**Primary Curriculum Map – How Pupils Learn**

***Year 1 Undergraduate***

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| **University Curriculum – Year 1** |
| **Session Sequence** | **Session Content Subject Specific Components/s** | **Learn That****(ITTECF reference in numerics e.g. 1.1)** | **Learn How****(ITTECF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment mode** |
| **Session 1****2 hour seminar** | **Memory and Sequencing**An introduction to memory and an understanding that learning requires information to be committed to memory. Memory has limited capacity and be separated into working and long term.Sequencing lessons to build on what the children already know within a unit.Design a retrieval task to use as a starter within the unit building on prior learning. | 2.1, 2.2, 2.2, 2.3, 2.4, 2.5, 2.8, 2.9 | 2a, 2b, 2d, 2e, 2f, 2j | Anon., n.d. Cognitive Science Approaches in The Classroom: A review of the evidence| Education Endowment Foundation | EEF [online]. [online]. Available from: https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/meta cognition-and-self-regulation. BOYD, P., HYMER, B., and LOCKNEY, K., 2015. Learning teaching: becoming an inspirational teacher [online]. Northwich, United Kingdom: Critical Publishing. Available from: <https://ebookcentral.proquest.com/lib/edgehill/detail.action?docID=4067583>.BRUNER, J. S., 1977. The process of education. Cambridge, Massachusetts: Harvard University Press. Available from: https://edgehill.on.worldcat.org/oclc/501833811 <https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=282866>. BUSCH, B., WATSON, E., & BOGATCHEK, L. (2023). Teaching & Learning Illuminated: The Big Ideas, Illustrated (1st ed.). Routledge. COWAN, N. 2008. What are the differences between long-term, short-term, and working memory? Progress in brain research, 169, 323-338.GARNETT, S. 2020. Cognitive Load Theory: A handbook for teachers. West Yorkshire: Charlesworth Press.GLAZZARD, J. and GREEN, M., 2022. Learning to be a primary teacher : core knowledge and understanding. Second edition ed. St Albans: Critical Publishing. GLAZZARD, J. and STONES, S., 2020. Evidence Based Primary Teaching. Sage Publications.GLAZZARD, J. and STONES, S., 2021. Evidence based primary teaching. Los Angeles: Learning Matters. HOWARD-JONES, P.A., 2014. Neuroscience and education: myths and messages. Nature Reviews Neuroscience [online]. 15 (12), pp. 817–824. Available from: https://go-gale-com.edgehill.idm.oclc.org/ps/retrieve.do?tabID=T002&resultListType= RESULT\_LIST&searchResultsType=SingleTab&hitCount=1&searchType=Ad vancedSearchForm&currentPosition=1&docId=GALE%7CA393517065&doc Type=Report&sort=RELEVANCE&contentSegment=ZONE-MOD1&prodId=A ONE&pageNum=1&contentSet=GALE%7CA393517065&searchId=R1& ;userGroupName=edge&inPS=true.LOVELL, O. 2020. Sweller’s Cognitive Load Theory. Woodbridge: John Catt Publications. PIAGET, J. 1957. Construction of Reality in the Child. London: Routledge & Kegan Paul.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>.SWELLER, J., 2016. Working Memory, Long-term Memory, and Instructional Design. Journal of Applied Research in Memory and Cognition. 5 (4), pp. 360-367. VYGOTSKY, L. 1978. Mind in Society. The Development of Higher Physchological Processes. Cambridge, MA: Havard University Press. | Weekly mentor meetingsLessons observationMentor and link tutor meetings |
| **Session 2****1 hour lecture** | **Prior learning, cognitive load and working memory strategies**Understand the importance of prior learning and that misconceptions can arise where prior learning is weak. Identify formative strategies to retrieval to identify understanding and areas of misconception.Introduction to cognitive overload theory (Sweller, 1988).Working memory and strategies to support attention and rehearsal. To know contructivist theorists which underpin how children learn.(Piaget, Vygotsky, Bruner and Rosenshine) | 2.1, 2.2, 2.2, 2.3, 2.4, 2.5, 2.7, 2.8,  | 2a, 2b, 2d, 2g  |
| **Session 3****2 hour seminar** | **Varying working memory capacities and adaptive strategies**Understand that pupils have different working memory capacities, some pupils with SEND many have more limited working memory capacity than their peers.Plan strategies to adapt retrieval for varying pupil needs and abilities.Understand how worked examples support pupils to learn.Plan strategies to recall and retrieve that will support memory. | 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.10 | 2a, 2b, 2c, 2e, 2f, 2g, 2h, 2i, 2j |
| **Session 4****2 hour seminar** | **Sequencing the curriculum – lateral and vertical curriculum knowledge**Understand the role the teacher plays in supporting memory and effective learning.Understand the interconnectedness of learning.Understand misconceptions arise when prior learning is weak.Identify links in the curriculum through spacing to revisit ideas and strengthen recall and retrieval. Interleave cognitive science approaches into a curriculum design to support pupils’ progress and understanding. | 2.1, 2.2, 2.3, 2.4, 2.5, 2.8, 2.9,  | 2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h, 2i, 2j |  |  |

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| **School Based Curriculum – Year 1** |
| **Observing:** Observe how expert colleagues plan for the needs of all learners while maintaining high expectations, providing targeted support and promote an inclusive and equitable learning environment.**Planning:** Observe how expert colleagues adapt content, approaches, and environments to support all learners especially those with an additional need, for at least one lesson.**Teaching:** Rehearse and refine approaches to adaptive teaching to meet the needs of all learners. Deliver group/whole class teaching.**Assessment:** Rehearse and refine how to adapt assessment to enable and support children to demonstrate what they know, remember, and understand using a range of assessment strategies.**Subject Knowledge:** Demonstrate the ability to work within the key legislation and policies that underpin adaptive teaching and inclusive practice for all children including those with Special Educational Needs/Disability.Discuss and analyse specific components with expert colleagues. |
| **Subject Specific Components/s (know, understand, can do)** | **Learn That****(ITTECF reference in numerics e.g. 1.1)** | **Learn How****(ITTECF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment** |
| Understand the role the teacher plays in supporting memory and effective learning.Understand the interconnectedness of learning. | 2.1,2.2,2.3,2.4,2.5 | 2a,2b, 2c, 2e, 2f | EEF neuroscience | Child profile- focus on scaffolding, accommodation and assimilation |
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***Year 2 Undergraduate***

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| **University Curriculum – Year 2** |
| **Session Sequence**  | **Session Content Subject Specific Components/s**  | **Learn That** **(ITTECF reference in numerics e.g. 1.1)** | **Learn How** **(ITTECF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment mode**  |
| **Session 1** **1 hour lecture** | **Focus: Support and challenge of working memory capacities** Revisit and extend understanding of memory and schemasThe stages of committing to memory. That regular purposeful practice can support this. The role of retrieval.Understand that pupils have different working memory capacities, some pupils with SEND many have more limited working memory capacity than their peers.Planning regular review and practice of key ideas and concepts over time (e.g. through carefully planned use of structured talk activities).Ways to adapt practice, generation and retrievals tasks to increase challenge (e.g. by removing scaffolding, lengthening spacing or introducing interacting elements). | 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 | 2a, 2b, 2c, 2d, 2e, 2g, 2h, 2i, 2j, 2k,  | Anon., n.d. Cognitive Science Approaches in The Classroom: A review of the evidence| Education Endowment Foundation | EEF [online]. [online]. Available from: https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/meta cognition-and-self-regulation. BOYD, P., HYMER, B., and LOCKNEY, K., 2015. Learning teaching: becoming an inspirational teacher [online]. Northwich, United Kingdom: Critical Publishing. Available from: <https://ebookcentral.proquest.com/lib/edgehill/detail.action?docID=4067583>.BRUNER, J. S., 1977. The process of education. Cambridge, Massachusetts: Harvard University Press. Available from: https://edgehill.on.worldcat.org/oclc/501833811 <https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=282866>. BUSCH, B., WATSON, E., & BOGATCHEK, L. (2023). Teaching & Learning Illuminated: The Big Ideas, Illustrated (1st ed.). Routledge. COWAN, N. 2008. What are the differences between long-term, short-term, and working memory? Progress in brain research, 169, 323-338.EDUCATION ENDOWMENT FOUNDATION., 2021. Cognitive Science Approaches in The Classroom: A review of the evidence [online]. [online]. Available from: https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/meta cognition-and-self-regulation.EDUCATION ENDOWMENT FOUNDATION., 2022. Metacognition: The Seven-Step Model [online]. Available at: <https://d2tic4wvo1iusb.cloudfront.net/production/eef-guidance-reports/metacognition/Seven_step_model_1.0.pdf?v=1720427625> GARNETT, S. 2020. Cognitive Load Theory: A handbook for teachers. West Yorkshire: Charlesworth Press.GLAZZARD, J. and GREEN, M., 2022. Learning to be a primary teacher : core knowledge and understanding. Second edition ed. St Albans: Critical Publishing. GLAZZARD, J. and STONES, S., 2020. Evidence Based Primary Teaching. Sage Publications.GLAZZARD, J. and STONES, S., 2021. Evidence based primary teaching. Los Angeles: Learning Matters. HOWARD-JONES, P.A., 2014. Neuroscience and education: myths and messages. Nature Reviews Neuroscience [online]. 15 (12), pp. 817–824. Available from: https://go-gale-com.edgehill.idm.oclc.org/ps/retrieve.do?tabID=T002&resultListType= RESULT\_LIST&searchResultsType=SingleTab&hitCount=1&searchType=Ad vancedSearchForm&currentPosition=1&docId=GALE%7CA393517065&doc Type=Report&sort=RELEVANCE&contentSegment=ZONE-MOD1&prodId=A ONE&pageNum=1&contentSet=GALE%7CA393517065&searchId=R1& ;userGroupName=edge&inPS=true.LOVELL, O. 2020. Sweller’s Cognitive Load Theory. Woodbridge: John Catt Publications. PIAGET, J. 1957. Construction of Reality in the Child. London: Routledge & Kegan Paul.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>.SWELLER, J., 2016. Working Memory, Long-term Memory, and Instructional Design. Journal of Applied Research in Memory and Cognition. 5 (4), pp. 360-367. VYGOTSKY, L. 1978. Mind in Society. The Development of Higher Physchological Processes. Cambridge, MA: Havard University Press. | Weekly mentor meetingsLessons obsMentor and link tutor meetings |
| **Session 2****2 hour seminar** | **Focus: Support and challenge**Planning, how does structured planning, teaching modelling and breaking things down to smaller chunks and worked examples can reduce cognitive load. Plan strategies to adapt retrieval for varying pupil needs and abilities.Designing practice, generation and retrieval tasks that provide just enough support so that pupils experience a high success rate when attempting challenging work and develop strategies to increase challenge in retrieval strategies as knowledge develops. | 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 | 2a, 2b, 2c, 2d, 2e, 2g, 2h, 2i, 2j, 2k,  |

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| **School Based Curriculum – Year 2** |
| **Observing:** Observe how expert colleagues use distributed and spaced learning in at least 4 lessons throughout school.Observe how expert practitioners use motivation and build self-esteem of all learners.Observe how expert colleagues identify and implement reasonable adjustments for children with identified Special Educational Needs.**Planning:** Discuss with expert practitioners how they embed adaptive approaches into planning.With the support of expert practitioners, capture and incorporate the voice of the child for example through a one-page profile.Work closely with other teachers, SENco and members of the staff team to implement reasonable adjustments within and beyond the classroom.Plan for children who may need adaptations beyond the classroom to support their social inclusion.**Teaching:** Rehearse and refine chunking, scaffolding, and fading in lesson planning over a sequence of lessons. Plan, teach and evaluate a series of lessons incorporating adaptive approaches to enable all children to access a rich curriculum.Observe and implement reasonable adjustments for children with identified special Educational Needs and Disability. **Assessment:** Use peer and self-assessment to aid and support independent learning.**Subject Knowledge:** Discuss and analyse with expert practitioners how to implement and review flexible groupings and use groupings to support learning and promote inclusion. |
| **Subject Specific Components/s (know, understand, can do)** | **Learn That****(ITTECF reference in numerics e.g. 1.1)** | **Learn How****(ITTECF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment** |
| Know the role the teacher plays to support learning and memory. Understand strategies including worked examples and modelling. The impact of targeted questioning on pupils’ retrieval and recall. | 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10  | 2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h, 2i, 2j, 2k | Anon., n.d. Cognitive Science Approaches in The Classroom: A review of the evidence| Education Endowment Foundation | EEF [online]. [online]. Available from: https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/meta cognition-and-self-regulation. GLAZZARD, J. and STONES, S., 2021. Evidence based primary teaching. Los Angeles: Learning Matters.  | Child profile:Scaffolding - what scaffolding has the teacher provided to support the child’s engagement and understanding of the subject matter?Fading – how has the teacher gradually withdrawn support to encourage the child to work and think more independently.Working memory – what strategies do they observe to support working memory. |

***Year 3 Undergraduate***

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| **University Curriculum – Year 3** |
| **Session Sequence**  | **Session Content Subject Specific Components/s**  | **Learn That** **(CCF reference in numerics e.g. 1.1)** | **Learn How** **(CCF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment mode**  |
| **Session 1****2 hour seminar**  | **Curriculum design**To analyse curriculum design approaches to support working memory and cognitive load including spaced learning, dual coding, retrieval practice, interleaving.To know how to plan regular review and practice of key ideas and concepts over time.  | 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 | 2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h, 2i, 2j, 2k,  | ALEXANDER, R., 2009. Introducing The Cambridge Primary Review. University of Cambridge: Routledge.Anon., n.d. Cognitive Science Approaches in The Classroom: A review of the evidence| Education Endowment Foundation | EEF [online]. [online]. Available from: https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/meta cognition-and-self-regulation. BOYD, P., HYMER, B., and LOCKNEY, K., 2015. Learning teaching: becoming an inspirational teacher [online]. Northwich, United Kingdom: Critical Publishing. Available from: <https://ebookcentral.proquest.com/lib/edgehill/detail.action?docID=4067583>.BRUNER, J. S., 1977. The process of education. Cambridge, Massachusetts: Harvard University Press. Available from: https://edgehill.on.worldcat.org/oclc/501833811 <https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=282866>. BUSCH, B., WATSON, E., & BOGATCHEK, L. (2023). Teaching & Learning Illuminated: The Big Ideas, Illustrated (1st ed.). Routledge. COWAN, N. 2008. What are the differences between long-term, short-term, and working memory? Progress in brain research, 169, 323-338.FRATER, G., 2023*. Primary curriculum design & delivery*. London: Corwin. Available from: <https://edgehill.on.worldcat.org/oclc/1370599892.>GARNETT, S. 2020. Cognitive Load Theory: A handbook for teachers. West Yorkshire: Charlesworth Press.GIBBONS, S. and LENNARD, E., 2023. Sequencing the primary curriculum. London: Sage. Available from: https://edgehill.on.worldcat.org/oclc/1375058035.GLAZZARD, J. and GREEN, M., 2022. Learning to be a primary teacher : core knowledge and understanding. Second edition ed. St Albans: Critical Publishing. GLAZZARD, J. and STONES, S., 2020. Evidence Based Primary Teaching. Sage Publications.GLAZZARD, J. and STONES, S., 2021a. An Ambitious Primary School Curriculum. St Albans: Critical Publishing. Available from: https://edgehill.on.worldcat.org/oclc/1237403885 http://public.eblib.com/choice/PublicFullRecord.aspx?p=6469702.GLAZZARD, J. and STONES, S., 2021b. Evidence based primary teaching. Los Angeles: Learning Matters. KOLB, D. 1984. Experiential Learning: Experience As The Source Of Learning And Development. Journal of Business Ethics. Vol 1. Available from: (PDF) Experiential Learning: Experience As The Source Of Learning And Development (researchgate.net)LOVELL, O. 2020. Sweller’s Cognitive Load Theory. Woodbridge: John Catt Publications. OGIER, S., 2022*. A broad and balanced curriculum in primary schools : educating the whole child*. 2nd edition ed. London: Learning Matters. Available from: <https://edgehill.on.worldcat.org/oclc/1295184156.>SHARMA, L., 2020. Curriculum to classroom : a handbook to prompt thinking around primary curriculum design and delivery. Ipswich: John Catt Educational Ltd. Available from: https://edgehill.on.worldcat.org/oclc/1202225293 <https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=2658531>. SWELLER, J., 2016. Working Memory, Long-term Memory, and Instructional Design. Journal of Applied Research in Memory and Cognition. 5 (4), pp. 360-367. | Weekly mentor meetingsLessons obsMentor and link tutor meetings |
| **Session 2****1 hour lecture** | To know the history of policy influence on curriculum design and how this has impacted how children learn.To know how curriculum design can plan for regular purposeful practice of what has previously been taught can help consolidate material and help pupils remember what they have learned. To know strategies for reducing cognitive load.To understand how possible misconceptions arise and how to plan to prevent these forming.  | 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 | 2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h, 2i, 2j, 2k, |

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| **School Based Curriculum – Year 3** |
| **Observing:** Observe how expert colleagues make links to prior learning across the lateral and vertical curriculum.Observe how expert colleagues identify and implement reasonable adjustments for children with identified Special Educational Needs. **Planning:** Plan for lateral and vertical curriculum links to build on prior learning.Through curriculum design, balance exposition, repetition, practice and retrieval of critical knowledge and skills. Through curriculum design, increase challenge with practice and retrieval as knowledge becomes more secure.Plan for children who may need adaptations beyond the classroom to support their social inclusion.**Teaching:** Plan, teach and evaluate a series of lessons incorporating prior learning as a foundation to enhance long term memory knowledge.Through curriculum design, balance exposition, repetition, practice and retrieval of critical knowledge and skills. Through curriculum design, increase challenge with practice and retrieval as knowledge becomes more secure.**Assessment:** Discuss with expert colleagues’ summative assessment, reporting and how data is used.Draw conclusions about what pupils have learnt by looking at patterns of performance over a number of assessments with support and scaffolding from expert colleagues and use this information to feed into curriculum design.**Subject Knowledge:** Through curriculum design, rehearse and refine sequencing lessons. How to identify possible misconceptions and plan how to prevent these from forming. Linking what pupils already know to what is being taught.  |
| **Subject Specific Components/s (know, understand, can do)** | **Learn That****(CCF reference in numerics e.g. 1.1)** | **Learn How****(CCF reference bullets alphabetically e.g. 1c)** | **Links to Research and Reading** | **Formative Assessment** |
| Understand the role of curriculum design with consideration to how children learn.The impact of targeted questioning on pupils’ retrieval and recall  | 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 2.10 | 2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h, 2i, 2j, 2k,  | Anon., n.d. Cognitive Science Approaches in The Classroom: A review of the evidence| Education Endowment Foundation | EEF [online]. [online]. Available from: https://educationendowmentfoundation.org.uk/education-evidence/evidence-reviews/meta cognition-and-self-regulation.  | Child profile |