



Initial Teacher Training and Early Career Framework Reference Map

Introduction

The Initial Teacher Training and Early Career Framework (ITTECF) lays out ‘the entitlement of every trainee and early career teacher (ECT) to the core body of knowledge, skills and behaviours that define great teaching’.

The Education Endowment Foundation (EEF) has independently assessed and endorsed that the claims made within the framework – particularly the ‘Learn that’ knowledge statements – accurately reflect the evidence sources from which they have been drawn.

The framework references represent the evidence base from which the ‘Learn that’ statements have been developed, in conjunction with the practical expertise of the advisory groups who constructed the framework statements themselves.

The framework references are not, however:

- A mandatory reading list for accredited providers or trainees/early career teachers, or
- A comprehensive list of all associated and relevant evidence to statements – accredited providers will inevitably need to supplement and diverge from the references to teach the core knowledge and skill statements.

The reference map

This document gives accredited providers of initial and early career teacher training a list of the relevant references from the framework reference list that are associated with each of the ‘Learn that’ statements – see table below. This is intended to support providers to see how the reference list for each framework section maps to the specific ‘Learn that’ statements. The table also indicates where a statement is new (all red) or amended (partially red).

When using the reference list and table below, it is worth remembering that:

- The DfE framework marks some of the references with an asterisk (*) to indicate that these are recommendations for further reading. However, there is no expectation that these references are mandatory reading for providers or participants, and they do not need to be treated as any different to other references in the framework. They have been identified as recommendations for further reading usually because they are freely available rather than behind academic logins or paywalls.
- The ‘Learn that’ statements make a range of claims about teaching and learning practice. Some claims suggest the likely impact or effectiveness of approaches, others are more theoretical in nature, and some are simply descriptive of common conditions and practice.
- Statements have been drawn from particular sections of or findings from the framework references, and therefore the statements are unlikely to ever represent the source as a whole.

Learn that statement	Associated References from the DfE ITTECF reference list
Standard 1 <i>*New or amended statements marked in red in the 'Learn that statement' column.</i>	
1.1 Teachers have the ability to affect and improve the wellbeing, motivation and behaviour of their pupils.	<p>Aronson, J. (Ed.) (2002) Improving academic achievement: Impact of psychological factors on education. New York: Academic Press.</p> <p>Campbell Collaboration (2018) School-based interventions for reducing disciplinary school exclusion: A Systematic Review. Available at: https://www.campbellcollaboration.org/better-evidence/reducing-school-exclusion-school-based-interventions.html.</p> <p>Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Behaviour Interventions: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learningtoolkit [retrieved 26 May 2023].</p> <p>Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Social and Emotional Learning: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learningtoolkit [retrieved 26 May 2023].</p> <p>Lazowski, R. A., & Hulleman, C. S. (2016) Motivation Interventions in Education: A Meta-Analytic Review. Review of Educational Research, 86(2), 602–640. https://doi.org/10.3102/0034654315617832.</p> <p>PISA. (2015) PISA in Focus: Do teacher-student relations affect students' well-being at school? Available at: PISA_DoTeacher-StudentRelationsAffectStudentsWellbeing.pdf.</p> <p>Rathmann K., Herke M., Hurrelmann K., & Richter M. (2018) Perceived class climate and school-aged children's life satisfaction: The role of the learning environment in classrooms. PLoS ONE, 13(2): e0189335. Available at: Rathmann_PerceivedClassClimateAndSchool-agedChildren'sLifeSatisfaction.pdf.</p>
1.2 Teachers are key role models, who can influence the attitudes, values and behaviours of their pupils.	<p>Chetty, R., Friedman, J. N., Rockoff, J. E. (2014) Measuring the Impacts of Teachers II: Teacher Value-Added and Student Outcomes in Adulthood. American Economic Review, 104(9), 2633–2679. https://doi.org/10.1257/aer.104.9.2633.</p> <p>Johnson, S., Buckingham, M., Morris, S., Suzuki, S., Weiner, M., Hershberg, R., B. Weiner, Hershberg, R., Fremont, E., Batanova, M., Aymong, C., Hunter, C., Bowers, E., Lerner, J., & Lerner, R. (2016) Adolescents' Character Role Models: Exploring Who Young People Look Up to as Examples of How to Be a Good Person. Research in Human Development, 13(2), 126–141. https://doi.org/10.1080/15427609.2016.1164552.</p>
1.3 Teacher expectations can affect pupil outcomes; setting goals that challenge and stretch pupils from their starting points is essential.	<p>Bandura, A. (1986) Social foundations of thought and action: a social cognitive theory. Englewood Cliffs, NJ: Prentice-Hall.</p> <p>Jussim, L. & Harber, K., (2005) Teacher Expectations and Self-Fulfilling Prophecies: Knowns and Unknowns, Resolved and Unresolved Controversies, Personality and Social Psychology Review 2005, Vol. 9, No. 2, 131–1557.</p> <p>Rubie-Davies, C. M., Weinstein, R. S., Huang, F. L., Gregory, A., Cowan, P. A., & Cowan, C. P. (2014) Successive teacher expectation effects across the early school years. Journal of Applied Developmental Psychology, 35(3), 181–191. https://doi.org/10.1016/j.appdev.2014.03.006.</p>

<p>1.4 Setting clear expectations can help communicate shared values that improve classroom and school culture.</p>	<p>Jussim, L. & Harber, K., (2005) Teacher Expectations and Self-Fulfilling Prophecies: Knowns and Unknowns, Resolved and Unresolved Controversies, <i>Personality and Social Psychology Review</i> 2005, Vol. 9, No. 2, 131–1557.</p> <p>Murdock-Perriera, L. A., & Sedlacek, Q. C. (2018) Questioning Pygmalion in the twentyfirst century: the formation, transmission, and attributional influence of teacher expectancies. <i>Social Psychology of Education</i>, 21(3), 691–707. https://doi.org/10.1007/s11218-018-9439-9.</p> <p>Rubie-Davies, C. M., Weinstein, R. S., Huang, F. L., Gregory, A., Cowan, P. A., & Cowan, C. P. (2014) Successive teacher expectation effects across the early school years. <i>Journal of Applied Developmental Psychology</i>, 35(3), 181–191. https://doi.org/10.1016/j.appdev.2014.03.006.</p>
<p>1.5 A culture of mutual trust and respect supports effective relationships.</p>	<p>Chapman, R. L., Buckley, L., & Sheehan, M. (2013) School-Based Programs for Increasing Connectedness and Reducing Risk Behavior: A Systematic Review, 25(1), 95–114. https://doi.org/10.1007/s10648-013-9216-4.</p> <p>*Institute of Education Sciences (2008) Reducing Behavior Problems in the Elementary School Classroom. Available at https://ies.ed.gov/ncee/wwc/PracticeGuide/4.</p> <p>Rathmann K., Herke M., Hurrelmann K., & Richter M. (2018) Perceived class climate and school-aged children’s life satisfaction: The role of the learning environment in classrooms. <i>PloS ONE</i>, 13(2): e0189335. Available at: Rathmann PerceivedClassClimateAndSchool-agedChildren'sLifeSatisfaction.pdf.</p> <p>Zins, J. E., Bloodworth, M. R., Weissberg, R. P., & Walberg, H. J. (2007) The Scientific Base Linking Social and Emotional Learning to School Success. <i>Journal of Educational and Psychological Consultation</i>, 17(2–3), 191–210. https://doi.org/10.1080/10474410701413145.</p>
<p>1.6 High quality teaching has a long-term positive effect on pupils’ life chances, particularly for pupils from disadvantaged backgrounds.</p>	<p>Boyd, D., Lankford, H., Loeb, S., Rockoff, J., & Wyckoff, J. (2008). The narrowing gap in New York City teacher qualifications and its implications for student achievement in high-poverty schools (No. w14021). National Bureau of Economic Research. Available at: https://www.nber.org/papers/w14021.</p> <p>Dobbie, W., & Fryer Jr, R. G. (2011). Are high-quality schools enough to increase achievement among the poor? Evidence from the Harlem Children's Zone. <i>American Economic Journal: Applied Economics</i>, 3(3), 158-187. Available at: https://www.aeaweb.org/articles?id=10.1257/app.3.3.158.</p> <p>Hanushek, E. (1992) The Trade-off between Child Quantity and Quality. <i>Journal of Political Economy</i>, 100(4), 859–887. https://doi.org/10.1086/261808.</p> <p>Muijs, D., Harris, A., Chapman, C., Stoll, L., & Russ, J. (2004). Improving schools in socioeconomically disadvantaged areas—A review of research evidence. <i>School effectiveness and school improvement</i>, 15(2), 149-175. https://doi.org/10.1076/sesi.15.2.149.30433.</p> <p>Slater, H., Davies, N. M., & Burgess, S. (2011) Do Teachers Matter? Measuring the Variation in Teacher Effectiveness in England. <i>Oxford Bulletin of Economics and Statistics</i>, 74(5), 629-645. Available at: Slater DoTeachersMatter?.pdf</p>
<p>1.7 High quality teaching is underpinned by positive interactions between pupils,</p>	<p>Cullen, M. A., Lindsay, G., Hastings, R., Denne, L., & Stanford, C. (2020) Special Educational Needs in Mainstream Schools: Evidence Review. Available at: EEF SEND Evidence Review.pdf (d2tic4wvo1iusb.cloudfront.net).</p> <p>Okonofua, J. A., Parker Goyer, J., Lindsay, C. A., Haugabrook, J., & Walton, G. M. (2022) A scalable empathic-mindset intervention reduces group disparities in school suspensions, <i>Science Advances</i>, 8(12), 1–11. https://doi.org/10.1126/sciadv.abj0691.</p>

<p>their teachers and their peers.</p>	<p>Roorda, D. L., Jak, S., Zee, M., Oort, F. J., & Koomen., H. M. Y. (2017) Affective Teacher–Student Relationships and Students’ Engagement and Achievement: A Meta Analytic Update and Test of the Mediating Role of Engagement.</p>
<p>1.8 Pupils’ experiences of school and their readiness to learn can be impacted by their home life and circumstances, particularly for EAL pupils, young carers, and those living in poverty.</p>	<p>Boyd, D., Lankford, H., Loeb, S., Rockoff, J., & Wyckoff, J. (2008). The narrowing gap in New York City teacher qualifications and its implications for student achievement in high-poverty schools (No. w14021). National Bureau of Economic Research. Available at: https://www.nber.org/papers/w14021.</p> <p>Clay, D., Connors, C., Day, N., Gkiza, M., and Aldridge, J. (2016) The Lives of young carers in England: Qualitative report to DfE. Available at: Clay_TheLivesOfYoungCarersInEngland.pdf.</p> <p>Dobbie, W., & Fryer Jr, R. G. (2011). Are high-quality schools enough to increase achievement among the poor? Evidence from the Harlem Children's Zone. American Economic Journal: Applied Economics, 3(3), 158-187. Available at: https://www.aeaweb.org/articles?id=10.1257/app.3.3.158.</p> <p>Hall, G. (2019). The experiences of secondary school students with English as an additional language: Perceptions, priorities and pedagogy. Hall_TheExperiencesofsecondaryschoolstudentswithEnglishasanadditionallanguage.pdf</p> <p>Muijs, D., Harris, A., Chapman, C., Stoll, L., & Russ, J. (2004). Improving schools in socioeconomically disadvantaged areas–A review of research evidence. School effectiveness and school improvement, 15(2), 149-175. https://doi.org/10.1076/sesi.15.2.149.30433.</p>
<p>Standard 2</p>	
<p>2.1 Learning involves a lasting change in pupils’ capabilities or understanding.</p>	<p>Chi, M. T. (2009). Three types of conceptual change: Belief revision, mental model transformation, and categorical shift. In International handbook of research on conceptual change (pp. 89-110). Routledge. Available at: Chi_ThreeTypesOfConceptualChange.pdf</p> <p>Perry, T., Lea, R., Jørgensen, C. R., Cordingley, P., Shapiro, K., Youdell, D., ... & Pomareda, C. (2021) Cognitive science in the classroom: evidence and practice review. London: Education Endowment Foundation (EEF). Available at: Perry_CognitvieScienceInTheClassroomEvidenceAndPracticeReview.pdf.</p>
<p>2.2 Prior knowledge plays an important role in how pupils learn; committing some key facts to their long-term memory is likely to help pupils learn more complex ideas.</p>	<p>Baddeley, A. (2003) Working memory: looking back and looking forward. Nature reviews neuroscience, 4(10), 829-839. https://doi.org/10.1038/nrn1201.</p> <p>Cowan, N. (2008) What are the differences between long-term, short-term, and working memory? Progress in brain research, 169, 323-338. https://doi.org/10.1016/S0079-6123(07)00020-9.</p> <p>*Education Endowment Foundation (2018) Improving Secondary Science Guidance Report. [Online] Available at: EEF_ImprovingSecondaryScienceGuidanceReport.pdf.</p> <p>*Willingham, D. T. (2009) Why don’t students like school? San Francisco, CA: JosseyBass. Available at: Willingham_WhyDontStudentsLikeSchool.pdf</p>
<p>2.3 An important factor in learning is memory, which can be thought of as</p>	<p>Gathercole, S., Lamont, E., & Alloway, T. (2006) Working memory in the classroom. Working memory and education, 219-240. https://doi.org/10.1016/B978-012554465-8/50010-7.</p>

<p>comprising two elements: working memory and long-term memory</p>	<p>Perry, T., Lea, R., Jørgensen, C. R., Cordingley, P., Shapiro, K., Youdell, D., ... & Pomareda, C. (2021) Cognitive science in the classroom: evidence and practice review. London: Education Endowment Foundation (EEF). Available at: Perry_CognitvieScienceInTheClassroomEvidenceAndPracticeReview.pdf.</p>
<p>2.4 Working memory is where information that is being actively processed is held, but its capacity is limited and can be overloaded.</p>	<p>Cowan, N. (2008) What are the differences between long-term, short-term, and working memory? Progress in brain research, 169, 323-338. https://doi.org/10.1016/S0079-6123(07)00020-9.</p> <p>*Education Endowment Foundation (2021) Cognitive science approaches in the classroom: A Review of the evidence (summary). [Online] Available at: EEF_CognitiveScienceApproachesInTheClassroomSummary.pdf.</p> <p>*Education Endowment Foundation (2018) Improving Secondary Science Guidance Report. [Online] Available at: EEF_ImprovingSecondaryScienceGuidanceReport.pdf.</p> <p>Gathercole, S., Lamont, E., & Alloway, T. (2006) Working memory in the classroom. Working memory and education, 219-240. https://doi.org/10.1016/B978-012554465-8/50010-7.</p> <p>Perry, T., Lea, R., Jørgensen, C. R., Cordingley, P., Shapiro, K., Youdell, D., ... & Pomareda, C. (2021) Cognitive science in the classroom: evidence and practice review. London: Education Endowment Foundation (EEF). Available at: Perry_CognitvieScienceInTheClassroomEvidenceAndPracticeReview.pdf.</p> <p>*Rosenshine, B. (2012) Principles of Instruction: Research-based strategies that all teachers should know. American Educator, 12–20. Available at: Rosenshine_PrinciplesOfInstruction.pdf.</p>
<p>2.5 Long-term memory can be considered as a store of knowledge that changes as pupils learn by integrating new ideas with existing knowledge.</p>	<p>*Deans for Impact (2015) The Science of Learning [Online] Accessible from: https://deansforimpact.org/resources/the-science-of-learning/.</p> <p>Hattie, J. (2012) Visible Learning for Teachers. Oxford: Routledge.</p> <p>Simonsmeier, B. A., Flaig, M., Deiglmayr, A., Schalk, L., & Schneider, M. (2022) Domain-specific prior knowledge and learning: A meta-analysis. Educational Psychologist, 57(1), 31-54. Available at: Simonsmeier_DomainSpecificPriorKnowledgeAndLearning.pdf.</p>
<p>2.6 Pupils have different working memory capacities; some pupils with SEND may have more limited working memory capacity than their peers without SEND.</p>	<p>Gathercole, S., Lamont, E., & Alloway, T. (2006) Working memory in the classroom. Working memory and education, 219-240. https://doi.org/10.1016/B978-012554465-8/50010-7.</p> <p>Perry, T., Lea, R., Jørgensen, C. R., Cordingley, P., Shapiro, K., Youdell, D., ... & Pomareda, C. (2021) Cognitive science in the classroom: evidence and practice review. London: Education Endowment Foundation (EEF). Available at: Perry_CognitvieScienceInTheClassroomEvidenceAndPracticeReview.pdf.</p> <p>Von Bastian, C. C., and Oberauer, K. (2014) Effects and Mechanisms of Working Memory Training: A Review, Psychological Research, 78 (6), pp. 803–820. https://doi.org/10.1007/s00426-013-0524-6.</p>

<p>2.7 Where prior knowledge is weak, pupils are more likely to develop misconceptions, particularly if new ideas are introduced too quickly.</p>	<p>Chi, M. T. (2009). Three types of conceptual change: Belief revision, mental model transformation, and categorical shift. In International handbook of research on conceptual change (pp. 89-110). Routledge. Available at: Chi_ThreeTypesOfConceptualChange.pdf</p> <p>Perry, T., Lea, R., Jørgensen, C. R., Cordingley, P., Shapiro, K., Youdell, D., ... & Pomareda, C. (2021) Cognitive science in the classroom: evidence and practice review. London: Education Endowment Foundation (EEF). Available at: Perry_CognitvieScienceInTheClassroomEvidenceAndPracticeReview.pdf.</p> <p>*Rosenshine, B. (2012) Principles of Instruction: Research-based strategies that all teachers should know. American Educator, 12–20. Available at: Rosenshine_PrinciplesOfInstruction.pdf.</p> <p>Sweller, J. (2016) Working Memory, Long-term Memory, and Instructional Design. Journal of Applied Research in Memory and Cognition, 5(4), 360–367. http://doi.org/10.1016/j.jarmac.2015.12.002.</p>
<p>2.8 Regular purposeful practice of what has previously been taught can help consolidate material and help pupils remember what they have learned.</p>	<p>Adesope, O. O., Trevisan, D. A., & Sundararajan, N. (2017) Rethinking the Use of Tests: A Meta-Analysis of Practice Testing. Review of Educational Research, 87(3), 659–701. https://doi.org/10.3102/0034654316689306.</p> <p>Agarwal, P. K., Finley, J. R., Rose, N. S., & Roediger, H. L. (2017) Benefits from retrieval practice are greater for students with lower working memory capacity. Memory, 25(6), 764–771.</p> <p>Agarwal, P. K., Nunes, L. D., & Blunt, J. R. (2021) Retrieval practice consistently benefits student learning: A systematic review of applied research in schools and classrooms. Educational Psychology Review, 33(4), 1409-1453. https://doi.org/10.1007/s10648-021-09595-9.</p> <p>Chen, O., Paas, F., & Sweller, J. (2021) Spacing and interleaving effects require distinct theoretical bases: A systematic review testing the cognitive load and discriminative contrast hypotheses. Educational Psychology Review, 33, 1499-1522. Available at: https://doi.org/10.1007/s10648-021-09613-w.</p> <p>Churches, R., Dommett, E. J., Devonshire, I. M., Hall, R., Higgins, S., & Korin, A. (2020) Translating laboratory evidence into classroom practice with teacher-led randomized controlled trials—A perspective and meta-analysis. Mind, Brain, and Education, 14(3), 292-302. https://doi.org/10.1111/mbe.12243.</p> <p>Donoghue, G. M., & Hattie, J. A. (2021) A meta-analysis of ten learning techniques. Frontiers in Education, 6, 1-9. Available at: https://doi.org/10.3389/educ.2021.581216</p> <p>Dunlosky, J., Rawson, K. A., Marsh, E. J., Nathan, M. J., & Willingham, D. T. (2013) Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology. Psychological Science in the Public Interest, Supplement, 14(1), 4–58. https://doi.org/10.1177/1529100612453266</p> <p>Pachler, H., Bain, P. M., Bottge, B. A., Graesser, A., Koedinger, K., McDaniel, M., & Metcalfe, J. (2007) Organizing Instruction and Study to Improve Student Learning. US Department of Education. Available at: Pachler_OrganisingInstructionAndStudyToImproveStudentLearning.pdf.</p>

<p>2.9 Requiring pupils to retrieve information from memory, and spacing practice so that pupils revisit ideas after a gap are also likely to strengthen recall.</p>	<p>Agarwal, P. K., Finley, J. R., Rose, N. S., & Roediger, H. L. (2017) Benefits from retrieval practice are greater for students with lower working memory capacity. <i>Memory</i>, 25(6), 764–771.</p> <p>Agarwal, P. K., Nunes, L. D., & Blunt, J. R. (2021) Retrieval practice consistently benefits student learning: A systematic review of applied research in schools and classrooms. <i>Educational Psychology Review</i>, 33(4), 1409-1453. https://doi.org/10.1007/s10648-021-09595-9.</p> <p>Chen, O., Paas, F., & Sweller, J. (2021) Spacing and interleaving effects require distinct theoretical bases: A systematic review testing the cognitive load and discriminative-contrast hypotheses. <i>Educational Psychology Review</i>, 33, 1499-1522. Available at: https://doi.org/10.1007/s10648-021-09613-w.</p> <p>Donoghue, G. M., & Hattie, J. A. (2021) A meta-analysis of ten learning techniques. <i>Frontiers in Education</i>, 6, 1-9. Available at: https://doi.org/10.3389/educ.2021.581216</p> <p>*Education Endowment Foundation (2018) Improving Secondary Science Guidance Report. [Online] Available at: EEF ImprovingSecondaryScienceGuidanceReport.pdf.</p> <p>Latimier, A., Peyre, H., & Ramus, F. (2021) A meta-analytic review of the benefit of spacing out retrieval practice episodes on retention. <i>Educational Psychology Review</i>, 33, 959-987. https://doi.org/10.1007/s10648-020-09572-8</p> <p>Pan, S. C., & Rickard, T. C. (2018) Transfer of test-enhanced learning: Meta-analytic review and synthesis. <i>Psychological Bulletin</i>, 144(7), 710–756. https://doi.org/10.1037/bul0000151.</p> <p>Perry, T., Lea, R., Jørgensen, C. R., Cordingley, P., Shapiro, K., Youdell, D., ... & Pomareda, C. (2021) Cognitive science in the classroom: evidence and practice review. London: Education Endowment Foundation (EEF). Available at: Perry CognitiveScienceInTheClassroomEvidenceAndPracticeReview.pdf.</p> <p>Roediger, H. L., & Butler, A. C. (2011) The critical role of retrieval practice in long-term retention. <i>Trends in Cognitive Sciences</i>, 15(1), 20–27.</p> <p>Yang, C., Luo, L., Vadillo, M. A., Yu, R., & Shanks, D. R. (2021). Testing (quizzing) boosts classroom learning: A systematic and meta-analytic review. <i>Psychological Bulletin</i>, 147(4), 399-435. https://doi.org/10.1037/bul0000309.</p>
<p>2.10 Worked examples that take pupils through each step of a new process are also likely to support pupils to learn.</p>	<p>Wittwer, J., & Renkl, A. (2010) How Effective are Instructional Explanations in Example Based Learning? A Meta-Analytic Review. <i>Educational Psychology Review</i>, 22(4), 393– 409. Available at: Wittwer HowEffectiveAreInstructionalExplanationsInExampleBasedLearning.pdf.</p>
<p>Standard 3</p>	

<p>3.1 A school's curriculum enables it to set out its vision for the knowledge, skills and values that its pupils will learn, encompassing the national curriculum within a coherent wider vision for successful learning.</p>	<p>Biesta, G. (2009) Good education in an age of measurement: on the need to reconnect with the question of purpose in education. <i>Educational Assessment, Evaluation and Accountability</i>, 21(1), 33-46. https://doi.org/10.1007/s11092-008-9064-9.</p>
<p>3.2 Secure subject knowledge helps teachers to motivate pupils and teach effectively.</p>	<p>Ball, D. L., Thames, M. H., & Phelps, G. (2008) Content knowledge for teachers: What makes it special? <i>Journal of Teacher Education</i>, 2008 59: 389 DOI: 10.1177/0022487108324554 [Online] https://doi.org/10.1177/0022487108324554.</p> <p>*Coe, R., Aloisi, C., Higgins, S., & Major, L. E. (2014) What makes great teaching. Review of the underpinning research. Durham University: UK. Available at: Coe_WhatMakesGreatTeaching.pdf.</p>
<p>3.3 Ensuring pupils master foundational concepts and knowledge before moving on is likely to build pupils' confidence and help them succeed.</p>	<p>*Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Mastery Learning. [Online] Accessible from: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p> <p>Jerrim, J., & Vignoles, A. (2016) The link between East Asian "mastery" teaching methods and English children's mathematics skills. <i>Economics of Education Review</i>, 50, 29-44. https://doi.org/10.1016/j.econedurev.2015.11.003.</p>
<p>3.4 Anticipating common misconceptions within particular subjects is also an important aspect of curricular knowledge; working closely with colleagues to develop an understanding of likely misconceptions is valuable.</p>	<p>Education Endowment Foundation (2021) Improving Mathematics in Key Stages 2 and 3 Guidance Report. [Online]. Available at: EEF_ImprovingMathematicsInKeyStages2And3.pdf.</p> <p>*Education Endowment Foundation (2018) Improving Secondary Science Guidance Report. [Online] Available at: EEF_ImprovingSecondaryScienceGuidanceReport.pdf.</p> <p>Guzzetti, B. J. (2000) Learning counter-intuitive science concepts: What have we learned from over a decade of research? <i>Reading & Writing Quarterly: Overcoming Learning Difficulties</i>, 16, 89–98. http://dx.doi.org/10.1080/105735600277971.</p> <p>Hill, H. C., & Chin, M. (2018) Connections between teachers' knowledge of students, instruction, and achievement outcomes. <i>American Educational Research Journal</i>, 55(5), 1076-1112. Available at: Hill_ConnectionsBetweenTeachers'KnowledgeOfStudentsInstructionAndAchievementOutcomes.pdf.</p> <p>Simonsmeier, B. A., Flaig, M., Deiglmayr, A., Schalk, L., & Schneider, M. (2022). Domain-specific prior knowledge and learning: A meta-analysis. <i>Educational Psychologist</i>, 57(1), 31-54. https://doi.org/10.1080/00461520.2021.1939700.</p>
<p>3.5 Explicitly teaching pupils the knowledge and skills</p>	<p>Dobinson, K. & Dockrell, J. (2021) Universal strategies for the improvement of expressive language skills in the primary classroom: A systematic review. <i>First Language</i>, 41(5), 527-554. https://doi.org/10.1177/0142723721989471.</p>

<p>they need to succeed within particular subject areas is beneficial.</p>	<p>Education Endowment Foundation (2018) Improving Literacy in Secondary Schools Guidance Report. [Online]. Available at: EEF_ImprovingLiteracyInSecondarySchools.pdf</p> <p>Education Endowment Foundation (2018) Improving Secondary Science Guidance Report. [Online] Available at: EEF_ImprovingSecondaryScienceGuidanceReport.pdf.</p> <p>Education Endowment Foundation (2021) Improving Literacy in Key Stage 2 Guidance Report. [Online]. Available at: EEF_ImprovingLiteracyInKeyStage2.pdf.</p> <p>Education Endowment Foundation (2021) Improving Mathematics in Key Stages 2 and 3 Guidance Report. [Online]. Available at: EEF_ImprovingMathematicsInKeyStages3And4.pdf</p> <p>*Rosenshine, B. (2012) Principles of Instruction: Research-based strategies that all teachers should know. American Educator, 12–20. Available at: Rosenshine_PrinciplesOfInstruction.pdf.</p>
<p>3.6 In order for pupils to think critically, they must have a secure understanding of knowledge within the subject area they are being asked to think critically about.</p>	<p>Abrami, P. C., Bernard, R. M., Borokhovski, E., Wade, A., Surkes, M. A., Tamim, R., & Zhang, D. (2008) Instructional interventions affecting critical thinking skills and dispositions: A stage 1 meta-analysis. Review of educational research, 78(4), 1102- 1134. https://doi.org/10.3102/0034654308326084.</p> <p>Abrami, P. C., Bernard, R. M., Borokhovski, E., Waddington, D. I., Wade, C. A., & Persson, T. (2015) Strategies for teaching students to think critically: A metaanalysis. Review of educational research, 85(2), 275-314. https://doi.org/10.3102/0034654314551063.</p> <p>Heard, J., Scoular, C., Duckworth, D., Ramalingam, D., & Teo, I. (2020) Critical thinking: Skill development framework. Available at: https://research.acer.edu.au/ar_misc/41/.</p> <p>Lai, E. R. (2011) Critical thinking: A literature review. Pearson's Research Reports, 6(1), 40-41. Available at: Lai_CriticalThinkingALiteratureReview.pdf.</p> <p>Willingham, D. T. (2002) Ask the Cognitive Scientist. Inflexible Knowledge: The First Step to Expertise. American Educator, 26(4), 31-33. Accessible from: https://www.aft.org/periodical/american-educator/winter-2002/ask-cognitive-scientist.</p>
<p>3.7 In all subject areas, pupils learn new ideas by linking those ideas to existing knowledge, organising this knowledge into increasingly complex mental models (or</p>	<p>Alfieri, L., Nokes-Malach, T. J., & Schunn, C. D. (2013) Learning through case comparisons: A meta-analytic review. Educational Psychologist, 48(2), 87-113. https://doi.org/10.1080/00461520.2013.775712.</p> <p>Jitendra, A. K., Dupuis, D. N., Rodriguez, M. C., Zaslowsky, A. F., Slater, S., Cozine-Corroy, K., & Church, C. (2013) A randomized controlled trial of the impact of schema-based instruction on mathematical outcomes for third-grade students with mathematics difficulties. The Elementary School Journal, 114(2), 252-276. https://doi.org/10.1086/673199.</p>

<p>“schemata”); carefully sequencing teaching to facilitate this process is important.</p>	<p>Kalyuga, S. (2010) Schema acquisition and sources of cognitive load. In J. L. Plass, R. Moreno, & R. Brünken (Eds.), <i>Cognitive Load Theory</i> (pp. 48–64). Cambridge University Press. https://doi.org/10.1017/CBO9780511844744.005</p> <p>Merchie, E., & Van Keer, H. (2016) Mind mapping as a meta-learning strategy: Stimulating pre-adolescents’ text-learning strategies and performance?. <i>Contemporary Educational Psychology</i>, 46, 128-147. https://doi.org/10.1016/j.cedpsych.2016.05.005.</p> <p>Perry, T., Lea, R., Jørgensen, C. R., Cordingley, P., Shapiro, K., Youdell, D., ... & Pomareda, C. (2021) <i>Cognitive science in the classroom: evidence and practice review</i>. London: Education Endowment Foundation (EEF). Available at: Perry_CognitvieScienceInTheClassroomEvidenceAndPracticeReview.pdf.</p> <p>*Rosenshine, B. (2012) <i>Principles of Instruction: Research-based strategies that all teachers should know</i>. <i>American Educator</i>, 12–20. Available at: Rosenshine_PrinciplesOfInstruction.pdf.</p> <p>Simonsmeier, B. A., Flaig, M., Deiglmayr, A., Schalk, L., & Schneider, M. (2022). Domain-specific prior knowledge and learning: A meta-analysis. <i>Educational Psychologist</i>, 57(1), 31-54. https://doi.org/10.1080/00461520.2021.1939700.</p> <p>Sweller, J., van Merriënboer, J. J. G., & Paas, F. G. W. C. (1998) <i>Cognitive Architecture and Instructional Design</i>. <i>Educational Psychology Review</i>, 10(3), 251–296. http://dx.doi.org/10.1023/a:1022193728205.</p>
<p>3.8 Pupils are likely to struggle to transfer what has been learnt in one discipline to a new or unfamiliar context.</p>	<p>Deans for Impact (2015) <i>The Science of Learning</i> [Online] Accessible from: https://deansforimpact.org/resources/the-science-of-learning/.</p> <p>Perry, T., Lea, R., Jørgensen, C. R., Cordingley, P., Shapiro, K., Youdell, D., ... & Pomareda, C. (2021) <i>Cognitive science in the classroom: evidence and practice review</i>. London: Education Endowment Foundation (EEF). Available at: Perry_CognitvieScienceInTheClassroomEvidenceAndPracticeReview.pdf.</p>
<p>3.9 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.</p>	<p>Education Endowment Foundation (2018) <i>Preparing for Literacy Guidance Report</i>. [Online] Available at: EEF_PreparingForLiteracy.pdf</p> <p>*Education Endowment Foundation (2021) <i>Education Endowment Foundation Teaching and Learning Toolkit, Phonics</i> [Online] Accessible from: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p> <p>Machin, S., McNally, S., & Viarengo, M. (2018) Changing how literacy is taught: Evidence on synthetic phonics. <i>American Economic Journal: Economic Policy</i>, 10(2), 217–241. https://doi.org/10.1257/pol.20160514.</p> <p>Shanahan, T. (2005) <i>The National Reading Panel Report: Practical Advice for Teachers</i>. Available at: Shanahan_TheNationalReadingPanelReport.pdf.</p>
<p>3.10 Every teacher can improve pupils’</p>	<p>Carney, M., & Indrisano, R. (2013) <i>Disciplinary literacy and pedagogical content knowledge</i>. <i>Journal of Education</i>, 193(3), 39-49. https://doi.org/10.1177/002205741319300306.</p>

<p>communication and literacy, including by explicitly teaching reading, writing and oral language skills specific to individual disciplines.</p>	<p>Corrin, W., Lindsay, J. J., Somers, M-A., Myers, N. E., Myers, C. V., Condon, C. A., & Smith, J. K. (2012) Evaluation of the Content Literacy Continuum: Report on Program Impacts, Program Fidelity, and Contrast. (NCEE2013-4001). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Available at: http://dx.doi.org/10.2139/ssrn.2198586</p> <p>Education Endowment Foundation (2018) Improving Literacy in Secondary Schools Guidance Report. [Online]. Available at: EEF ImprovingLiteracyInSecondarySchools.pdf.</p> <p>Education Endowment Foundation (2021) Improving Literacy in Key Stage 2 Guidance Report. [Online]. Available at: EEF ImprovingLiteracyInKeyStage2.pdf.</p> <p>Scott, C. E., McTigue, E. M., Miller, D. M., & Washburn, E. K. (2018) The what, when, and how of preservice teachers and literacy across the disciplines : A systematic literature review of nearly 50 years of research. Teaching and Teacher Education, 73, 1–13. https://doi.org/10.1016/j.tate.2018.03.010.</p> <p>What Works Clearinghouse, Institute of Education Sciences, U.S. Department of Education. (2021). Literacy Design Collaborative. Available at: https://ies.ed.gov/ncee/WWC/Docs/InterventionReports/wwc_EESL ldc_IR_mar2021.pdf.</p> <p>Wright, T. S., & Gotwals, A. W. (2017). Supporting kindergartners’ science talk in the context of an integrated science and disciplinary literacy curriculum. The Elementary School Journal, 117(3), 513-537. https://doi.org/10.1086/690273.</p>
<p>3.11 Pupils’ positive dispositions and attitudes towards mathematics are associated with positive outcomes on learning.</p>	<p>Barroso, C., Ganley, C. M., McGraw, A. L., Geer, E. A., Hart, S. A., & Daucourt, M. C. (2021) A meta-analysis of the relation between math anxiety and math achievement. Psychological Bulletin, 147(2), 134–168. https://doi.org/10.1037/bul0000307.</p> <p>Ma, X., & Kishor, N. (1997) Assessing the Relationship between Attitude toward Mathematics and Achievement in Mathematics: A Meta-Analysis. Journal for Research in Mathematics Education, 28(1), 26–47. https://doi.org/10.2307/749662.</p>
<p>3.12 Pupils’ oral language skills can be supported by teaching new words and how to use and understand words within sentences or longer texts. This can help to address speech and language difficulties, especially for children in their early school years.</p>	<p>Dobinson, K. & Dockrell, J. (2021) Universal strategies for the improvement of expressive language skills in the primary classroom: A systematic review. First Language, 41(5), 527-554. https://doi.org/10.1177/0142723721989471.</p> <p>Education Endowment Foundation (2022) Early Years Toolkit. [Online] Available at: https://educationendowmentfoundation.org.uk/education-evidence/early-years-toolkit.</p> <p>Education Endowment Foundation (2023) Early Years Evidence Store. [Online] Available at: https://educationendowmentfoundation.org.uk/support-for-schools/evidence-for-the-early-years/early-years-evidence-store.</p> <p>Hulme, C., Snowling, M. J., West, G., Lervag, A., & Melby-Lervag, M. (2020) Children’s Language Skills Can Be Improved: Lessons From Psychological Science for Educational Policy. Current Directions in Psychological Science, 29(4), 372- 377. https://doi.org/10.1177/0963721420923684.</p> <p>Rasinski, T. V. (2004). Assessing reading fluency. Pacific Resources for Education and Learning (PREL). Available at: Rasinski AssessingReadingFluency.pdf.</p>

	West, G., Lervag, A., Snowling, M. J., Buchanan-Worster, E., Duta, M., & Hulme, C. (2022) Early language intervention improves behavioral adjustment in school: Evidence from a cluster randomized trial. <i>Journal of School Psychology</i> , 92, 334-345. https://doi.org/10.1016/j.jsp.2022.04.006 .
Standard 4	
4.1 Effective teaching can transform pupils' knowledge, capabilities and beliefs about learning.	* Coe, R., Aloisi, C., Higgins, S., & Major, L. E. (2014) What makes great teaching. Review of the underpinning research. Durham University: UK. Available at: Coe WhatMakesGreatTeaching.pdf .
4.2 Effective teachers introduce new material in steps, explicitly linking new ideas to what has been previously studied and learned.	Institute of Education Sciences. (2009) Assisting Students Struggling with Mathematics: Response to Intervention for Elementary and Middle Schools. Available at: IES_AssistingStudentsStrugglingWithMathematics.pdf . Hodgen, J., Foster, C., Marks, R. & Brown, M. (2018) Improving Mathematics in Key Stages Two and Three: Evidence Review. [Online] Available at: Hodgen_ImprovingMathematicsInKeyStages3And4EvidenceReview.pdf , 149-157. *Rosenshine, B. (2012) Principles of Instruction: Research-based strategies that all teachers should know. <i>American Educator</i> , 12–20. Available at: Rosenshine PrinciplesOfInstruction.pdf .
4.3 Modelling helps pupils understand new processes and ideas; good models make abstract ideas concrete and accessible.	Education Endowment Foundation (2016) Improving Literacy in Key Stage One Guidance Report. [Online] Available at: EEF ImprovingLiteracyInKeyStage1.pdf . Education Endowment Foundation (2021) Improving Mathematics in Key Stages 2 and 3 Guidance Report. [Online]. Available at: EEF ImprovingMathematicsInKeyStages2And3.pdf . *Education Endowment Foundation (2018) Improving Secondary Science Guidance Report. [Online] Available at: EEF ImprovingSecondaryScienceGuidanceReport.pdf .
4.4 Guides, scaffolds and worked examples can help pupils apply new ideas, but should be gradually removed as pupil expertise increases.	Dunlosky, J., Rawson, K. A., Marsh, E. J., Nathan, M. J., & Willingham, D. T. (2013) Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology. <i>Psychological Science in the Public Interest</i> , Supplement, 14(1), 4–58. https://doi.org/10.1177/1529100612453266 . Kalyuga, S. (2007) Expertise reversal effect and its implications for learner-tailored instruction. <i>Educational Psychology Review</i> , 19(4), 509-539. Sweller, J. (2016) Working Memory, Long-term Memory, and Instructional Design. <i>Journal of Applied Research in Memory and Cognition</i> , 5(4), 360–367. http://doi.org/10.1016/j.jarmac.2015.12.002 .

	<p>Van de Pol, J., Volman, M., Oort, F., & Beishuizen, J. (2015) The effects of scaffolding in the classroom: support contingency and student independent working time in relation to student achievement, task effort and appreciation of support. <i>Instructional Science</i>, 43(5), 615-641. Available at: https://doi.org/10.1007/s11251-015-9351-z.</p> <p>Wittwer, J., & Renkl, A. (2010) How Effective are Instructional Explanations in Example-Based Learning? A Meta-Analytic Review. <i>Educational Psychology Review</i>, 22(4), 393– 409. https://doi.org/10.1007/s10648-010-9136-5.</p>
<p>4.5 Explicitly teaching pupils metacognitive strategies linked to subject knowledge, including how to plan, monitor and evaluate, supports independence and academic success.</p>	<p>Donker, A. S., de Boer, H., Kostons, D., Dignath van Ewijk, C. C., & van der Werf, M. P. C. (2014) Effectiveness of learning strategy instruction on academic performance: A meta-analysis. <i>Educational Research Review</i>, 11, 1–26. https://doi.org/10.1016/j.edurev.2013.11.002.</p> <p>Education Endowment Foundation (2017) Metacognition and Self-regulated learning Guidance Report. [Online] Available at: EEF_MetacognitionAndSelfRegulatedLearning.pdf.</p> <p>Zimmerman, B. J. (2002) Becoming a Self-Regulated Learner: An Overview, Theory Into Practice. <i>Theory Into Practice</i>, 41(2), 64–70. https://doi.org/10.1207/s15430421tip4102_2.</p>
<p>4.6 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</p>	<p>* Coe, R., Aloisi, C., Higgins, S., & Major, L. E. (2014) What makes great teaching. Review of the underpinning research. Durham University: UK. Available at: Coe_WhatMakesGreatTeaching.pdf.</p> <p>Jay, T., Willis, B., Thomas, P., Taylor, R., Moore, N., Burnett, C., Merchant, G., Stevens, A. (2017) Dialogic Teaching: Evaluation Report. [Online] Available at: https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/dialogic-teaching.</p>
<p>4.7 High quality classroom talk (sometimes referred to as oracy), can support pupils to articulate key ideas, consolidate understanding and extend their vocabulary.</p>	<p>Alexander, R. (2017) <i>Towards Dialogic Teaching: rethinking classroom talk</i>. York: Dialogos.</p> <p>Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Oral Language Interventions: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p> <p>Elleman, A. M., Lindo, E. J., Morphy, P., & Compton, D. L. (2009) The Impact of Vocabulary Instruction on Passage-Level Comprehension of School-Age Children: A Meta-Analysis. <i>Journal of Research on Educational Effectiveness</i>, 2(1), 1–44. https://doi.org/10.1080/19345740802539200.</p>
<p>4.8 Practice is an integral part of effective teaching; ensuring pupils have repeated opportunities to practise, with appropriate</p>	<p>Education Endowment Foundation (2021) Improving Mathematics in Key Stages 2 and 3 Guidance Report. [Online]. Available at: EEF_ImprovingMathematicsInKeyStages2And3.pdf.</p> <p>Institute of Education Sciences. (2009) <i>Assisting Students Struggling with Mathematics: Response to Intervention for Elementary and Middle Schools</i>. Available at: IES_AssistingStudentsStrugglingWithMathematics.pdf</p>

guidance and support, increases success.	*Rosenshine, B. (2012) Principles of Instruction: Research-based strategies that all teachers should know. American Educator, 12–20. Available at: Rosenshine PrinciplesOfInstruction.pdf .
4.9 Paired and group activities can increase pupil success, but to work together effectively pupils need guidance, support and practice.	<p>Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Collaborative Learning Approaches: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p> <p>Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Peer Tutoring: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p> <p>Kirschner, P., Sweller, J., Kirschner, F. & Zambrano, J. (2018) From cognitive load theory to collaborative cognitive load theory. In International Journal of Computer-Supported Collaborative Learning, 13(2), 213-233. Available at: https://doi.org/10.1007/s11412-018-9277-y.</p> <p>Leung, K. C. (2015) Preliminary Empirical Model of Crucial Determinants of Best Practice for Peer Tutoring on Academic Achievement Preliminary Empirical Model of Crucial Determinants of Best Practice for Peer Tutoring on Academic Achievement. Journal of Educational Psychology, 107(2), 558–579.</p>
4.10 How pupils are grouped is also important; care should be taken to monitor the impact of groupings on pupil attainment, behaviour and motivation.	<p>Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Within Class Attainment Grouping: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p> <p>Tereshchenko, A., Francis, B., Archer, L., Hodgen, J., Mazonod, A., Taylor, B., Travers, M. C. (2018) Learners’ attitudes to mixed-attainment grouping: examining the views of students of high, middle and low attainment. Research Papers in Education, 34(4), 425- 444. https://doi.org/10.1080/02671522.2018.1452962.</p>
4.11 Homework can improve pupil outcomes, particularly for older pupils, but it is likely that the quality of homework and its relevance to main class teaching is more important than the amount set.	<p>Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Homework : Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p> <p>Hodgen, J., Foster, C., Marks, R. & Brown, M. (2018) Improving Mathematics in Key Stages Two and Three: Evidence Review. [Online] Available at: Hodgen ImprovingMathematicsInKeyStages2And3EvidenceReview.pdf, 149-157</p>
Standard 5	
5.1 Adapting teaching in a responsive way, including by providing targeted support	Deunk, M. I., Smale-Jacobse, A. E., de Boer, H., Doolaard, S., & Bosker, R. J. (2018) Effective Differentiation Practices: A systematic review and meta-analysis of studies on the cognitive effects of differentiation practices in primary education. Educational Research Review, 24(February), 31–54. https://doi.org/10.1016/j.edurev.2018.02.002

<p>to pupils who are struggling, is likely to increase pupil success.</p>	<p>*Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit: Individualised Instruction Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p> <p>Gallagher, M. A., Parsons, S. A., & Vaughn, M. (2022). Adaptive teaching in mathematics: A review of the literature. <i>Educational Review</i>, 74(2), 298-320. https://doi.org/10.1080/00131911.2020.1722065.</p> <p>OECD (2015) Pisa 2015 Result: Policies and Practices for Successful Schools: How Schools and Teaching Practices Shape Students' Performance In and Dispositions Towards Science. Accessible from: https://doi.org/10.1787/9789264267510-en.</p> <p>Speckesser, S., Runge, J., Foliano, F., Bursnall, M., Hudson-Sharp, N., Rolfe, H. & Anders, J. (2018) Embedding Formative Assessment: Evaluation Report. [Online] Available at: https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/embedding-formative-assessment.</p>
<p>5.2 Pupils are likely to learn at different rates and to require different levels and types of support from teachers to succeed.</p>	<p>Hattie, J. (2009) Visible learning: a synthesis of over 800 meta-analyses relating to achievement. London: Routledge.</p> <p>Kriegbaum, K., Becker, N., & Spinath, B. (2018) The Relative Importance of Intelligence and Motivation as Predictors of School Achievement: A meta-analysis. <i>Educational Research Review</i>. https://doi.org/10.1016/j.edurev.2018.10.001.</p>
<p>5.3 Seeking to understand pupils' differences, including their different levels of prior knowledge and potential barriers to learning, is an essential part of teaching.</p>	<p>Hattie, J. (2009) Visible learning: a synthesis of over 800 meta-analyses relating to achievement. London: Routledge.</p> <p>Kriegbaum, K., Becker, N., & Spinath, B. (2018) The Relative Importance of Intelligence and Motivation as Predictors of School Achievement: A meta-analysis. <i>Educational Research Review</i>. https://doi.org/10.1016/j.edurev.2018.10.001.</p> <p>Sisk, V. F., Burgoyne, A. P., Sun, J., Butler, J. L., & Macnamara, B. N. (2018) To What Extent and Under Which Circumstances Are Growth Mind-Sets Important to Academic Achievement? Two Meta-Analyses. <i>Psychological Science</i>, 29(4), 549–571. https://doi.org/10.1177/0956797617739704.</p>
<p>5.4 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.</p>	<p>Deunk, M. I., Smale-Jacobse, A. E., de Boer, H., Doolaard, S., & Bosker, R. J. (2018) Effective differentiation Practices: A systematic review and meta-analysis of studies on the cognitive effects of differentiation practices in primary education. <i>Educational Research Review</i>, 24(February), 31–54. https://doi.org/10.1016/j.edurev.2018.02.002</p> <p>*Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit: Individualised Instruction Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p>
<p>5.5 Flexibly grouping pupils within a class to provide more tailored support can</p>	<p>Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Within Class Attainment Grouping: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p>

<p>support learning, but care should be taken to monitor its impact on attainment, behaviour, engagement and motivation, particularly for low attaining pupils.</p>	<p>Steenbergen-Hu, S., Makel, M. C., & Olszewski-Kubilius, P. (2016) What One Hundred Years of Research Says About the Effects of Ability Grouping and Acceleration on K-12 Students Academic Achievement: Findings of Two Second-Order Meta-Analyses. <i>Review of Educational Research</i>, 86(4), 849-899. https://doi.org/10.3102/0034654316675417.</p> <p>Tereshchenko, A., Francis, B., Archer, L., Hodgen, J., Mazenod, A., Taylor, B., Travers, M. C. (2018) Learners' attitudes to mixed-attainment grouping: examining the views of students of high, middle and low attainment. <i>Research Papers in Education</i>, 34(4), 425- 444. https://doi.org/10.1080/02671522.2018.1452962.</p>
<p>5.6 There is a common misconception that pupils have distinct and identifiable learning styles. This is not supported by evidence and attempting to tailor lessons to learning styles is unlikely to be beneficial.</p>	<p>Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Learning Styles: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p> <p>Pashler, H., McDaniel, M., Rohrer, D., & Bjork, R. (2008) Learning Styles: Concepts and Evidence. <i>Psychological Science in the Public Interest</i>, 9 (3). https://doi.org/10.1111/j.1539-6053.2009.01038.x.</p>
<p>5.7 Pupils with SEND are likely to require additional or adapted support; working closely with colleagues, parents/carers, and pupils to understand barriers to learning and identify effective strategies is essential.</p>	<p>Cullen, M. A., Lindsay, G., Hastings, R., Denne, L., & Stanford, C. (2020) Special Educational Needs in Mainstream Schools: Evidence Review. Available at: Cullen_SENDEvidenceReview.pdf.</p> <p>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. Available at: Davis_TeachingStrategiesAndApproachesForPupilsWithSEND.pdf.</p> <p>Education Endowment Foundation (2020) Special Educational Needs in Mainstream School Guidance Report. [Online] Available at: EEF_SENDInMainstreamSchool.pdf.</p>
<p>5.8 High quality teaching for all pupils, including those with SEND, is based on strategies which are often already practised by teachers, and which can be developed through training and support.</p>	<p>Cullen, M. A., Lindsay, G., Hastings, R., Denne, L., & Stanford, C. (2020) Special Educational Needs in Mainstream Schools: Evidence Review. Available at: Cullen_SENDEvidenceReview.pdf.</p> <p>Education Endowment Foundation (2020) Special Educational Needs in Mainstream School Guidance Report. [Online] Available at: EEF_SENDInMainstreamSchool.pdf.</p> <p>McLeskey et al. (2017) High-leverage practices in special education. Arlington, VA: Council for Exceptional Children and CEDAR Center. Available at: McLeskey_High-LeveragePracticesInSpecialEducation.pdf.</p>
<p>5.9 Technology, including educational software and</p>	<p>Belland, B. R., Walker, A. E., & Kim, N. J. (2017) A Bayesian Network Meta-Analysis to Synthesize the Influence of Contexts of Scaffolding Use on Cognitive Outcomes in STEM Education. <i>Review of Educational Research</i>, 87(6), 1042- 1081. https://doi.org/10.3102/0034654317723009.</p>

<p>assistive technology, can support teaching and learning for pupils with SEND.</p>	<p>Cullen, M. A., Lindsay, G., Hastings, R., Denne, L., & Stanford, C. (2020) Special Educational Needs in Mainstream Schools: Evidence Review. Available at: Cullen_SENDEvidenceReview.pdf.</p> <p>Education Endowment Foundation (2020) Special Educational Needs in Mainstream School Guidance Report. [Online] Available at: EEF_SENDInMainstreamSchool.pdf.</p>
<p>Standard 6</p>	
<p>6.1 Effective assessment is critical to teaching because it provides teachers with information about pupils' understanding and needs.</p>	<p>*Education Endowment Foundation (2021) Teacher Feedback to Improve Pupil Learning Guidance Report. [Online]. Available at: EEF_TeacherFeedbackToImproveLearning.pdf.</p> <p>William, D. (2010) What Counts as Evidence of Educational Achievement? The Role of Constructs in the Pursuit of Equity in Assessment. Review of Research in Education, 34, 254-284. https://doi.org/10.3102/0091732X09351544.</p>
<p>6.2 Good assessment helps teachers avoid being over-influenced by potentially misleading factors, such as how busy pupils appear.</p>	<p>*Coe, R. (2013) Improving Education: A triumph of hope over experience. Centre for Evaluation and Monitoring.</p>
<p>6.3 Before using any assessment, teachers should be clear about the/ decision it will be used to support and be able to justify its use.</p>	<p>*Black, P., & William, D. (2009) Developing the theory of formative assessment. Educational Assessment, Evaluation and Accountability, 21(1), 5-31. https://doi.org/10.1007/s11092-008-9068-5.</p> <p>Christodoulou, D. (2017) Making Good Progress: The Future of Assessment for Learning. Oxford: OUP.</p> <p>Harlen, W. & James, M. (1997) Assessment and Learning: differences and relationships between formative and summative assessment, Assessment in Education: Principles, Policy & Practice 4:3, 365-379. https://doi.org/10.1080/0969594970040304.</p> <p>Speckesser, S., Runge, J., Foliano, F., Bursnall, M., Hudson-Sharp, N., Rolfe, H. & Anders, J. (2018) Embedding Formative Assessment: Evaluation Report. [Online] Available at: https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/embedding-formative-assessment.</p> <p>William, D. (2010) What Counts as Evidence of Educational Achievement? The Role of Constructs in the Pursuit of Equity in Assessment. Review of Research in Education, 34, 254-284. https://doi.org/10.3102/0091732X09351544.</p>
<p>6.4 To be of value, teachers use information from assessments to inform the decisions they make; in turn,</p>	<p>*Black, P., & William, D. (2009) Developing the theory of formative assessment. Educational Assessment, Evaluation and Accountability, 21(1), 5-31. https://doi.org/10.1007/s11092-008-9068-5.</p>

<p>pupils must be able to act on feedback for it to have an effect.</p>	<p>*Education Endowment Foundation (2021) Teacher Feedback to Improve Pupil Learning Guidance Report. [Online]. Available at: EEF TeacherFeedbackToImproveLearning.pdf.</p> <p>Sadler, D. (1989) Formative assessment and the design of instructional systems. <i>Instructional Science</i>, 18(2), 119-144. Available at: Sadler FormativeAssessmentAndTheDesignOfInstructionalSystems.pdf.</p>
<p>6.5 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.</p>	<p>Black, P., Harrison, C., Lee, C., Marshall, B., & Wiliam, D. (2004). Working inside the Black Box: Assessment for Learning in the Classroom. <i>Phi Delta Kappan</i>, 86(1), 8–21. https://doi.org/10.1177/003172170408600105.</p> <p>*Education Endowment Foundation (2021) Teacher Feedback to Improve Pupil Learning Guidance Report. [Online]. Available at: EEF TeacherFeedbackToImproveLearning.pdf.</p> <p>Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Feedback: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit.</p> <p>Hattie, J., & Timperley, H. (2007) The Power of Feedback. <i>Review of Educational Research</i>, 77(1), 81–112. https://doi.org/10.3102/003465430298487.</p> <p>Kluger, A. N., & DeNisi, A. (1996) The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. <i>Psychological Bulletin</i>, 119(2), 254–284. https://doi.org/10.1037/0033-2909.119.2.254.</p>
<p>6.6 Over time, feedback should support pupils to monitor and regulate their own learning.</p>	<p>*Black, P., & Wiliam, D. (2009) Developing the theory of formative assessment. <i>Educational Assessment, Evaluation and Accountability</i>, 21(1), 5-31. https://doi.org/10.1007/s11092-008-9068-5.</p> <p>*Education Endowment Foundation (2021) Teacher Feedback to Improve Pupil Learning Guidance Report. [Online]. Available at: EEF TeacherFeedbackToImproveLearning.pdf.</p> <p>Sadler, D. (1989) Formative assessment and the design of instructional systems. <i>Instructional Science</i>, 18(2), 119-144. Available at: Sadler FormativeAssessmentAndTheDesignOfInstructionalSystems.pdf.</p>
<p>6.7 Working with colleagues to identify efficient approaches to assessment is important; assessment can become onerous and have a disproportionate impact on workload.</p>	<p>Gibson, S., Oliver, L. and Dennison, M. (2015) <i>Workload Challenge: Analysis of teacher consultation responses</i>. Department for Education. Available at: Gibson WorkloadChallengeAnalysisOfTeacherConsultationResponses.pdf.</p>
<p>Standard 7</p>	

<p>7.1 Establishing and reinforcing routines, including through positive reinforcement, can help create an effective learning environment.</p>	<p>*Institute of Education Sciences (2008) Reducing Behavior Problems in the Elementary School Classroom. Available at: IES ReducingBehaviourProblems.pdf.</p> <p>Kern, L., & Clemens, N. H. (2007) Antecedent strategies to promote appropriate classroom behavior. <i>Psychology in the Schools</i>, 44(1), 65–75. https://doi.org/10.1002/pits.20206.</p>
<p>7.2 A predictable and secure environment benefits all pupils, including younger pupils, but is particularly valuable for pupils with special educational needs.</p>	<p>*Carroll, J., Bradley, L., Crawford, H., Hannant, P., Johnson, H., & Thompson, A. (2017). SEN support: A rapid evidence assessment. Available at: Carroll SENSupportARapidEvidenceAssessment.pdf.</p> <p>Education Endowment Foundation (2021) Improving Behaviour in Schools Guidance Report. [Online] Available at: EEF ImprovingBehaviourInSchools.pdf.</p>
<p>7.3 The ability to self-regulate one’s emotions affects pupils’ ability to learn, success in school and future lives.</p>	<p>*Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Social and Emotional Learning: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit</p> <p>Ursache, A., Blair, C., & Raver, C. C. (2012) The promotion of self-regulation as a means of enhancing school readiness and early achievement in children at risk for school failure. <i>Child Development Perspectives</i>, 6(2), 122-128. https://doi.org/10.1111/j.1750-8606.2011.00209.x</p>
<p>7.4 Teachers can influence pupils’ resilience and beliefs about their ability to succeed, by ensuring all pupils have the opportunity to experience meaningful success.</p>	<p>Chapman, R. L., Buckley, L., & Sheehan, M. (2013) School-Based Programs for Increasing Connectedness and Reducing Risk Behavior: A Systematic Review. <i>Educational Psychology Review</i>, 25(1), 95–114. https://doi.org/10.1007/s10648-013- 9216-4.</p> <p>Wubbels, T., Brekelmans, M., den Brok, P., Wijsman, L., Mainhard, T., & van Tartwijk, J. (2014) Teacher-student relationships and classroom management. In E. T. Emmer, E. Sabornie, C. Evertson, & C. Weinstein (Eds.). <i>Handbook of classroom management: Research, practice, and contemporary issues</i> (2nd ed., pp. 363–386). New York, NY: Routledge.</p>
<p>7.5 Building effective relationships is easier when pupils believe that their feelings will be considered and understood.</p>	<p>*Willingham, D. T. (2009) <i>Why don’t students like school?</i> San Francisco, CA: JosseyBass. Available at: Willingham WhyDontStudentsLikeSchool.pdf</p>
<p>7.6 Pupils are motivated by intrinsic factors (related to</p>	<p>Lazowski, R. A., & Hulleman, C. S. (2016) Motivation Interventions in Education: A Meta-Analytic Review. <i>Review of Educational Research</i>, 86(2), 602–640. https://doi.org/10.3102/0034654315617832.</p>

<p>their identity and values) and extrinsic factors (related to reward).</p>	<p>*Willingham, D. T. (2009) Why don't students like school? San Francisco, CA: JosseyBass. Available at: Willingham WhyDontStudentsLikeSchool.pdf</p> <p>Sibieta, L., Greaves, E. & Sianesi, B. (2014) Increasing Pupil Motivation: Evaluation Report. [Online] Available at: https://educationendowmentfoundation.org.uk/projects-and-evaluation/projects/increasing-pupil-motivation.</p>
<p>7.7 Pupils' investment in learning is also driven by their prior experiences and perceptions of success and failure.</p>	<p>*Coe, R., Aloisi, C., Higgins, S., & Major, L. E. (2014) What makes great teaching. Review of the underpinning research. Durham University: UK. Available at: Coe WhatMakesGreatTeaching.pdf.</p> <p>Gutman, L. & Schoon, L. (2013) The impact of non-cognitive skills on the outcomes of young people. Available at: Gutman TheImpactOfNon-CognitiveSkills.pdf.</p> <p>Lazowski, R. A., & Hulleman, C. S. (2016) Motivation Interventions in Education: A Meta-Analytic Review. Review of Educational Research, 86(2), 602–640. https://doi.org/10.3102/0034654315617832.</p> <p>Yeager, D. S., & Walton, G. M. (2011) Social-Psychological Interventions in Education: They're Not Magic. Review of Educational Research, 81(2), 267–301. https://doi.org/10.3102/0034654311405999.</p>
<p>7.8 Teaching and modelling a range of social and emotional skills (e.g. how to recognise and understand feelings, manage emotions, and sustain positive relationships) can support pupils' social and emotional development.</p>	<p>Education Endowment foundation (2019) Improving Social and Emotional Learning in Primary Schools Guidance Report. [Online] Available at: EEF ImprovingSocialAndEmotionalLearningInPrimarySchools.pdf.</p> <p>*Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Social and Emotional Learning: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit</p> <p>Education Endowment Foundation (2022) Early Years Toolkit. [Online] Available at: https://educationendowmentfoundation.org.uk/education-evidence/early-years-toolkit.</p> <p>Education Endowment Foundation (2023) Early Years Evidence Store. [Online] Available at: https://educationendowmentfoundation.org.uk/support-for-schools/evidence-for-the-early-years/early-years-evidence-store.</p>
<p>7.9 Teaching typically expected behaviours will reduce the need to manage misbehaviour.</p>	<p>Education Endowment Foundation (2021) Improving Behaviour in Schools Guidance Report. [Online] Available at: EEF ImprovingBehaviourInSchools.pdf.</p>
<p>7.10 Pupils who need a tailored approach to support their behaviour do not</p>	<p>Education Endowment Foundation (2021) Improving Behaviour in Schools Guidance Report. [Online] Available at: EEF ImprovingBehaviourInSchools.pdf.</p> <p>Department for Education (2019) Omnibus survey of pupils and their parents or carers: wave 6 research report. Available at: DFE OmnibusSurveyOfPupilsAndTheirParentsOrCarers.pdf.</p>

necessarily have SEND and pupils with SEND will not necessarily need additional support with their behaviour.	
7.11 A key influence on a pupil's behaviour in school is being the victim of bullying.	<p>Chatzitheochari, S., Parsons, S., & Platt, L. (2016). Doubly Disadvantaged? Bullying Experiences among Disabled Children and Young People in England. <i>Sociology</i>, 50(4), 695–713. https://doi.org/10.1177/0038038515574813.</p> <p>Education Endowment Foundation (2021) Improving Behaviour in Schools Guidance Report. [Online] Available at: EEF ImprovingBehaviourInSchools.pdf.</p>
Standard 8	
8.1 Effective professional development is likely to be sustained over time, building knowledge, motivating staff, developing teaching techniques, and embedding practice.	<p>*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.</p> <p>Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Van Herwegen, J., & Anders, J. (2021). What are the characteristics of teacher professional development that increase pupil achievement? A systematic review and meta-analysis. Available at: Sims WhatAreTheCharacteristicsOfTeacherProfessionalDevelopment.pdf.</p> <p>Skaalvik, E. M., & Skaalvik, S. (2017) Still motivated to teach? A study of school context variables, stress and job satisfaction among teachers in senior high school. <i>Social Psychology of Education</i>, 20(1), 15–37. https://doi.org/10.1007/s11218-016-9363-9.</p>
8.2 Reflective practice, supported by feedback from and observation of experienced colleagues, professional debate, and learning from educational research, is also likely to support improvement.	<p>*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.</p> <p>Education Endowment Foundation. (2021). Effective Professional Development Guidance Report [Online] Available at: EEF EffectiveProfessionalDevelopment.pdf.</p> <p>Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Van Herwegen, J., & Anders, J. (2021). What are the characteristics of teacher professional development that increase pupil achievement? A systematic review and meta-analysis. Available at: Sims WhatAreTheCharacteristicsOfTeacherProfessionalDevelopment.pdf.</p>
8.3 Teachers can make valuable contributions to the wider life of the school in a broad range of ways, including by supporting and developing effective	<p>Heyder, A., Südkamp, A., Steinmayr, R. (2020). How are teachers' attitudes toward inclusion related to the social-emotional school experiences of students with and without special educational needs? <i>Learning and Individual Differences</i>, 77. https://doi.org/10.1016/j.lindif.2019.101776</p>

<p>professional relationships with colleagues.</p>	
<p>8.4 Building effective relationships with parents, carers and families can improve pupils' motivation, behaviour and academic success.</p>	<p>*Carroll, J., Bradley, L., Crawford, H., Hannant, P., Johnson, H., & Thompson, A. (2017). SEN support: A rapid evidence assessment. Available at: Carroll_SENSupportARapidEvidenceAssessment.pdf.</p> <p>Department for Education (2018) Schools: guide to the 0 to 25 SEND code of practice. Available at: DFE_SchoolsGuideToThe0to25SENDCodeOfPractice.pdf.</p> <p>*Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Parental Engagement: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit</p> <p>Hughes, D., Mann, A., Barnes, S., Baladuf, B. and McKeown, R. (2016). Careers education: International literature review. Available at: Hughes_CareersEducationInternationalLiteratureReview.pdf.</p>
<p>8.5 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.</p>	<p>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. Available at: Blatchford_DeploymentAndImpactOfSupportStaffInSchools.pdf.</p> <p>*Education Endowment Foundation (2015) Making Best Use of Teaching Assistants Guidance Report. [Online] Available at: EEF_MakingBestUseOfTeachingAssistants.pdf</p> <p>*Education Endowment Foundation (2021) Education Endowment Foundation Teaching and Learning Toolkit, Teaching Assistant Interventions: Available at: https://educationendowmentfoundation.org.uk/education-evidence/teaching-learning-toolkit</p>
<p>8.6 SENCOs, pastoral leaders, careers advisors and leaders and other specialist colleagues also have valuable expertise and can ensure that appropriate support is in place for pupils.</p>	<p>Allen JP, Pianta RC, Gregory A, Mikami AY, Lun J (2011) An interaction-based approach to enhancing secondary school instruction and student achievement. Science 333(6045):1034-1037 https://doi.org/10.1126/science.1207998.</p> <p>Basma, B. & Savage, R. (2018) Teacher Professional Development and Student Literacy Growth: a Systematic Review and Meta-analysis. Education Psychology Review. 30: 457-481 https://doi.org/10.1007/s10648-017-9416-4.</p> <p>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, 88(4), 547-588. https://doi.org/10.3102/0034654318759268.</p>
<p>8.7 Engaging in high quality professional development can help teachers improve.</p>	<p>*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.</p> <p>Darling-Hammond, L. (2009) Professional Learning in the Learning Profession. Available at: Darling-Hammond ProfessionalLearningintheLearningProfession.pdf.</p>

	<p>Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Van Herwegen, J., & Anders, J. (2021). What are the characteristics of teacher professional development that increase pupil achievement? A systematic review and meta-analysis. Available at: Sims_WhatAreTheCharacteristicsOfTeacherProfessionalDevelopment.pdf.</p>
<p>8.8 Teacher attitudes towards inclusion and SEND are a key determinant in the school experience of pupils with SEND.</p>	<p>Heyder, A., Südkamp, A., Steinmayr, R. (2020). How are teachers' attitudes toward inclusion related to the social-emotional school experiences of students with and without special educational needs? Learning and Individual Differences, 77. https://doi.org/10.1016/j.lindif.2019.101776</p>
<p>8.9 Research evidence can vary in its level of reliability, which is determined by how the research was conducted and other factors that might introduce bias, such as the level of independence. High quality research communicates methods and limitations transparently.</p>	<p>Education Endowment Foundation (2024) Using Research Evidence: A Concise Guide. [Online] Available at: https://educationendowmentfoundation.org.uk/support-for-schools/using-research-evidence.</p>