learning/4017240.article?utm_source=house-list&utm_medium=email&utm_campaign=monthly-alert) |
| 30 | * Intervention and response week.
 | * Demonstrate the building on pupils’ prior knowledge, understanding and skills at Key Stage 3.
 |  | * Use the focus of discussions from mentor meetings, targets, lesson observation feedback and task to reflect on areas of focus and development.
* Explore and reflect on how metacognition and sequencing is implemented in the history department.
 | PB1HPL8CP5 | WDS |
| Key reading  | Reading:John Perry, David Lundie & Gill Golder (2019) Metacognition in schools: what does the literature suggest about the effectiveness of teaching metacognition in schools?, Educational Review, 71:4, 483-500, DOI: [10.1080/00131911.2018.1441127](https://doi.org/10.1080/00131911.2018.1441127) |
| 31 | Consolidation Placement |
| 31 | * Pupils’ responses to feedback/ feedforward can vary depending on a range of social factors (e.g., the message the feedback contains or the age of the pupil).
* Effective assessment is critical to teaching because it provides teachers with information about pupils’ understanding and needs. To be of value, teachers use information from assessments to inform the decisions they make; in turn, pupils must be able to act on feedback for it to have an effect (Hattie, 2007).
* High-quality feedback can be written or verbal; it is likely to be accurate and clear, encourage further effort, and provide specific guidance on how to improve.
 | * Plan to scaffold self-assessments by sharing model work with pupils, highlighting key details using technology such as visualisers.
* Utilise feedback that is specific and helpful when using peer- or self- assessment.
* Explicitly teach pupils metacognitive strategies linked to subject knowledge, including how to plan, monitor and evaluate, supports independence and academic success using DIRT.
 | * Practice and feedback on how to ensure feedback is specific and helpful when using peer- or self-assessment.
* Practice and feedback on focusing on specific actions for pupils and providing time for pupils to respond to feedback.
* Discussing and analysing with expert colleagues how pupils’ responses to feedback can vary depending on a range of social factors (e.g., the message the feedback contains or the age of the child).
* Receiving clear, consistent and effective mentoring in how to scaffold self-assessment by sharing model work with pupils, highlighting key details.
* Discussing and analysing with expert colleagues how to identify efficient approaches to marking and alternative approaches to providing feedback (e.g., using whole class feedback or well supported peer- and self-assessment) and deconstructing this approach.
* Practice and feedback on using verbal feedback during lessons in place of written feedback after lessons where possible.
 | 1. To what extent are you using specific and helpful feedback in peer- or self-assessment to support pupil progress? Give an example.
2. Evaluate the importance of sharing model work with pupils to scaffold self-assessments within science.
 | A.1A.2A.3A.4A.5A.6 | WDS |
| Key reading  | CCF reading:Hattie, J., & Timperley, H. (2007) The Power of Feedback. Review of Educational Research, 77(1), 81–112. <https://doi.org/10.3102/003465430298487>Science Reading:* Education Endowment Foundation, *Improving Secondary Science: Guidance Report.* Feedback: Use structured feedback to move on pupils’ thinking. pp.38-41.

[*https://educationendowmentfoundation.org.uk/public/files/Publications/Science/EEF\_improving\_secondary\_science.pdf*](https://educationendowmentfoundation.org.uk/public/files/Publications/Science/EEF_improving_secondary_science.pdf) |
| 32 | Easter holiday | S4003 Submission12/4/24 |
| 33 |
| 34 | * Effective assessment is critical to teaching because it provides teachers with information about pupils’ understanding and needs.
* Good assessment helps teachers avoid being over-influenced by potentially misleading factors, such as how busy pupils appear.
* Before using any assessment, teachers should be clear about the decision it will be used to support and be able to justify its use.
* Include a range of types of questions in class discussions to extend and challenge pupils (e.g., by modelling new vocabulary or asking pupils to justify answers).
* Scaffolding and modelling helps to reduce cognitive load.
* Know the assessment structures in place for GCSE Science.
* As part of the Teaching, Learning and Assessment cycle, assessment enables teachers to draw conclusions about what pupils have learned by looking at patterns of performance over a number of assessments (e.g., appreciating that assessments draw inferences about learning from performance).
 | * Plan formative assessment tasks linked to lesson objectives and how to think ahead about what would indicate understanding (e.g., using hinge questions) and monitor pupil work during lessons, including checking for misconceptions.
* Structure assessment tasks to check for prior knowledge, knowledge gaps, and pre-existing misconceptions.
* Draw conclusions about the level of pupil learning based on effective assessment tasks and the use of data.
* Use data to effectively enable pupils to learn and make progress checking for prior knowledge and pre-existing misconceptions.
* Identify common strategies to provide feedback/feedforward to pupils.
* Use subject examination material to structure assessment tasks.
 | * Practice and feedback on prompting pupils to elaborate when responding to questioning to check that a correct answer stems from secure understanding.
* Practice and feedback on monitoring pupil work during lessons, including checking for misconceptions.
* Receiving clear, consistent and effective mentoring in how to record data only when it is useful for improving pupil outcomes.
* Receiving clear, consistent and effective mentoring in how to structure tasks and questions to enable the identification of knowledge gaps and misconceptions (e.g., by using common misconceptions within multiple-choice questions).
* Discuss and analyse with expert colleagues on how to draw conclusions about what pupils have learned by looking at patterns of performance over a number of assessments.
 | 1. Use the focus of discussions from mentor meetings, targets, lesson observation feedback and task to reflect on areas of focus and development.
2. Explore and reflect on how assessments coupled with student data inform planning and interventions in your setting.
 | CP.2CP.3CP.4CP.5A.1A.2A.3A.4A.6A.5 | WDS |
| Key reading  | CCF Reading:Christodoulou, D. (2017) Making Good Progress: The Future of Assessment for Learning. Oxford: OUP. [chapters 6-8] |
| 35 | ITP Week on Questioning* Questioning is the most important kind of formative assessment. A key role of a question is to give the teacher evidence on which to decide what to do next (Muijs & Reynolds, 2017).
* High-quality classroom talk can support pupils to articulate key ideas, consolidate understanding and extend their vocabulary (Rosenshine, 2012).
* Pupils should only be asked questions that they have been taught the answer to, or that they can reasonably be expected to work out given what they have been taught (Rosenshine, 2012).
* Questioning can help with finding out pupils’ prior knowledge, assessing their understanding as the lesson proceeds and can help with problem solving.
* Questioning also allows pupils to express their ideas and extend their vocabulary.
* Good questioning can lead to good quality classroom discussion and learning.
 | * Check prior knowledge and understanding during lessons by structuring tasks and questions to enable the identification of knowledge gaps and misconceptions (e.g., by using common misconceptions within multiple-choice questions).
* Give pupils time to think between asking a question and expecting an answer. This can include pause time, or partner talk time.
* Provide ‘just enough’ scaffolding to enable a pupil to correct a wrong answer.

  | * Working with colleagues to identify efficient approaches to assessment is important; assessment can become onerous and have a disproportionate impact on workload.
* Co-planning and independent planning and implementation of closed and open questions as both play an important role in the overall learning process.
* Co-planning and independent planning and implementation of using a range of questioning techniques such as Socratic, hinge, factual, process questioning, step by step up, extending and lifting, funnelling, sowing and reaping, step by step down to assess pupils’ understanding (Pollard, 2008).
* Identify what constitutes high-quality classroom talk and implement a range of strategies, for example, collective, reciprocal, supportive, cumulative, purposeful (Alexander, 2017).
* Expert modelling of subject specific questioning techniques.
* Practice and feedback on questioning in the classroom.
 | 1.Identify what constitutes high-quality classroom talk and questioning and discuss what strategies are effective and explain why.2.Describe the pitfalls in questioning and what possible solutions could be implemented to overcome these. | AT.1AT.2AT.3AT.4AT.5AT.6AT.7PB.2 | WDS |
| Key reading | Alexander R (2017) Towards *Dialogic Teaching: The effective use of talk for teaching and learning:*  Rethinking Classroom Talk. 5th ed. Cambridge: Dialogos.Rosenshine, B. (2012) Principles of Instruction: Research-based strategies that all teachers should know. American Educator, 12–20. https://doi.org/10.1111/j.1467-8535.2005.00507. |
| 36 | Review and respond week on progress tracking. | * Analyse the progress tracking strategy in your placement school and how your mentor uses this. Reflect on how your own progress tracking has developed and identify ways to further strengthen this in your own teaching.
 |  | 1. How do you monitor pupil work during lessons and use assessment data to make informed decisions about adjusting your teaching?
2. Explain your use of subject examination material to structure assessment tasks and provide feedback/feedforward to pupils.
 | AT.1AT.2AT.3AT.4AT.5AT.6AT.7PB.2 | WDS |
| Key reading | CCF Reading:Kraft, M., Blazar, D., & Hogan, D. (2018) The Effect of Teacher Coaching on Instruction and Achievement: A Meta-Analysis of the Causal Evidence. Review of Educational Research, 003465431875926. https://doi.org/10.3102/0034654318759268. |
| 37 | * The importance of CPD beyond the PGCE. For example, looking ahead to Early Career Teaching, MA and Doctoral study.
* Reflective practice, supported by feedback from and observation of experienced colleagues, professional debate, and learning from educational research, is also likely to support improvement.
* Effective professional development is likely to be sustained over time, involve expert support or coaching and opportunities for collaboration.
* Ongoing CPD is important for professional and personal development in teaching e.g., ASE, IOP and RSC.
* Progression on ITE should underpin their development as Science ECTS.
 | * Set targets and identity next steps for career/ECT progression.
* Work with mentors to develop effective relationships and act on the coaching support.
* Know that planning should always be underpinned by up-to-date science scholarship or teaching becomes inaccurate and stale.
* Set targets and identity next steps for career/ECT progression.
* Reflect on your ongoing contribution to the effective working of a Science department maybe use Association for Science Education (ASE) resources and materials to support further development.
 | * Receiving clear, consistent and effective mentoring in how to engage in professional development with clear intentions for impact on pupil outcomes, sustained over time with built-in opportunities for practice.
* Practice and feedback on strengthening pedagogical and subject knowledge by participating in wider networks.
* Learning to extend subject and pedagogic knowledge as part of the lesson preparation process.
 | 1. Outline how you have effectively worked with your mentor to develop a strong working relationship and act on the coaching support provided.
2. How do you ensure that your planning and teaching is always informed by up-to-date scholarship, research and resources within your subject area?
 | PB.7PB.2PB.1 | WDS |
| Key reading  | CCF readingBasma, B. & Savage, R. (2018) Teacher Professional Development and Student Literacy Growth: a Systematic Review and Meta analysis. Education Psychology Review. 30: 457 <https://doi.org/10.1007/s10648-017-9416-4>. |
| 38 | * The importance of engaging parents/carers in the education of their children (including effective use of parents’ evenings) and the value of understanding pupils’ individual circumstances that ensure high academic and behavioural expectations and proactively highlight success.
* Strategies to build effective working relationships by working with colleagues as part of a team.
 | * Consider the development of professional relationships within your wider department and school teams, in addition to those with pupils/ parents/ carers.
* Exemplify how to engage parents and carers in the education of their children (e.g., proactively highlighting successes).
* Explain how expert colleagues communicate with parents and carers proactively and make effective use of parents’ evenings to engage parents and carers in their children’s schooling and deconstructing this approach.
 | * Practice and feedback on engaging with parents and carers in the education of their children (e.g., proactively highlighting successes) with support from expert colleagues to understand how this engagement changes depending on the age and development stage of the pupil.
* Discussing and analysing with expert colleagues effective strategies for liaising with parents, carers and colleagues to better understand pupils’ individual circumstances and how they can be supported to meet high academic and behavioural expectations.
* Practice and feedback collaborating with colleagues to share the load of planning and preparation and making use of shared resources (e.g., textbooks).
 | 1.How have you developed professional relationships within your wider department and school teams?2.How do you communicate with parents and carers proactively and make effective use of parents’ evenings to engage them in their children’s schooling? Appraise any unique challenges within science. | HE4HE5MB7PB3PB4PB6 | WDS |
| Key reading  | CCF readingBlatchford, P., Bassett, P., Brown, P., Martin, C., Russell, A., & Webster, R. (2009) Deployment and impact of support staff in schools: Characteristics, Working Conditions and Job Satisfaction of Support Staff in Schools. Retrieved from http://eprints.uwe.ac.uk/12342/. |
| 39 | * Alternative provision exists to support students whose needs cannot be met by mainstream education.
* There are a variety of alternative provision settings that provide bespoke support for varying needs.
 | * Identify the reasons resulting in alternative provision for student whose needs are often complex.
* Recognise the varying types of alternative provision and the challenges faced by professionals working within these settings.
 | * Case studies will be provided with examples of students whose needs are not being met by mainstream settings.
* Trainees will have the opportunity to visit an alternative provision setting to observe teaching practice.
 | 1. ‘No one is born a great teacher. Great teachers continuously improve over time, benefitting from the mentoring of expert colleagues and a structured introduction to the core body of knowledge, skills and behaviours that define great teaching’ (DfE, 2019, p.3).

 Critically reflect on this statement. Do you agree? To what extent is this true for you? 1. Should the aim always be to keep students within mainstream education?

 1. Critically reflect upon the importance of alternative provision within the education system.
 | PB7HE1 HE2 HE3 HE4 HE5 HE6 AT1 AT2 | WDS |
| Key reading | McClusky, G., Riddell, S., & Weedon, E. (2015) Children’s rights, school exclusion and alternative educational provision. Retrieved from [Children's rights, school exclusion and alternative educational provision (tandfonline.com)](https://www.tandfonline.com/doi/epdf/10.1080/13603116.2014.961677?needAccess=true&role=button) |
| 40 | Half Term |
| 41 | * How experienced colleagues seek ways to support individual colleagues and work as part of a team.
* How to contribute positively to the wider school culture and develop a feeling of shared responsibility for improving the lives of all pupils within the school (e.g., by supporting expert colleagues with their pastoral responsibilities, such as careers advice).
* Know how asking questions and researching subject knowledge and content can aid their development as a teacher.
* Critically engage with research and use evidence to critique practice. Leading to an identification of areas for development and engage in appropriate CPD with clear intentions for pupil outcomes.
* Strategies to build effective working relationships by working with colleagues as part of a team.
 | * Use research informed methods/results to offer insights into how curriculum and practice can be enhanced.
* Critically reflect on their own practice for the purpose of making developments in practice.
* Ask a range of questions (in relation to working with your mentor) to ensure progression of knowledge/ pedagogies/ application in science.
* Collaborate with colleagues to effectively use resources and materials (such as shared planning or textbooks).
* Consider the development of professional relationships within your wider department and school teams, in addition to those with pupils/ parents/ carers.
* How action research can be used as a tool to help develop pupil learning.
 | * Observe expert colleagues on how to engage critically with research and using evidence to critique practice.
* Discuss and analyse with expert colleagues how to strengthen pedagogical and subject knowledge by participating in wider networks and evidence this in practice.
* Practice and feedback how educational research informs practice.
* Receiving clear, consistent and effective mentoring in how to work closely with the SENCO and other professionals supporting pupils with additional needs, including how to make explicit links between interventions delivered outside of lessons with classroom teaching.
* Practice and feedback on contributing positively to the wider school culture and developing a feeling of shared responsibility for improving the lives of all pupils within the school.
 | 1. Provide examples of how research-informed methods have been implemented in your classroom to enhance curriculum and teaching practices.
2. How have your discussions with your mentor helped you progress in your knowledge and application of pedagogies in science?
 | PB1PB2HE1MB1 | WDS |
|  Key reading  | CCF ReadingDarling-Hammond, L. (2009) Professional Learning in the Learning Profession. |
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# Intensive Training and Practice (ITP) Curriculum Map 2023/24

ITaP Focus: Questioning

Programme: PGCE Secondary

Trainee Development Phase: w.b. 22.04.24 Consolidation

| **Focus** | **Detail** |
| --- | --- |
| **Curriculum Component/s (including links to CCF)** | **CCF: Classroom Practice**Questioning is an essential tool for teachers; questions can be used for many purposes, including to check pupils’ prior knowledge, assess understanding and break down problems.And - following expert input - by taking opportunities to practise, receive feedback and improve at: * Narrating thought processes when modelling to make explicit how experts think (e.g., asking questions aloud that pupils should consider when working independently and drawing pupils’ attention to links with prior knowledge).
* Including a range of types of questions in class discussions to extend and challenge pupils (e.g., by modelling new vocabulary or asking pupils to justify answers).
* Providing appropriate wait time between question and response where more developed responses are required.

**CCF: Adaptive Teaching*** Reframing questions to provide greater scaffolding or greater stretch.

  |
| **Links to theory and research** | CCF:Alexander R (2017) Towards *Dialogic Teaching: The effective use of talk for teaching and learning:*  Rethinking Classroom Talk. 5th ed. Cambridge: Dialogos.Anderson L, Krathwohl D, Airasian P, et al. (2001) A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom’s Taxonomy of Educational Objectives. New York: Longman.Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2004). Working inside the Black Box: Assessment for Learning in the Classroom. Phi Delta Kappan, 86(1), 8–21. Accessible from: <https://eric.ed.gov/?id=EJ705962> Brooks J and Brooks M (2001) Becoming a Constructive Teachers. Costa A (ed.). Developing Minds: A Resource Book for Teaching Thinking. Alexandria, VA: Ass.Cohen L, Manion L and Morrison K (2004) A Guide to Teaching Practice. London: Routledge.Christodoulou, D. (2017) Making Good Progress: The Future of Assessment for Learning. Oxford: OUP. [chapters 6-8]Coe, R., Aloisi, C., Higgins, S., & Major, L. E. (2014) What makes great teaching. Review of the underpinning research. Durham University: UK. Available at: <http://bit.ly/2OvmvKO>Coe, R, Rauch C.J., Kime, S., Singleton, D., (2020) [Great Teaching Toolkit: Evidence Review](https://drive.google.com/file/d/1K9k0Ci-DnsCpszE9xt3z0MIZ6zkWeAGa/view?usp=sharing) Degener S and Berne J (2016) Complex questions promote complex thinking. The Reading Teacher, International Literacy Association70(5): 595–599.Education Endowment Foundation (2016) A marked improvement? A review of the evidence on written marking. Accessible from: <https://educationendowmentfoundation.org.uk/public/files/Publications/EEF_Marking_Review_April_2016.pdf>Hattie, J., & Timperley, H. (2007) The Power of Feedback. Review of Educational Research, 77(1), 81–112. <https://doi.org/10.3102/003465430298487>.Lemov, D. & Robinson, M (2017) Classroom Talk and Questioning. In Hendrick, C. & McPherson, R. (Eds.) What Does This Look Like in the Classroom? Bridging the gap between research and practice. Woodbridge: John Catt.Paramore J (2017) Questioning to stimulate dialogue. In: Paige R, Lambert S, and Geeson R (eds) Building Skills for Effective Primary Teaching. London: Learning Matters, pp. 125–142.Rich, P. R., Van Loon, M. H., Dunlosky, J., & Zaragoza, M. S. (2017) Belief in corrective feedback for common misconceptions: Implications for knowledge revision. Journal of Experimental Psychology: Learning, Memory, and Cognition, 43(3), 492-501. <http://dx.doi.org/10.1037/xlm0000322>.Rosenshine, B. (2012) Principles of Instruction: Research-based strategies that all teachers should know. American Educator, 12–20. https://doi.org/10.1111/j.1467-8535.2005.00507.Speckesser, S., Runge, J., Foliano, F., Bursnall, M., Hudson-Sharp, N., Rolfe, H. & Anders, J. (2018) Embedding Formative Assessment: Evaluation Report. [Online] Accessible from: https://educationendowmentfoundation.org.uk/public/files/EFA\_evaluation\_report.pdf [retrieved 10 August 2022].Tofade T, Elsner J and Haines S (2013) Best practice strategies for effective use of questions as a teaching tool. American Journal of Pharmaceutical Education77(7): 155.Wiliam, D. (2017) Assessment, marking and feedback. In Hendrick, C. and McPherson, R. (Eds.) What Does This Look Like in the Classroom? Bridging the gap between research and practice. Woodbridge: John Catt |
| **Prior to ITP, trainees know:** | * Effective assessment is critical to teaching because it provides teachers with information about pupils’ understanding and needs (assessment data to inform planning).
* Effective assessment is critical to teaching because it provides teachers with information about pupils’ understanding and needs.
* Good assessment helps teachers avoid being over-influenced by potentially misleading factors, such as how busy pupils appear.
* Before using any assessment, teachers should be clear about the decision it will be used to support and be able to justify its use.
* There are differences between Assessment of learning and Assessment For learning- including purpose and type. Black and William’s approach to ‘Inside the Black box’- raising classroom standards by assessment.
* High-quality classroom talk can support pupils to articulate key ideas, consolidate understanding and extend their vocabulary.
* Questioning is an essential tool for teachers; questions can be used for many purposes, including to check pupils’ prior knowledge, assess understanding and break down problems.
* Paired and group activities can increase pupil success, but to work together effectively pupils need guidance, support and practice.
* Questioning can help with finding out pupils’ prior knowledge, assessing their understanding as the lesson proceeds and can help with problem solving. It also allows pupils to express their ideas and extend their vocabulary.
* Good questioning can lead to good quality classroom discussion and learning.
* Pupils’ responses to feedback/ feedforward can vary depending on a range of social factors (e.g., the message the feedback contains or the age of the pupil).
* Effective assessment is critical to teaching because it provides teachers with information about pupils’ understanding and needs. To be of value, teachers use information from assessments to inform the decisions they make; in turn, pupils must be able to act on feedback for it to have an effect (Hattie, 2007).
* High-quality feedback can be written or verbal; it is likely to be accurate and clear, encourage further effort, and provide specific guidance on how to improve.
* Structure assessment tasks to check for prior knowledge, knowledge gaps, and pre-existing misconceptions.
* Draw conclusions about the level of pupil learning based on effective assessment tasks and the use of data.
* Use data to effectively enable pupils to learn and make progress checking for prior knowledge and pre-existing misconceptions.
 |
| **Prior to ITP, trainees are able to:** | * Deconstruct and implement a range of types of questions in class discussions to extend and challenge pupils (e.g., by modelling new vocabulary or asking pupils to justify answers).
* Analyse questions to enable the identification of knowledge gaps and misconceptions.
* Evaluate and implement a range of target questioning techniques to enable the identification of knowledge gaps and misconceptions and reframe questions to provide greater scaffolding or greater stretch.
* Plan formative assessment tasks linked to lesson objectives and think ahead about what would indicate understanding (e.g., by using hinge questions to pinpoint knowledge gaps).
* Practice and receive feedback on making use of formative assessment e.g., retrieval starter, plenary to check for prior knowledge and misconceptions.
* Observing how expert colleagues use verbal feedback during lessons.
* Observing expert colleagues on how to monitor pupil work during lessons, including checking for misconceptions.

 * Observing expert colleagues on how to ensure feedback is specific and helpful when using peer- or self-assessment.
* Plan to scaffold self-assessments by sharing model work with pupils, highlighting key details using technology such as visualisers.
* Utilise feedback that is specific and helpful when using peer- or self- assessment.
* Explicitly teach pupils metacognitive strategies linked to subject knowledge, including how to plan, monitor and evaluate, supports independence and academic success using DIRT.
 |
| **By the end of the ITP trainees will know that:**  | * Questioning is the most important kind of formative assessment. A key role of a question is to give the teacher evidence on which to decide what to do next (Muijs & Reynolds, 2017).
* Effective teachers as a large number of questions and check responses of all pupils (Rosenshine, 2012).
* There are five purposes for questions: discovery, application, checking understanding, retrieval and perception-based questioning (Lemov, 2017).
* Taking time to craft questions beforehand which might be used in class results in more purposeful questioning.
* Bloom’s Taxonomy is one useful way of structuring oral questions, as it tests foundational knowledge, which can then be used for higher order questions such as synthesis.
* Socratic Questioning provides another useful way of structuring oral questions to give pupils opportunity to answer in greater depth.
* Pupils should only be asked questions that they have been taught the answer to, or that they can reasonably be expected to work out given what they have been taught (Rosenshine, 2012).
* Questioning can help with finding out pupils’ prior knowledge, assessing their understanding as the lesson proceeds and can help with problem solving.
* Questioning also allows pupils to express their ideas and extend their vocabulary.
* Good questioning can lead to good quality classroom discussion and learning.
* Working with colleagues to identify efficient approaches to assessment is important; assessment can become onerous and have a disproportionate impact on workload.

 * High-quality classroom talk can support pupils to articulate key ideas, consolidate understanding and extend their vocabulary (Rosenshine, 2012).
 |
| **By the end of the ITP trainees will know how to:** | * Meet individual needs by reframing questions to provide greater scaffolding or greater stretch.
* Stimulate pupil thinking and check for understanding by reframing questions to provide greater scaffolding or greater stretch.
* Check prior knowledge and understanding during lessons by structuring tasks and questions to enable the identification of knowledge gaps and misconceptions (e.g., by using common misconceptions within multiple-choice questions).
* Manage the process of which pupils answer, and when, to initiate the greatest amount of thinking time to occur among the widest range of pupils by using no-hands questioning.
* Give pupils time to think between asking a question and expecting an answer. This can include pause time, or partner talk time.
* Provide ‘just enough’ scaffolding to enable a pupil to correct a wrong answer.
* Probe a student to stretch and challenge pupils to give better answers by asking one pupil several questions to check understanding, eradicate misconceptions, add extra challenge, or scaffold for improvement.
* Plan and implement closed and open questions as both play an important role in the overall learning process.
* Use a range of questioning techniques such as Socratic, hinge, factual, process questioning to assess pupils’ understanding.
* Identify what constitutes high-quality classroom talk and implement a range of strategies, for example, collective, reciprocal, supportive, cumulative, purposeful (Alexander, 2017).
 |

| **22.04.24****INTRODUCE/****ANALYSE** | **23.04.24****PREPARE/****ENACT** | **24.04.24****ENACT** | **25.04.24****ENACT** | **26.04.24****ASSESS** |
| --- | --- | --- | --- | --- |
| Learning about the theory of teaching and learning.Using representations to analyse expert teaching. | Using approximations to practice and get feedback. | Receiving support to apply learning in the classroom. | Receiving support to apply learning in the classroom. | Tracking trainees’ growing knowledge and skills. |
| Lecture:Principles of effective questioning(1 hours) | Scenario Planning: Questioning in the Classroom(2 hours) | Lesson Observation: Questioning in subject areas(1 hour) | Deliberate Practise(1 hour)  | Lesson observations and assessment (2 hours) |
| Seminar:Questioning in subject areas(2 hours) | Role Plays: Questioning(2 hours) | Lesson Observation: Questioning outside subject areas(1 hour) | Subject specific expert feedback and Co-planning(1 hour) | Assigned reading  |
| Seminar:Questioning led by subject specialist(1 hour) | Assigned Readings (1 hour) | Co-planning (1 hour) | Expert Modelling: Questioning in subject areas(1 hour) | Trainees to complete reflective journal and target setting (3 hours) |
| Classroom artefacts(1 hour) |
| Interview:How expert colleagues approach questioning(1 hour) | Expert Modelling: Questioning in subject areas(1 hour) | Trainee planning and artefacts(2 hours) |
| 5 hours  | 5 hours | 5 hours  | 5 hours | 5 hours |
| **Total – 25 hours** |

Overview of ITaP

Contingency plans

In the event that they are required, the following are possible contingencies which will be utilised:

| Event | Contingency |
| --- | --- |
| Trainee is absent. | Recorded sessions and resources made available. If absence affects the whole ITP, CL liaises with mentor and a suitable week is identified for the trainee to be supported with their ITP. |
| Mentor is absent. | Link Tutor assumes role and/or seeks support of Lead/Lead Mentor. Makes use of online availability of resources. Link Tutor to make opportunities available on campus. |
| Trainee unable to attend campus-based sessions. | * Recording of lectures/seminars or delivering these online.
* Resources, recordings, artefacts are made available via the relevant Blackboard area(s).
 |
| Mentor is unavailable for joint-planning session or target setting (assessment). | Trainee meets with their Link Tutor (online or in person). This may be 1:1 or as a group dependent on numbers. |
| Setting/mentor is unable to facilitate a lesson observation to demonstrate effective practice/model a scenario. | Link Tutor to lead a group-simulated teaching activity on campus. |
| Lack of mentor/expert colleague availability for interviewing.  | Host online and/or trainees submit questions in advance and expert records their response. |
| Edge Hill staff absence (for example, illness, or strike action). | Trainees affected to join online session run by other colleagues. |

# Curriculum Design Quality Assurance Processes 2023/24

In designing and Quality Assuring this curriculum, the following partners and external bodies have been consulted:

| Name | Role | Organisation |
| --- | --- | --- |
| Sam Piearce-Swift | ITE Lead | Meols Cop High School |
| Andrew Norcross | Religious Education mentor | Meols Cop High School |
| Sophie Twaites | Physical Education mentor | Meols Cop High School |
| Phil Johnson | Science mentor | Meols Cop High School |
| Natalie Ford | Religious Education mentor | Meols Cop High School |
| Emma Rose | English mentor | Meols Cop High School |
| Phil Paul | ITE Lead | Byrchall High School |
| Rob Anderton | Science mentor | Byrchall High School |
| Beth Stewart  | English mentor | Byrchall High School |
| Karen McConnachie | Science mentor | Byrchall High School |
| James Williams | PGCE Science External Examiner | University of Sussex. Fellow of the Royal Society of Biology (RSB) and Member of the Association for Science Education (ASE) |

Revise subject curriculum aims and objectives in light of Ofsted research and ITE frameworks.

Outline the knowledge, skills and behaviours gained at each stage in learning.

Work in course team to redesign curriculum area.

Review curriculum maps at programme level ensuring appropriate sequencing, coherence, inclusion and ambition.

Peer reviews with senior Leadership Team external ITE partners and external examiners.

Revise in light of feedback.

Consult with expert colleagues from subject associations as well as peers from across the faculty and other universities.

Share with selected mentors and ITE partners and revise planning based on feedback.

Review and revise the curriculum with Strategic Partnership Board.

Consult Student body via fora and revise planning based on feedback.

Revisions made in respect of recommendations made by

Strategic Development and Quality Committee.

Revisions made in respect of recommendations made by the Curriculum Development Group.

Amend at key points during the year to reflect feedback, impact and trainee progress.

# The ITT Core Content Framework (2019)

The ITT core content framework defines in detail the minimum entitlement of all trainee teachers. Your EHU Teacher training curriculum has been carefully designed into a coherent sequence that supports trainees to succeed in the classroom. The Science curriculum includes the minimum entitlement as detailed in the table below but importantly offers much more through the additional analysis and critique of theory, research and expert practice as well as a wide range of enhancement opportunities.

The table below indicates where trainees will engage with the aspects of the core content framework throughout the year. Mapping exercise completed with direct reference to the ITE Core Content Frame- work (2019): Further details can be found here:

<https://www.gov.uk/government/publications/initial-teacher-training-itt-core-content-framework>

|  | High Expectations  | How Pupils Learn  | Subject and Curriculum  | Classroom Practice  | Adaptive Teaching  | Assessment  | Managing behaviour  | Professional Behaviours  | Personal and Professional Conduct  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pre course tasks |  |  |  |  |  |  |  |  |  |
| Week 1  |  |  |  |  |  |  |  |  |  |
| Week 2  |  |  | X |  |  |  | X | X | X |
| Week 3 | X | X | X | X | X |  |  |  |  |
| Week 4  | X | X | X |  | X |  | X |  | X |
| Week 5 |  | X | X | X |  |  |  |  |  |
| Week 6 | X |  |  |  | X |  |  |  | X |
| Week 7 |  |  |  | X | X |  |  | X |  |

|  | High Expectations  | How Pupils Learn  | Subject and Curriculum  | Classroom Practice  | Adaptive Teaching  | Assessment  | Managing behaviour  | Professional Behaviours  | Personal and Professional Conduct  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Week 8  | X |  |  |  |  |  | X |  | X |
| Week 9  |  |  |  |  |  |  |  |  |  |
| Week 10  |  |  |  | X |  | X |  |  |  |
| Week 11  |  |  |  | X |  | X |  |  |  |
| Week 12 |  | X | X | X |  |  |  |  |  |
| Week 13 |  | X |  |  |  |  |  |  |  |
| Week 14 |  |  |  |  |  | X |  |  |  |
| Week 15 |  | X |  |  | X |  |  |  |  |
| Week 16 | X |  |  |  |  |  |  |  |  |
| Week 17 |  |  |  |  |  |  |  |  |  |
| Week 18 |  |  |  |  |  |  |  |  |  |
| Week 19 | X |  |  |  | X |  |  |  |  |
| Week 20 |  |  | X | X |  |  |  |  |  |
| Week 21 |  |  |  |  | X |  |  |  |  |
| Week 22 |  |  |  |  | X |  |  |  |  |
| Week 23 |  |  | X | X |  |  |  |  |  |
| Week 24 |  | X | X | X |  |  |  |  |  |
| Week 25 |  |  |  |  |  |  |  |  |  |
| Week 26 |  |  |  |  | X |  |  | X |  |
| Week 27 |  |  |  | X |  |  |   | X |  |
| Week 28 |  |  | X |  |  |  |  |  |  |
| Week 29 |  |  | X | X |  |  |   | X | X |
| Week 30 |  | X |  | X |  |  |  | X |  |
| Week 31 |  |  |  |  |  | X |  |  |  |
| Week 32 |  |  |  |  |  |  |  |  |  |
| Week 33 |  |  |  |  |  |  |  |  |  |
| Week 34 |  |  |  | X |  | X |  |  |  |
| Week 35 |  |  |  |  | X |  |   | X |  |
| Week 36 |  |  |  |  | X |  |   | X |  |
| Week 37 |  |  |  |  |  |  |  | X |  |
| Week 38 | X |  |  |  |  |  | X | X |  |
| Week 39 | X |  |  |  | X |  |  | X |  |
| Week 40 |  |  |  |  |  |  |  |  |  |
| Week 41 | X |  |  |  |  |  | X | X |  |
| Week 42 |  |  |  |  |  |  |  |  |  |
| Academic assignments |  |  | X | X | X | X | X | X | X |
| Subject knowledge audits |  |  |  X |  |  |  |  |  X |  X |
| Engagement with conference activities | X | X | X | X | X | X | X | X | X |
| Mentor Progress Meetings |  X |  X |  X |  X |  X |  X |  X |  X | X |
| Library & Online Resources | X | X | X | X | X | X | X | X |  X |
| Personal Reading & Reflection | X | X | X |  X | X | X | X | X |  X |
| Placement based training |  X |  X |  X |  X |  X |  X |  X |  X  |  |
| Safeguarding, Feminista and PREVENT training | X |  |  |  |  |  |  | X | X |
| Intensive Training and Practice  |  |  |  | X | X |  |  |  |  |

# Appendix: Progress Support Plans

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All information contained in this document correct at time of creation (July 2023). We will endeavor to provide any updates should key information change during the academic year.