Curriculum Implementation

The Craft of The Classroom

October 2022

CONTENTS

- Present material in small steps
- Ask questions
- Provide models/examples/thinking aloud
- Guide student practise
- Check student understanding
- Obtain high success rate
- Scaffolds for difficult tasks
- Independent practise
- Weekly and monthly review
- Climate for learning and disciplinary literacy

PART 1

THE HELE'S MODEL OF LEARNING

The curriculum is planned through schemes of learning; comprehensive documents that map out the academic journey for every Hele's student. The fundamental principles of the Hele's School curriculum are outlined in this section. Before reading this section, it is worth noting that it represents our current thinking regarding a process that began back in 2017. The curriculum constantly evolves and improves (as does the thinking behind it) so it is reasonable to assume that the contents of this section will evolve alongside it.

An effective scheme:

- underpins a comprehensive and cohesive learning experience for *all* learners; provides clear information how a subject helps students' learning and attainment;
- identifies the contributions the department makes towards whole school and cross-curricular priorities; provides a clear line of progression in both planning and delivery;
- demonstrates how curriculum content, teaching and learning and the use of assessment are organised; requires teachers to work together to plan a coherent programme; and helps teachers plan common activities, resources, & individual lesson plans.

Expectations of Long-Term Planning (LTP)

LTP will map the delivery of a course across an extended period (e.g. year or Key Stage), and will show the sequencing of the course, illustrating:

- time allocation of all units to ensure full coverage of curriculum requirements
- how this curriculum builds on previous Key Stages
- progression throughout the course, both in terms of skills and knowledge key assessment points as per school calendar
- interleaving of knowledge to support memory for learning

Expectations of Medium- Term Planning (MTP)

MTP will map the delivery of an individual unit across a defined period, and will reference:

- time allocation
- Key Concepts
- Learning Objectives and Success Criteria
- Essential activities for in-class/ home learning
- Additional activities for teachers to dip in to

- These activities are linked to high quality resources
- Wider skills coverage
- Formative/summative assessment
- DIRT

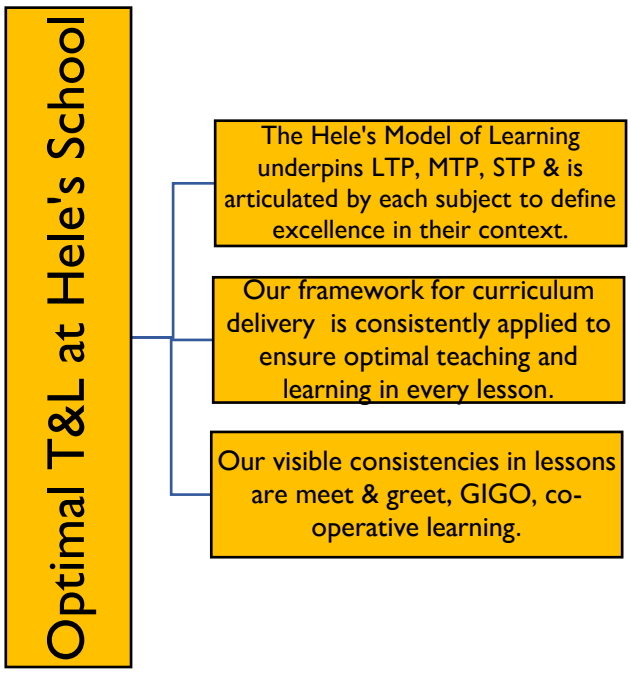
All Medium-Term Plans should be linked explicitly to a Knowledge Organiser

Short-Term Planning (STP)

All short-term plans (lesson plans) should have a core which have been planned collaboratively and reference:

- GIGO task foucsed on retrieval of prior knowledge relevant to the lesson
- Learning objectives/title
- The EEF symbols to show the 5 stages of a lesson
- Introduction
- Activate
- Explain
- Practise
- Reflect
- Essential agreed activates
- Essential core assessment tasks

Beyond this agreed format, teachers will adapt Short Term Plans to meet the needs of the individual students in front on them.



Framework	Hele's		
EEF	**Rosenshine's Principles of Instruction**	**What we do…**	**Why we do it…**
 **Introduction Meet & Greet**		• Meet student at the threshold and welcome them into the classroom • Students enter in silence • Check uniform and direct students to allocated seat in line with seating plan • Super 6 on desk and bags under desk • Students begin GIGO immediately	• We have a consistent routine where lessons begin safely • High expectations are established • No learning time is lost.
 **Activate (Review)**	Daily review Weekly & monthly review	• Retrieval-based GIGO is on the screen ready for the students when they arrive • Register during this time • GIGO should retrieve core vocabulary and knowledge for the lesson • GIGO should make clear links with previous learning and interleave topics	• Storage and retrieval strength are improved, and long-term memory is strengthened • Students can correctly use appropriate subject vocabulary and apply relevant subject knowledge • Students develop effective schema
 **Teacher Instruction/Explain**	Present new material using small steps Provide models Provide scaffolds for difficult tasks Ask questions Check for student understanding	• Present material using small steps • Limit the amount of material students receive at one time. • Give clear and detailed instructions and explanations • Think aloud and model step • Provide many examples • Ask focused questions to check for understanding • Ask students to explain what they have learnt • Check the responses of all students • Provide systematic feedback and corrections.	• To deal with the limits of working memory • To prevent errors becoming embedded as learned misconceptions • Help students form a clear schema and understand connections • To support students in becoming self-regulated • To check understanding and reframe/reteach "on the hoof" or provide more time to practice • By rehearsing their understanding and articulating what they have

			learnt, it will improve long-term retention
 **Deliberate Practice (Guided then Independent)**	Guide student practice Obtain high success rate Independent practice	• Provide a high-level of practice for all students • Guide students as they begin to practice • Use co-operative learning structures to help students rehearse, process and elaborate • Provide structured cooperative learning opportunities which promote oracy • Subject-specific reading opportunities are woven in • Provide scaffolds for difficult tasks • Vocabulary is visible and explicit • Prepare students for independent practice • Monitor students when they begin independent practice	• To form a strong schema • To minimise the chance of misconceptions forming • Students can't write something properly until they have said it properly • To improve long-term memory • Create a high-success rate to sustain motivation and engagement
 **Reflect**	Daily Review	• Plan opportunities for students to consider any changes they think they should make next time, whether the strategies they chose were effective and evaluate how effectively they completed the task	• To form a strong schema • To minimise the chance of misconceptions forming • To improve long-term memory • Create a high-success rate to sustain motivation and engagement

CHALLENGE AND EXPECTATIONS

"We establish what we establish." **Bill Rogers**

"High expectations should be tattooed inside our hearts for every child, until the minute they leave school for good—maybe not even then." **Tom Bennett**

Introduction

Having high expectations, communicating them and reinforcing them is a powerful feature of great teaching. By sweating the small stuff you show that you really believe that excellence is possible from everyone. If you don't expect them to be able to do it, they never will. Don't accept mediocrity; insist on excellent behaviour; pay attention to details of the subject content, delivering and expecting clarity and precision; push students to find even deeper levels of meaning.

Evidence Base

One consistent finding of academic research is that high expectations are the most reliable driver of high student achievement, even in students who do not have a history of successful achievement. Much of this research has been centred around the 'Pygmalion Effect", in which teachers are told that randomly selected groups of students have very high test scores and have the potential for high academic gains. Rosenthal and Jacobson have noted, "when teachers expected that certain children would show greater intellectual development, those children did show greater intellectual development". The Pygmalion Effect has found to be most pronounced where teachers start the school year with high expectations and build them in from the start. No one rises to low expectations. Having high expectations of every student and providing the necessary support needed to achieve that level is key to all students achieving to their best ability. Robert Bjork's concept of desirable difficulties suggests that introducing certain difficulties into the learning process can greatly improve long-term retention of the learned material. so, if we get the learning right, both memory, retention, and performance is improved. But learning is not easy, and both students and their teachers might resist - wishing for that simpler task, which requires minimal effort of brain power.

What does it look like?

How do you know if you are challenging your students enough? The only way to find the limits is to push students beyond them. Try a bit of deep-end challenge and see where they get stuck. If we establish that we expect high standards and reinforce them continually with tight routines in lessons characterised by rigour, depth, drive and a clear sense of purpose, that is what we get. If we establish that we will insist on polite, respectful interactions, listening to whoever is speaking and acting in a supportive, mature fashion, then students will learn the boundaries and respond. The pitch of your lesson is an expression of your expectations. If you set students the task of doing something gentle like a poster or title page you send a clear message that the expectation is low.

LITERACY

Introduction

The philosopher Ludwig Wittgenstein captured the fundamental importance of literacy when he wrote "the limits of my language are the limits of my world." Good literacy (the ability to speak, read and write) allows us to engage with and make sense of the world and society around us. There is an inescapable link between a person's level of literacy and their life chances. Their health and prosperity in life, whether academic, professional or social will be heavily influenced by their level of literacy. Consequently, the development of a child's literacy is the responsibility of every teacher.

Evidence Base

The National Literacy Trust estimates that around 7 million adults are functionally illiterate (defined as having a reading age of 11 years or less). In the words of the Trust "As a child they would not have been able to succeed at school, as a young adult they will be locked out of the job market, and as a parent they will not be able to support their children's learning"[1]. This then creates an intergenerational cycle of disadvantage in which the children of adults with poor literacy skills often join school with weaker literacy than their peers.

As children progress through school this disadvantage (often, but not always, coupled with related socio-economic factors) becomes more pronounced and results in a widening attainment gap. Students with good literacy skills progress more quickly while students with weaker literacy skills find it increasingly hard to engage with the curriculum.

The impact of this phenomenon, often referred to as the Matthew Effect[2], is most apparent in the latter stages of the curriculum where measures such as alternative provision, reduced timetables and Level 1 qualifications are used to ensure students (the majority of whom have weaker literacy skills) remain actively engaged in education. In short, we need to successfully develop the literacy of every student in every subject to keep the curriculum and the world open to them.

What does this look like?

If we accept the National Literacy Trust's definition of literacy as "the ability to read, write speak and listen well", we must also then accept that developing literacy requires a multifaceted, inter disciplinary approach. While every subject area is responsible for developing students' vocabulary within their discipline, this should take place as part of an evidence based whole-school approach. The Education Endowment Foundation report, Improving Literacy in Secondary Education (2019) made 7 recommendations regarding literacy teaching. The three highlighted recommendations should be implemented in all classes this year:

1. **Prioritise 'disciplinary literacy' across the curriculum**
2. **Provide targeted vocabulary instruction in every subject**

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[1] National Literacy Trust: Literacy and Life Expectancy (February 2019)

[2] "For to all those who have, more will be given, and they will have abundance; but for those who have nothing even what they have will be taken away." Matthew 25:29

    a. Key tier 2 and 3 vocabulary planned into medium- and short-term plans and knowledge organisers
    b. Explicit teaching of key tier 2 and 3 vocabulary using knowledge organisers and Frayer models
3. **Develop students' ability to read complex academic texts**
    a. Opportunities for guided academic reading plan throughout the curriculum in all subjects
    b. Control the Game used for all guided reading activities to ensure active participation
4. Break down complex writing tasks
    a. teachers break writing down into planning monitoring and evaluation and support students by modelling each step
    b. teachers provide suitable scaffolds for writing
5. Combine writing instruction with reading in every subject
6. **Provide opportunities for structured talk**
    a. cooperative learning strategies are planned and used to ensure talk is high quality and emphasised how talk can be subject specific
7. Provide high quality literacy interventions for struggling students

MEMORY FOR LEARNING

Introduction

Memory and learning are so closely connected that it is easy to confuse them with each other. Learning can be defined as "the retention and transfer of knowledge and skills" whereas memory is the ability to remember past experiences. You learn a new language by studying it, but you then speak it by using your memory to retrieve the words that you have learned. Memory is essential to all learning because it lets you store and retrieve the information that you learn.

Evidence Base

Thirty years ago, little was known about how memory works, but now we know a great deal. Psychologists and neurologists have divided memory into two broad categories: working memory and long-term memory. Long-term memory is often associated with arithmetic, such as recalling 5x7=35 or that the capital of France is Paris. Working memory is often thought of as a mental workspace that we can use to store important information on the course of our mental activities. However, whilst the capacity of our long-term memory is unlimited, our working memory can only process 3-5 pieces of information at a time.

Psychologists think about long-term memory as organised into schemas, or interconnected webs of concepts, facts, impressions and ideas. The most successful learning happens when students can piece the jigsaw together and see how their learning links together. Schemas ensure effortless access to basic facts and concepts that are repeated over and over in our subjects. Daniel Willingham says, "The more you know, the easier it will be for you to learn new things." This is the advantage that our students with good cultural/general knowledge have. We need to ensure we help build this for all.

Absence of a relevant schema means students must use less process-intensive strategies and because they can't chunk the material effectively, their working memory can easily become overloaded. Remember, our working memory can only hold 3-5 pieces of information at any one time, so we need to help students develop schemas to avoid their working memory being overloaded.

Research shows that when we transfer information from our working memory to our long-term memory, learning takes place.

What does it look like?

Daniel Willingham says, "Memory is the residue of thought". This means that students must be motivated and paying attention to their learning so that they process their learning. If they think about it and we challenge them, they'll remember it. If we make learning too easy, it'll be lost. This is known as desirable difficulties - the harder our brain works and the more we think, then the more we remember. Engagement and challenge are key, so cooperative learning strategies to encourage talk for learning are important.

STUDENTS AS PARTNERS IN LEARNING

Introduction

To develop students as partners in the learning process requires us to create a culture where opt-out is removed and students are trained to be self-regulated learners. They need to understand how they learn and confidently use strategies to plan, monitor and evaluate their work. Our most effective learners model these behaviours, but we need to model these explicitly for all students.

Evidence Base

The EEF Teaching and Learning Toolkit highlights that self-regulation approaches have consistently high levels of impact, with students making an average of seven months' additional progress.

These strategies are usually more effective when taught in collaborative groups so that learners can support each other and make their thinking explicit through discussion.

The potential impact of these approaches is high but can be difficult to achieve in practice as they require pupils to take greater responsibility for their learning and develop their understanding of what is required to succeed.

The evidence indicates that teaching these strategies can be particularly effective for low achieving and older pupils.

What does it look like?

- This work is multi-faceted and includes:
- Teachers modelling what to do and how to do it
- Teachers modelling their thought-processes and choices
- Live modelling
- Providing opportunities for students to reflect on what worked, what didn't, the reasons for this and next steps
- Co-operative learning structures used to avoid opt-out
- An expectation that all students respond to the feedback and take ownership of improving

PART TWO

EXPECTATIONS OF HELE'S STAFF

In this section, we outline what is expected of every teacher at Hele's School. Departments may use their own individual systems and strategies but by adopting a consistent approach to cooperative learning, marking, DIRT, assessment and home learning, we can be consistent in expecting the best from our students.

COOPERATIVE LEARNING

Introduction

Cooperative learning is a structured approach to learning that is designed to actively engage every student.

'Structures' are a content free set of repeatable steps that organise the interaction of students with the lesson content, each other and the teacher. All students should benefit from the coaching, encouragement and feedback that cooperative learning provides.

Evidence Base

The Education Endowment Foundation have found that over 40 years evidence about the benefits and impact of cooperative learning has been consistently positive if done well. Effective cooperative learning requires well-designed tasks, which promote talk and interaction between learners to result in the best gains.

What does it look like?

Cooperative learning structures are based on the following principles (PIES):

- Positive interdependence – students need each other to complete the task, the success of one is linked to the success of the other.
- Individual accountability – each student is accountable for their own contribution; they cannot hide behind teammates.
- Equal participation – everyone must participate, there is no opt-out.
- Simultaneous interaction – many students are participating at once maximising positive outcomes in cooperative learning.

Further resources can be found on the T: drive → Cooperative Learning.

GREEN PEN MARKING AND DIRT

Staff will adopt the following consistent practice:

- **WWW** (what went well) - comments on the progress in line with learning outcomes or praise comment.
- **EBI** (even better if) - comments on what to do to improve or achieve their next steps in learning. Students often find this useful when this is phrased as a question.

Green pen marking and DIRT are expected to enable learners to improve their work, to apply the feedback in a new context or to improve substandard work.

GPM during DIRT time is a crucial part of the learning process and ensures that self/peer/teacher assessment has maximum impact.

Students use it most effectively when they are reminded of its value (i.e. to make progress and practice their improvements) rather than seeing it as a task. We need to remind them that it takes practice to achieve quality.

> *"It's how professional writers, artists, scientists produce excellent work in the real world. They take more care over their work; they understand that progress is earned step by step through the progress of action and reflection; and they develop competence and self-esteem by comparing the progress they have made from their early drafts to the finished work".*
>
> **Griffith and Burns, Teaching Backwards**

SELF AND PEER ASSESSMENT

We recognise the value of learners assessing both themselves and their peers as part of the wider programme of assessment for learning:

- Ensures student engagement in learning dialogue
- Forces students to proofread their work before handing it in
- If students have meaningful success criteria, it enables then to 'think like an examiner', thereby better understanding what is required of them

HOME LEARNING

> *"The evidence shows that the impact of homework, on average, is five months additional progress."* **Education Endowment Fund.**

Home learning is a critical part of delivering the curriculum and needs to be treated as such. It is not an optional extra (for either staff or students). Used effectively, it can aid students' understanding of a subject, allow students to explore certain aspects of the subject in a bit more depth, and develop students' research skills.

More importantly, however, setting home learning is one of the main ways in which a school can instil a sense of self-motivation in its students and recognition that schoolwork is done both at school and at home.

Successful students will be those who put in the hours at home as well as at school. Setting regular home learning right from the start of Year 7 is vital if we are to create a work ethic in students that encompasses both work which is undertaken at school and work done at home.

Our belief:

Home learning is an intrinsic part of education and allows students the opportunity to pursue learning independently. As well as supporting subject specific knowledge, home learning enables students to develop skills and habits essential to making good progress. We believe that home learning should be a valid and relevant activity, which allows students to build their knowledge, move their understanding forward and build retrieval strength from their long-term memory. Staff should have the freedom and flexibility to set home learning as appropriate within a sequence of lessons, but mindful of the timetable below.

Time Allocations

<table>
<tr><th colspan="2">KS3</th><th rowspan="2">KS4</th><th rowspan="2">KS5 Advanced Courses</th></tr>
<tr><th>Maths, Science, English, MFL</th><th>All other subjects (excluding PE)</th></tr>
<tr><td>1 home learning task of up to 30-40 minutes per week</td><td>1 home learning task of up to 30-40 minutes per fortnight</td><td>All examined subjects to set a weekly home learning task of up to one hour</td><td></td></tr>
<tr><td colspan="4">Effective learners should accept challenge and take opportunities to extend tasks or take on those with greater demand.</td></tr>
<tr><td colspan="4">The setting and submission of all home learning should be recorded on ClassCharts.</td></tr>
</table>

Expectations:

- Set according to the guidance above
- Record on ClassCharts
- Ensure it is a valid activity with robust learning objectives that will move learning forward for the individual pupil.
- Give clear guidance as to the length of time the activity should take and the location of any resources necessary to complete the activity.
- Give a clear deadline by which the work should be completed, which will not be the next day, unless in exceptional circumstances.

Pupils

- Check ClassCharts daily for homework set.
- Spend the appropriate amount of time and effort on the given task.
- Ensure Home Learning is handed in by the deadline set.
- Improve work by responding to feedback given.
- Seek help or assistance if stuck or unsure, before the deadline.
- Take responsibility for completing the work set.

Parents

- Check ClassCharts to confirm home learning set and deadlines.
- Take an interest in the work being set for their child and talk to them about their learning.
- Provide a suitable environment for home learning to be completed.
- Feedback any issues related to the completion of home learning, either to the specific member of task, or to the tutor.
- Support the school in light of any sanctions in regard to the non-completion of homework.

If homework is not fully completed or the standard is not acceptable, the teacher marks as 'not submitted' in ClassCharts (Single click on each student) and issued a behaviour point by using 'award all not submitted' for homework not completed/handed in.

The behaviour point will automatically create a 1-hour detention - the date is set by the teacher. I a student already has a detention; it will notify them of a clash. This will email parents to let them know of the date and time

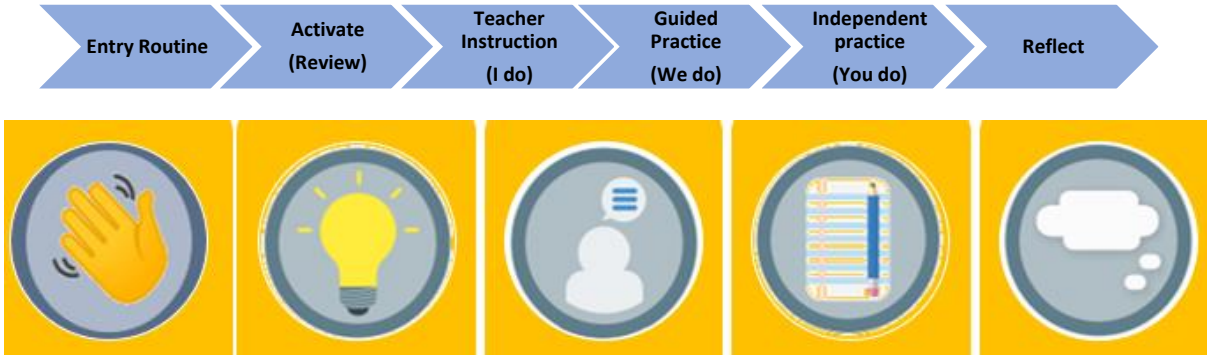
PART THREE

CURRICULUM IMPLEMENTATION

In this section we look closely at the delivery of lessons within the Hele's School curriculum. While the saying "You can't Rosenshine your way out of a bad curriculum!" is true, there is no point in investing time and resources in an excellent curriculum only for it to be wasted through inconsistent and sub optimal delivery in classrooms. This section represents our current thinking regarding optimal lesson delivery. You will find explanations and evidence relating to Barak Rosesnshine's Principles of Instruction alongside examples of how they can be applied in lessons.

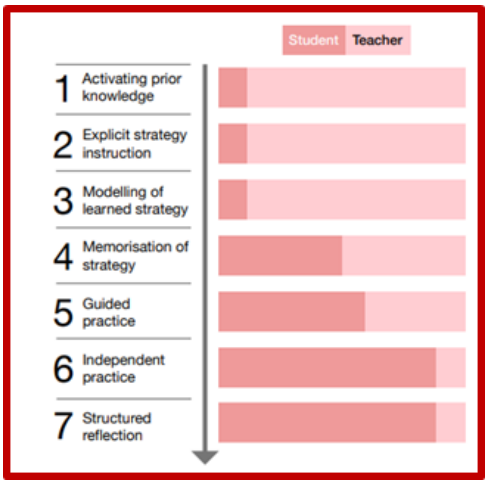
Over the next few pages, you will see several references to a resource called Walkthrus. Walkthrus is a collection of 50 strategies which address common issues and situations that arise in lessons. Copies of the Walkthru book can be found in the library and downloadable copies can be found in the Hele's School CPD Team on MS Teams.

Hele's School Framework for Curriculum Implementation



EEF Structured Support for Independent Learning

This teaching and learning process also mirrors the recent guidance from the EEF on fading teachers' support to increase students' self-regulation[3]:



[3] EEF Guidance Report "Metacognition and Self-regulated Learning"

DIRECT INSTRUCTION

It goes without saying that the teacher is the defining factor in a successful lesson. Brophy and Good (1984 & 2008) identified a key characteristic of the more effective classrooms as "active teaching" involving students being taught or actively supervised rather than left to work on their own. They identified frequent phases when the teacher "presents and develops concepts through lecture and demonstration", gives practice examples, monitors progress *before* assigning independent work and then providing feedback and reteaching where necessary[4]. They also found that students made greater gains when:

- They were taught by business-like teachers who focus on academic content and activities
- Teachers regularly monitor the classroom, scan the room and nip problems in the bud before escalation (they do not sit at the desk whilst students work on a task)
- Teachers achieve a high success rate when students answer the teachers' questions or complete activities (about 75% for questions and 90-100% for seatwork activities). This is achieved by breaking the learning down into manageable chunks (i.e. small steps)

Direct Instruction was first defined by Englemann and Becker but over recent years, this work has been popularised by Tom Sherrington in *Rosenshine's Principles in Action*[5], which draws on the work of Barack Rosenshine, an American Professor of Educational Psychology. This is recognised by the Sutton Trust (organisation behind the Education Endowment Fund) as a practice "supported by robust evidence of positive impact on student learning".[6]

The recent EEF review[7] on cognitive science concluded, "there is consistent evidence that well targeted scaffolds, guidance and schema-based support are effective to support students to solve problems or learn from complex tasks". It is for these reasons that teacher instruction is identified as a key strand of the Hele's Model of Learning because it ensures effective curriculum delivery. This approach is optimal when it is planned as part of every lesson phase, so that students are guided through the process of:

Teacher delivers key information and modelling what you want them to learn

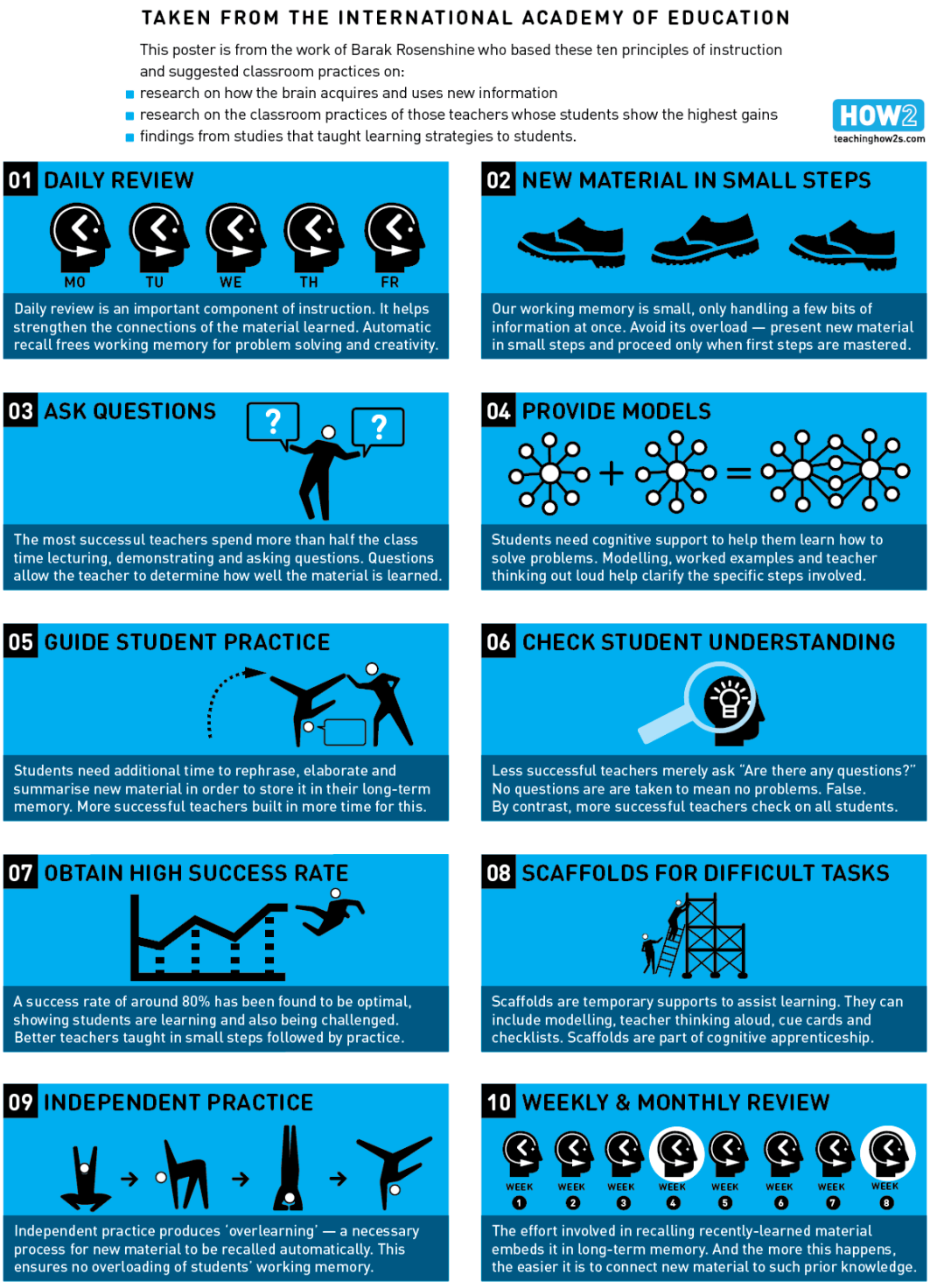
Teacher completes the example with students help. Students complete example with teacher help.

Students are provided with many opportunities to practise on their own, with increasing difficulty.

[4] Ashman,G., 2019 *The ResearchEd Guide to explicit and direct instruction p30*
[5] Sherrington, T,. 2019 *Rosenshine's Principles in Action*
[6] Suttontrust.com 2014
[7] EEF, *Cognitive Science Approaches in the Classroom: A Review of the Evidence* 2021

ROSENSHINE'S PRINCIPLES OF INSTRUCTION

Oliver Caviglioli[8] has produced this excellent visual representation of Rosenshine's 10 Principles of Instruction:



[8] Oliver Caviglioli, *International Academy of Education*,

PRINCIPLE 1: DAILY REVIEW

> *" … involve students in retrieving their existing schema, making as many connections as they can to new information. This doesn't happen if lessons are too task dominated – getting things written down neatly in books that aren't properly understood." Sherrington*

Long-term memory as organized into schemas, or interconnected webs of concepts, facts, impressions and ideas. Schemas ensures effortless access to basic facts and concepts that are repeated over and over in our subjects.

Daniel Willingham[9] says, "The more you know, the easier it will be for you to learn new things." This is the advantage that our students with good cultural/general knowledge have. We need to ensure we help build this for all.

Absence of a relevant schema means students must use process-intensive strategies and because they can't chunk the material effectively, their working memory can easily become overloaded.

Remember: working memory can only hold 3-5 pieces of information at any one time so, we need to help students develop schemas to avoid their working memory being overloaded.

Curriculum Planning

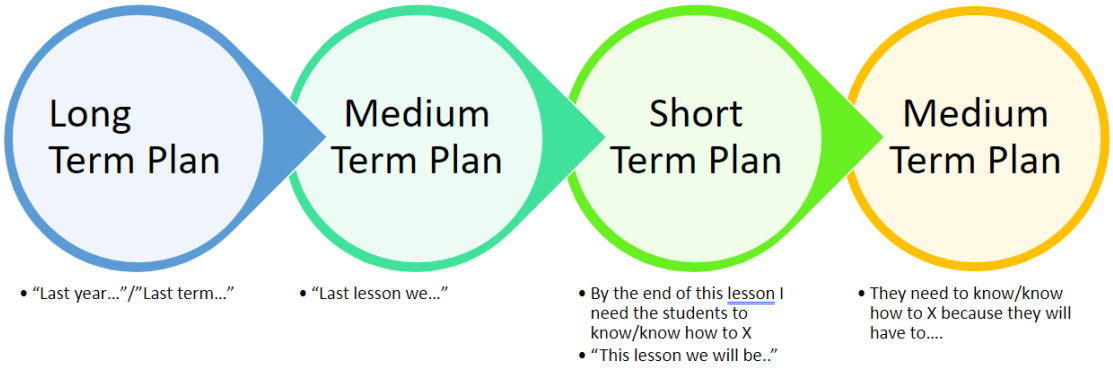
Planning our curriculum so that students build a coherent web and encounter the building blocks of knowledge in a logical order is vital. Our job as curriculum leaders and teachers is to ensure and check that this web is coherent and secure. It is important to note, that students can form incorrect schema if foundational knowledge is not secure or misconceptions are not addressed.

Our lessons need to provide opportunities to activate what students have previously learned and explicitly link it to new knowledge. This helps new learning "stick" in the long-term memory.

How do we make explicit links between prior and subsequent knowledge?

Step 1: At the planning stage:

[9] WIllingham



Step 2: Script/plan explicit verbal cues to make concrete connections between the prior knowledge and the current lesson

- "Last lesson we looked at…."
- "This lesson we are going to look at…"
- "Before we get started…"
- "And this is what I'm going to teach you today…"
- "You'll see why in a moment…"

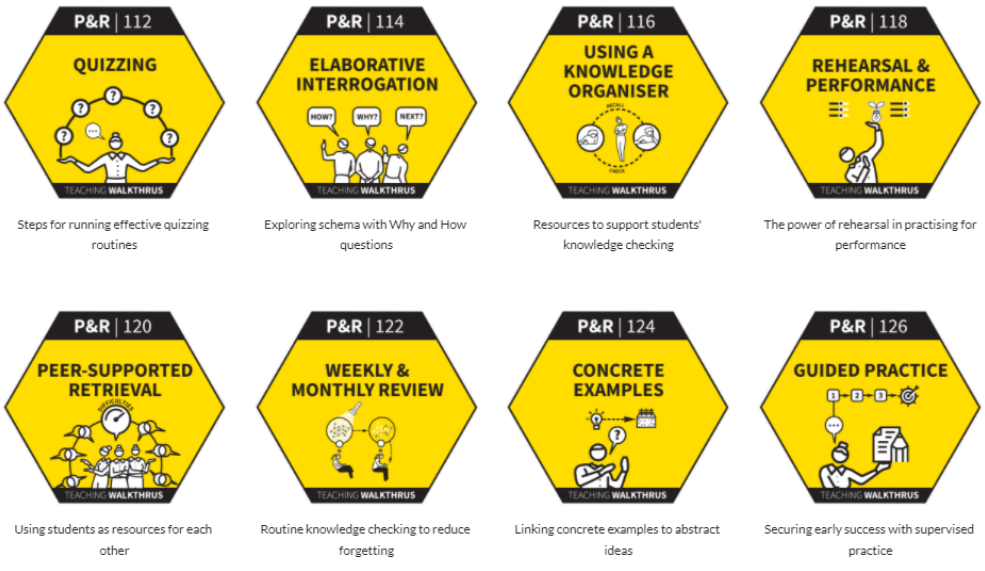
Step 3: Plan GIGOs to ensure students activate prior foundational knowledge to which the new knowledge will connect and revisit key Tier 2/3 vocabulary that will be used.

Check this knowledge is secure before progressing with the lesson

We should be aiming for approximately an 80% success rate before moving on.

If they haven't secured the foundational knowledge, then there is nothing for the new knowledge to "stick" to and students' working memory will be overwhelmed.

Relevant WalkThrus

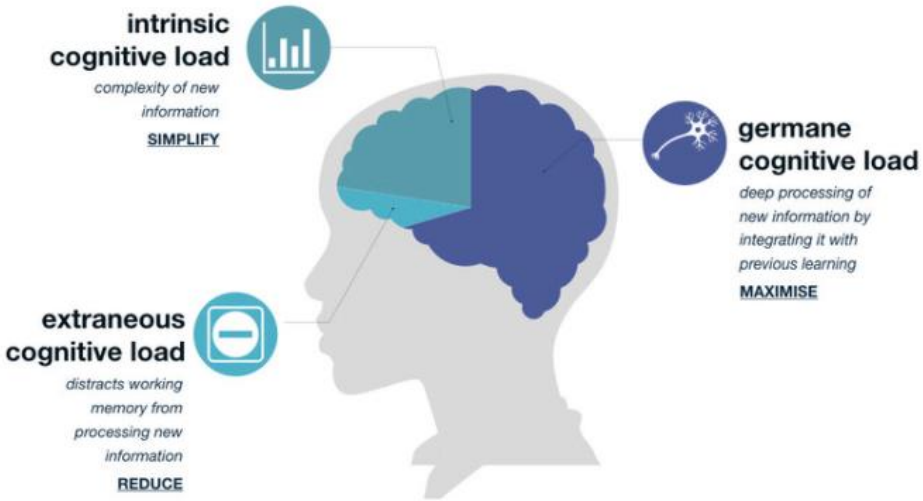


PRINCIPLE 2: PRESENT NEW MATERIAL IN SMALL STEPS

Kircshner, Sweller & Clark's[10] cognitive load theory highlights that there is a limit to how much new information the human brain can process at one time. However, it also emphasizes that there are no known limits to how much *stored* information can be processed.

Teachers need to reduce the demands on working memory by:

- Simplifying the complexity of new information
- Reducing distractions
- Maximising opportunities for deep processing of new learning and integration with previous learning



Psychologists talk about the "curse of knowledge": things that seem simple to experts can be complex to novices. As subject experts it is important to debate and agree the **best** way to explain knowledge, concepts and techniques. Different wording may seem trivial to an expert teacher but can create a significant barrier to novice learners.

[10] *Cognitive load theory: Research that teachers really need to understand*, Centre for Education Statistics and Evaluation, 2017

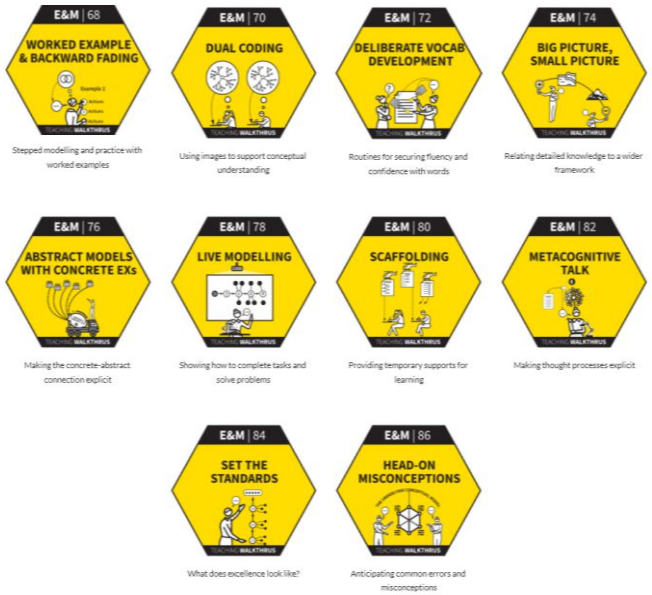
What is the Wording Principle?[11]:

- Use the same vocabulary and definitions across the department – avoid lots of synonyms in the initial delivery
- Do your definitions match your Knowledge Organisers?
- Are you modelling how to talk like an expert?
- Is your communication clear and precise?
- Are you explicitly teaching high leverage/high frequency Tier 2 vocabulary using a Frayer model?

Rosenshine provides a structure to help teachers deal with this by "chunking" information into small steps:

- First, clearly define the new knowledge
- Script the stages of the process, "First, we need to…Then…Finally, we…"
- Limit the amount of information that students receive at one time
- Give them time to practice
- Break a task down into a set of instructions. Whether this is baking a cake, constructing a paragraph or deconstructing the process of composition in art.
- Start with the big picture (zoom out), then break it into component parts (zoom in) adding further detail, but remember make the connection with the big picture very explicit, zoom in and out step by step

Relevant Walkthrus



[11] [11] Ashman,G., 2019 *The ResearchEd Guide to explicit and direct instruction*

PRINCIPLE 3: ASK QUESTIONS

Questioning is central to high-quality teaching. The work of many educational researchers including Rosenshine, Lemov and Wiliam highlight that the most effective teachers spend a significant amount of time lecturing, demonstrating and questioning to ascertain if knowledge has been learned.

The most effective strategies[12] link closely with our Hele's Model of Learning and students as partners in learning:

Strategy	Objective	Practice
Cold calling TLAC	To ensure all students are engaged during teacher instruction	No hands up! Pose the question, give think time, then select a student to answer. ***This should be the default form of questioning in all classrooms.***
No opt-out TLAC	To ensure students feel safe to answer but if they don't know or are wrong, they should be given opportunities to gain in confidence. Students shouldn't allowed to form the habit of saying "I don't know"	If students get an answer wrong, completely or partially, move to other students but then return to those who didn't know or made errors and give them the chance to state the right answer. This challenges the "I don't know" defence and hope of being left alone".
Say it again, say it better	Articulating new learning is tricky and initial ideas are often half-formed. This provides opportunities for students to think aloud, formulate thoughts but then improve their answers.	Thank the student for the initial answer but ask them to say it again better and suggest prompts: Add … Link to …
Timed, pair, share	To ensure students get time to think, rehearse initial thoughts, admit lack of knowledge and prepare good answers. It prevents hogs and logs!	• Give the topic/question and tell the students how long they will have • Give a few seconds of think time • Tell the students who is going first • Partner A share & Partner B thanks • Partner B share & Partner A thanks

[12] P28 Sherrington, Rosenshine Principles in Action

Whole-class response	It is helpful to get the response of everyone to ensure teaching has been successful and they have all "got it" before moving on.	Use MWB.
Probing	To ensure connections have been made and explore a student's schema. A series of questions to separate students doesn't achieve this.	Ask students 4-5 questions before moving on: • *Why do you say that?* • *Can you give me an example?* • *Why do you think that is?* • *Is there an alternative way?* • *How did you work that out/come to that conclusion?*

Relevant Walkthrus

Selecting students to answer; involving everyone in thinking

A routine for structured discussion

An effective all-student response technique

A key question: What have you understood?

Generating improved verbal responses

Questioning as a set of probing exchanges

How do we know what we know?

Elements of effective formative feedback

Five ways to make feedback productive

Giving feedback to a whole class at once

PRINCIPLE 4 PROVIDE MODELS

It can be tempting after presenting material in small steps (Strategy 1) to move to students practising independently. Whilst this might be tempting and appropriate on some occasions, students need the "we" part of guided practice to help them move from novice to expert.

Sherrington talks about the importance of an extended handover in his blog[13] and gives an example to illustrate a common mistake:

> *Some of the most interesting discussions I've had with teachers in recent times have been about the challenge of making modelling work so that students all learn to do the things they are modelling. In one case it was in English. The teacher found it frustrating that, despite feeling she was doing the 'right things' in her modelling, several students still couldn't get going. Over a series of instructional coaching discussions we identified what was happening. If you had a video of her alone, you'd see a teacher giving a really clear exposition of how to write the paragraph in the form required. As a knowledgeable adult writer, it made total sense to me. But, if you were to see it through the eyes of one of the struggling students, it was like a novice dancer watching an expert: impressive but overwhelming. Put simply, there were too many steps to learn all at once. Initially the teacher had asked the class to copy down the exemplar as she live modelled it – but we identified that in doing this, students were not mentally engaging with her explanatory talk; they were just focused on copying the words correctly. Not enough thinking was being done. She changed approach, broke it down into even smaller steps and got students to discuss and then practise their own version of each small step – phrase by phrase. It took longer but the results were far better.*

Teacher delivers key information and modelling what you want them to learn

Teacher completes the example with students help. Students complete example with teacher help.

Students are provided with many opportunities to practise on their own, with increasing difficulty.

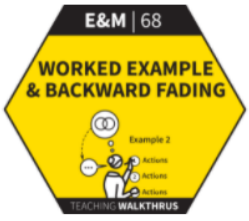
Modelling provides a highly-effective way for novices to understand the thought processes and the excellence we are aiming for. Here are 5 high-impact strategies identified by Adam Riches[14] :

[13] https://teacherhead.com/2020/11/28/the-art-of-modelling-its-all-in-the-handover/

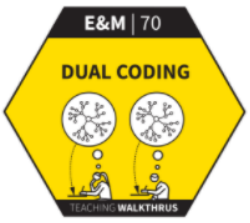
[14] Sec-ed.co.uk Effective teacher modelling

- Live modelling – watching a teacher do what is expected of students, and doing it well, allows students to see how an answer can be produced in the time. Students are able to see step-by-step how to complete the task and by narrating each step, students understand the strategies and thought-processes. Visualisers are great for this
- Organise the information – modelling can help students create well-structured schema through teachers showing students how information can be sequenced, connected and arranged in patterns
- Knowing what "excellence" looks like – a high-quality model can help students see what they should be aspiring to
- Pre-planning to avoid misconceptions – experienced teachers know the common mistakes and misconceptions. These can be planned for, highlighted to help students avoid them
- Modelling success and failure – using incorrect models can be good for discussion, analysis and to determine the understanding of students. NB: it is vital that the incorrect elements are clearly communicated after the task

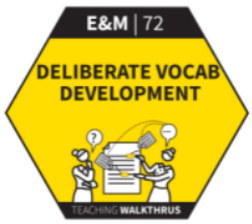
Relevant Walkthrus



Stepped modelling and practice with worked examples

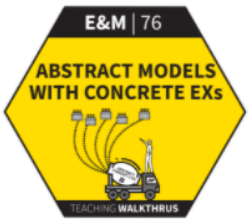


Using images to support conceptual understanding

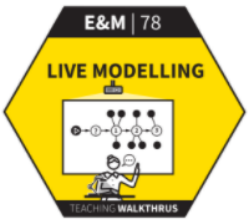


Routines for securing fluency and confidence with words

Relating detailed knowledge to a wider framework

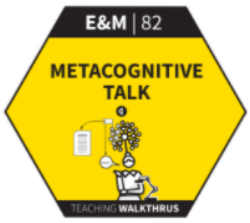


Making the concrete-abstract connection explicit



Showing how to complete tasks and solve problems

Providing temporary supports for learning



Making thought processes explicit

What does excellence look like?

Anticipating common errors and misconceptions

PRINCIPLE 5: GUIDED STUDENT PRACTICE

Guided practice is one of Rosenshine's fundamental principles and states that "successful teachers spend more time guiding students' practice of new material"[15]. Central to this is students achieving high-success rates (about 80%) to build confidence.

This phase of the lesson must involve teacher circulation to provide live feedback and reteaching when misconceptions arise. If misconceptions arise at this stage it can lead to faulty schema being developed and embedded.

Vital to this stage of the lesson is the judgement of the expert teacher of when to continue to provide scaffolding and further practice for those who are struggling or move more fluent students on to independent practice.

In Sherrington and Caviglioli's *Teaching Walkthrus*[16], the phases of guided practice are clearly articulated:

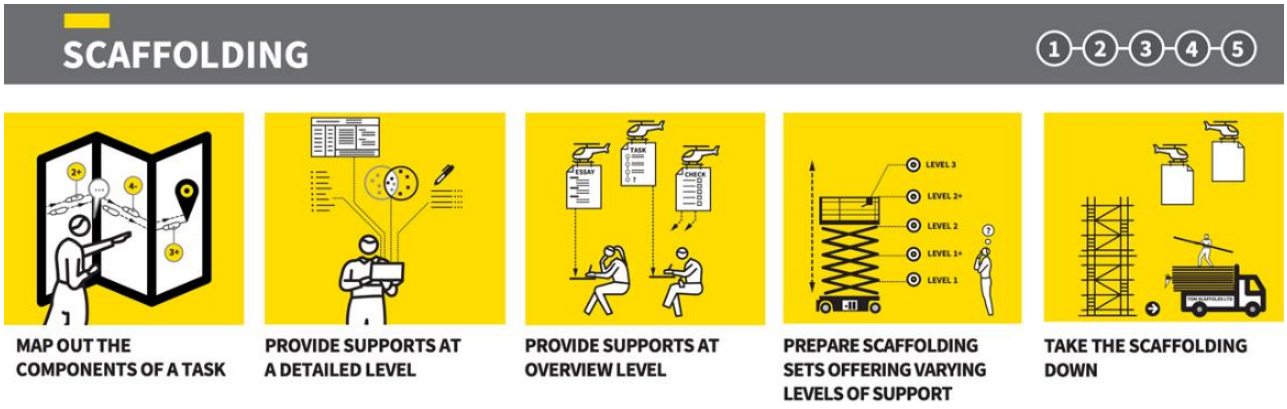
Further exemplification of each step can be found in *Walkthrus*, but it is important to highlight the following points:

1. Co-operative learning structures are ideal for this phase of the lesson because they help students to rehearse, rephrase, elaborate and summarise new information, all of which helps to embed it in students' long-term memory. Teachers should circulate during this time and address any misconceptions

2. A high level of repetition helps to build fluency and automaticity of recall**,** which is vital for long-term retention and development of schema

[15] American Educator, 2012. Principles of Instruction p12-39
[16] Sherrington & Caviglioli, *Teaching Walkthrus*, p126-7

3. Careful thought is needed at this stage to how you will move a class or individuals from guided practice to independent practice at the appropriate time



4. Fading[17] to remove scaffolding needs to be carefully considered in curriculum planning and by individual teachers.

[17] Sarah Cullen, *Explicit & Direct Instruction*, ResearchED

PRINCIPLE 6: CHECK STUDENT UNDERSTANDING

This aspect of Teacher Instruction also links back to **Strategy 3: Ask Questions.** It is central to high quality direct/teacher instruction so it's no surprise that Lemov in *Teach Like A Champion* [18]also provides teachers with several useful strategies to optimise this aspect of practice:

- **Reject self-report** – replace functionally rhetorical questions with more objective forms of impromptu questioning
- **Targeted questioning** – ask a series of carefully chosen, open-ended questions directed at a strategic sample of the class and executed in a short-time period
- **Standardize the format** – streamline observations of students by designing materials and space so that you're looking in the same, consistent place every time for the data you need
- **Tracking not watching** – be intentional about how you scan your classroom. Decide specifically what you are looking for and remain disciplined about it in the face of distractions
- **Show me** – flip the classroom dynamic in which the teacher gleans data from a passive group of students. Have students actively show evidence of their understanding
- **Affirmative checking** – insert specific points into your lesson when students must get confirmation that their work is correct, productive, or sufficiently rigorous before moving on to the next stage

Sherrington highlights for Rosenshine the importance of **Principle 1** (Presenting the Material in Small Steps) because if the teacher checks for understanding after each step, and a misunderstanding has formed, they only need to re-teach that aspect of learning. However, if student understanding is routinely checked until the end of a teaching episode, then if a misconception occurred early on the students' schema needs to be dismantled and rebuilt.

In *Teaching Walkthrus*[19], the following 5 steps help ensure teachers do not assume that students have understood before moving on

1. Cold call. Ask WHY not IF
2. Probe with a short dialogue
3. Follow up with more checking dialogues
4. Explore differences and details
5. Re-teach, defer or move on

[18] Doug Lemov, *Teach Like a Champion*, 2015 p27-57
[19] Sherrington & Caviglioli, *Teaching Walkthrus*, p96-97

Doug Lemov | HUNTING NOT FISHING

When you call on students and have no idea what they will say, that's fishing. You hope you get a useful answer for discussion or analysis, but you don't know what you'll get. Nothing wrong with fishing–sometimes it's nice to be surprised–but sometimes it can be better to hunt–to assign written reflection before discussion and to circulate during the discussion to choose specific students to call on to share because their answers will be most productive to discuss (often because they developed a key idea or made a common mistake everyone can learn from). It brings a whole new level of intentionality to discussions.

Responsive Teaching

How responsive teaching can have the biggest impact on learning?

Adapt teaching based on what student are thinking during each lesson.

Know what every student is thinking
Adapt teaching accordingly.

Going on the hunt is active observation. It is not just about taking notes. It is deciding what you should see and whether you see it. It is thinking about the mistakes that might occur and being ready to respond rapidly.

To observe effectively you must think through what you are going to look for, identifying it and going on the **'hunt'.**

*What might **Responsive Teaching** look like?*

Live Modelling

I might chose to produce a model live in the lesson, whilst narrating the steps.

I might present a piece of students work and use targeted questioning to receive feedback that works as a tool for students to then self reflect and self improve the work they have produced.

I might take the students through a task, step-by-step, to ensure it is completed correctly and or common errors that have been made are explained. It is harder for students to unlearn something that is embedded in their long term memory.

Questioning techniques such as cold call, probe, no opt out

Using cold call strategically can quicken the process of understanding and remembering. Cold call isn't targeted randomness.

- I might select to cold call a student that has made a common misconception. This promotes debate/discussion/response.
- I might cold call a student that has given most of what I am looking for in their work. This allows me to probe others for more, stretching the thinking and quality of feedback I receive.
- - I might cold call a student that has shown they are 100%. This recognises the standard that is expected from the class.
- My strategy will vary dependent of the context, but however I do it the aim is to efficiently encounter and close the gap in knowledge.

The identified gap(s) in knowledge are encountered and addressed straight away. Students will improve their understanding, encounter the correct method/knowledge/skill/definition etc. and will be in a stronger position to move on

Retrieval & Practice Planned Activity

It is a practical solution to students forgetting something.

- 5 minutes maximum
- Be precise with questions
- Use elaboration (connecting to other pieces of knowledge/ideas, reflecting and expanding on it as you practice and review it.

Retrieval & Practice planned to focus on precise knowledge to ensure it sticks in students memory and they can recall it at a later date.

Hunt not Fish

Actively observing the class

- Deliberately scan the room
- Plan your circulation (you know your class)
- Note findings from your hunt
- Provide live feedback to scaffold support
- Promote positive attitude to learning

Gain knowledge from your active observation to assess what students understand, what they don't understand, common misconceptions, unplanned misconceptions, SPAG errors.

Respond Now

Respond with your findings

- Feedback to the class
- Live modelling
- 'Show me' with your whiteboards
- Cold call and probe
- Use elaboration

The identified gap in knowledge has been encountered straight away. Students will have a better understanding and are in a stronger position to move on.

Hunting | Circulate the room with purpose

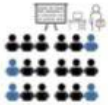
Active observations to close gaps and support retention of knowledge

It is crucial that you are 'hunting' for what your students understand.

What knowledge have they recalled?

Have they been able to elaborate on this?

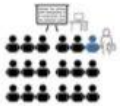
Can they apply context, follow the correct method, analyse, explain?



Now let's be strategic with how we are doing this…

Your seating plan is critical to the success of this. It will make the **'hunt'** more efficient and effective.

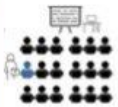
The **blue students** are in strategic positions to give me as the teacher a statistical sample of the room. I have used four students for the purpose of this example. It can and probably will vary.



The **first student** I encounter is a student that struggles with the work.

They potentially need a prompt/reminder

They have potentially made a mistake that would be common across the group.



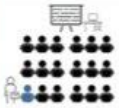
The **second student** I encounter is often typical of the group. I know this from:

Work produced in their books

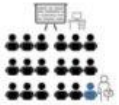
Answers given in class

Performance in assessments

Ability to retain and recall knowledge.



The **third student** I encounter is also often typical of the group. This reaffirms what I have found from student two.



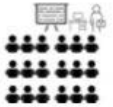
The **fourth student** I encounter is a high performer. I know this from:

Work produced in their books

Answers given in class

Performance in assessments

Ability to retain and recall knowledge.



As you have circulated the room with your active observation you are testing your initial thoughts of how the students are doing.

By the third or fourth student you should have the information to know what you are going to do about what you have found.

Respond with your findings

The identified gap in knowledge has been encountered straight away. Students will have a better understanding and are in a stronger position to move on. You can do this by using the following techniques:

Live Modelling (visualiser)

Questioning techniques such as cold call, probe (no opt out)

At Co-op Academy Swinton we strive to ensure that all students regardless of their background, achieve their potential. We are committed to opening doors and providing opportunities for our students to secure their next step and encourage them to be ambitious.

The 'Ways of Being' are embedded in all that we do within the academy and the community. We build our culture on trust and respect.

Be yourself, always | Do what matters most | Show you care | Succeed together

PRINCIPLE 7: OBTAIN A HIGH SUCCESS RATE

Major research studies[20] have shown that the most successful teachers obtain high success rates because this enables students to build confidence, reinforce correct knowledge but also builds in a degree of challenge. This is known as "desirable difficulties"[21].

The research also suggests that the optimal success rate for student achievement appears to be about 80%

A higher success rate also ensures that students are not practising and learning errors, because one this has happened it can be harder to undo.

What are the implications for the classroom?

- Plan GIGOs so that students can confidently retrieve around 80% - this may be slightly lower at the beginning of the unit but rise to almost 100% by the end!
- Ensure secure prior or knowledge before presenting new material. Have the confidence to stop and go back to secure prior knowledge before moving on
- Avoid presenting too much information at once because this is likely to lead to lower success rate
- Make sure that students are not practising errors because otherwise, this will become embedded in their schema
- Challenge errors and misconceptions as soon as they occur
- Check regularly to avoid errors and misconceptions occurring

Lemov[22] refers to this in his techniques for "Acting on the Data and the Culture of Error":

- **Technique 7:** Plan for Error – increase the likelihood that you'll recognize and respond to common errors by planning for common mistakes in advance
- **Technique 8:** Culture of Error – create an environment where your students feel safe making and discussing mistakes, so you can spend less time hunting for errors and more time fixing them
- **Technique 9:** Excavate Error – dig into errors, studying them efficiently and effectively, to better understand where students struggle and how you can best address those points

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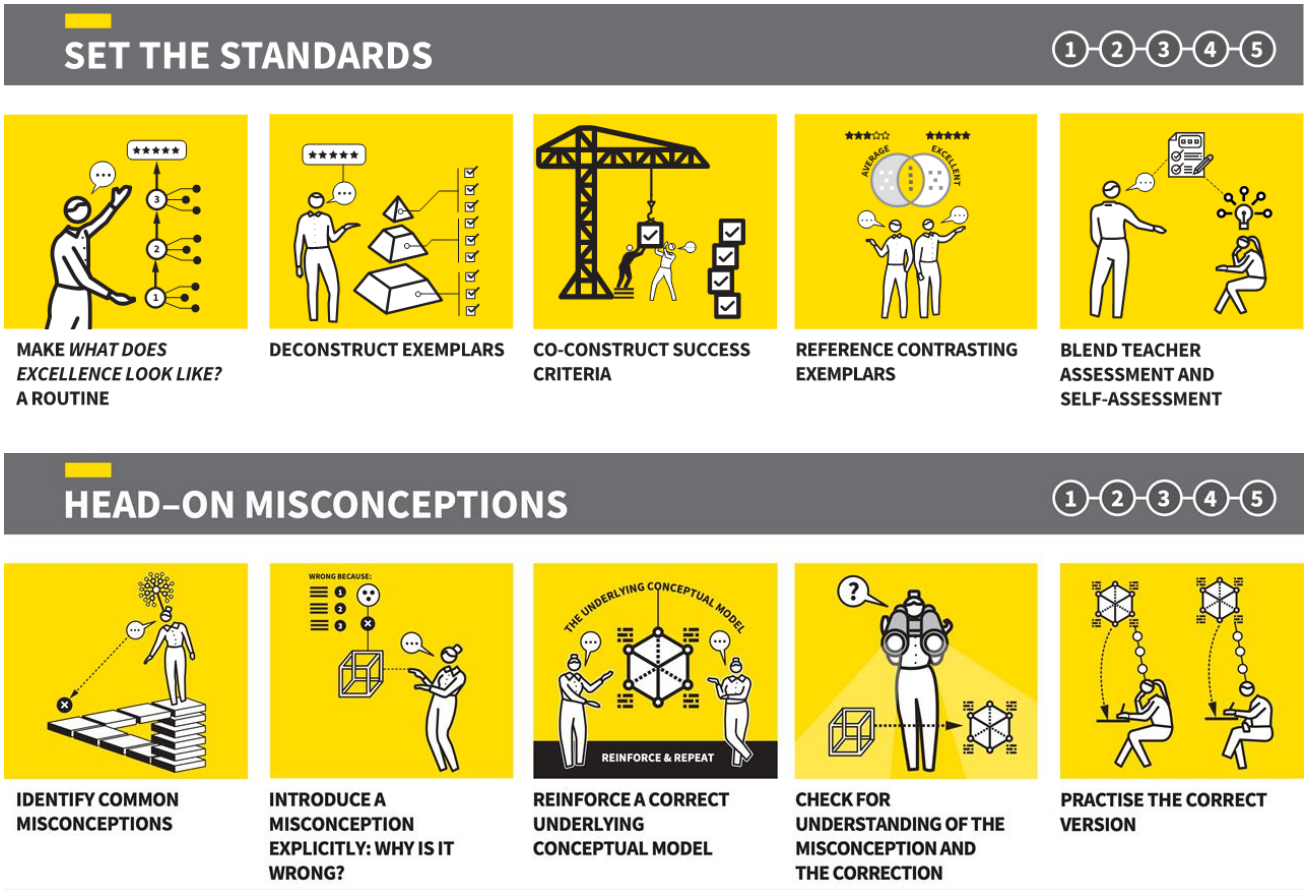
[20] Sherrington, *Rosenshine's Principles of Instruction*, p73

[21] R.A & E.L Bjork, (2020) *Desirable difficulties in theory and practice, Journal of Applied Research in Memory & Cognition*

[22] Doug Lemov, *Teach Like a Champion* 2015, p57-80

- **Technique 10:** Own and track – have students correct or revise their own work, fostering an environment of accountability for the correct answer

Relevant Walkthrus



PRINCIPLE 8 SCAFFOLDS FOR DIFFICULT TASKS

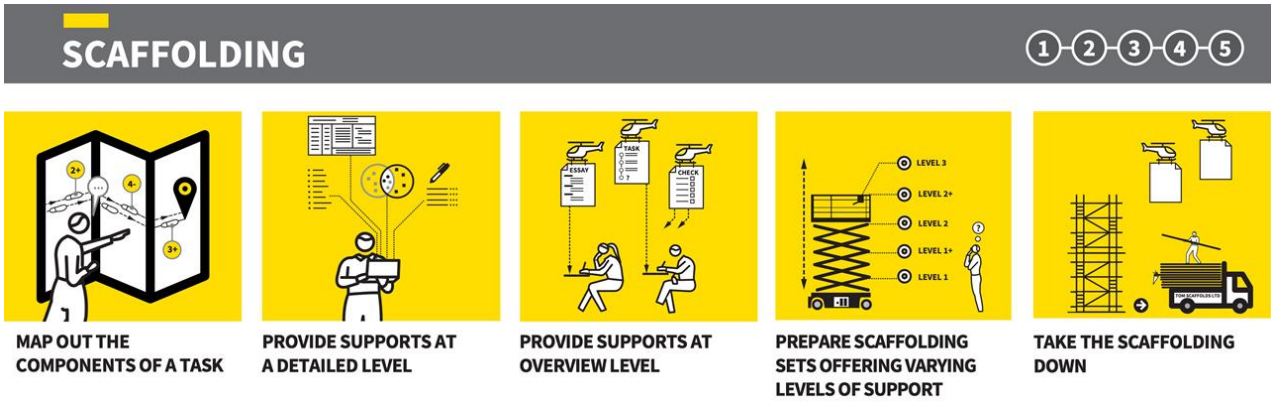
As Sarah Cullen says in the ResearchED guide, "children must walk before the can run (or fly) and it is our jobs to ensure they are supported in their initial wobbly steps, all the way through to the moment of take-off"[23].

Scaffolding is the provision of temporary support that is gradually removed when no longer required[24]. The process needs to be assessed accurately by the teacher to ensure each student can complete the task independently. The gradual removal of this scaffolding is often known as "fading" and is a cornerstone of responsive teaching.

Scaffolding during direct instruction requires a firm understanding of how long-term memory works and a recognition that nothing is learnt until it is embedded in the long-term memory. Scaffolding reduces the cognitive load as students increase automaticity and fluency so that new learning can become embedded in long-term memory.

What does it look like in the classroom?

- Retrieval practice that deliberately calls back to mind core knowledge
- Encouraging students to refer to Knowledge Organisers as and when required
- Sentence starters
- Writing frames
- Steps to follow when completing a task
- Questioning to scaffolding thinking, rehearse a process or deepen understanding i.e. draw links with prior learning, prompt deeper thinking, i.e. Say it Again, Say it Better
- Mnemonics
- Co-operative learning structures used to rehearse and scaffold
- Meta-cognitive thinking aloud by the teacher
- Clarifying in advance where common mistakes are made, for students to avoid them
- Compare work with that provided by an expert and analyse the difference



[23] Sarah Cullen, *Explicit & Direct Instruction*, ResearchED p87
[24] Education Endowment Fund, 2020. Special needs in Mainstream Schools, London

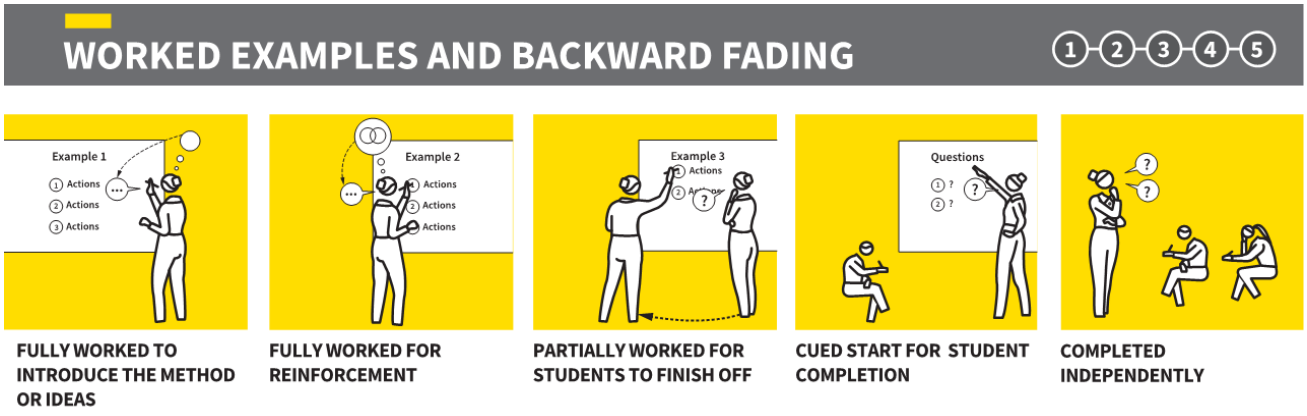
SEND

Quality-first teaching for students with SEND is good teaching for all. Scaffolding, and its well-judged removal, is a highly effective technique and vital for building success with students with additional learning needs.

Fading

Whilst on a lesson-level gradual removal of scaffolding needs to be expertly assessed by the class teacher, it also needs to be central to planning a 5-7-year curriculum. Things to consider, include:

- What key knowledge and skills are crucial early on and widely applicable?
- What scaffolding is needed early in their curriculum journey at Hele's to increase retention of knowledge in the long-term memory in order to increase automaticity and fluency? How will we assess the effectiveness of this?
- Across the academic year, how do we use assessment to build in complexity, apply to difference contexts and sample across the domain?
- As an individual class teacher, how do I remove the scaffolding at the right time for each child i.e. when they have demonstrated mastery of new knowledge?



PRINCIPLE 9: INDEPENDENT PRACTICE

This is the stage of the lesson when the expert teacher decides that individual students or the class are ready to practise individually and deliberately without support. This is the "I do" phase.

Independent practice is an essential part of ensuring that new knowledge and skills are embedded in the long-term memory. Sherrington[25] reminds us that "when material is overlearned it can be recalled automatically, and doesn't take up any space in our working memory". This fluency should be the aim of independent practice. It is also important to note that independent practice be based on the same content as the guided practice phase, so it is advisable to use near-identical or very similar tasks.

The most successful teachers provide plenty of time for independent practice and ensure students are concentrating hard. Just as the best predictor the quality of a surgeon is how many surgeries they have performed, the best predictor of student success is how much practice they have had. This means numerous repetitions rather than 1 or 2.

After a high-success rate has been secured, more challenging tasks can be included:

- Synoptic links
- More abstract problems
- Extended pieces

Co-operative learning structures can be well-used in this phase so that students verbally rehearse their learning and increase their fluency.

Written independent practice is usually best done in silence so that students are able to concentrate on their own practice without distraction.

It is vital for teachers to circulate during this phase of the lesson and engage in short, focussed interactions. By "ditching the desk" teachers can live mark thus ensuring progress doesn't stall and reducing workload outside of the lesson. Instant feedback can help address misconceptions, correct errors and ensure accurate responses. This approach is commonplace in practical subjects but equally applies to written tasks. Lemov[26] recommends the following strategies to optimise circulation:

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[25] Sherrington, *Rosenshine's Principles of Instruction*, p77
[26] Lemov, *Teach Like a Champion* p185

- 3:30:30 – first 3 minutes reinforcing expectations of product, process and behaviour, then alternate 30 second bursts of intentional circulation followed by 30 seconds of whole-class observation and accountability. This process is described step-by-step on p190 of TLAC
- Simple walk-by – you walk by a student's desk slowly enough to show that you are monitoring without engaging extensively
- Non-verbal cues – a brief non-spoken interaction like touching the desk, smile, nodding, thumbs up or motion to keep going
- Basic read/review – stop and read what a student is working on. You might comment but you don't have to. Reading it is a powerful message
- Pick-up read- pick it up and read it to signal a real interest in what a student is writing
- Dot round – put a dot on their work if it contains an error to specify that something needs checking
- Move systematically- cover all parts of the room and move circuitously to any students that are off-task so that you don't draw too much attention to them & think about how to manage the interaction
- Position for power – maintain whole-class awareness and position yourself so that you can see everyone during individual interactions

Studies show that in the most successful classrooms, limited intervention is needed by the teacher at this stage because the guided practice has prepared students well. It may be necessary to revisit or extend the guided practice if you identify errors being made or if students are struggling to work independently.

Teachers should also help to develop students' self-regulation during this phase by:

- Encourage a "no-hands up" approach and explicitly teach them "what to do when they don't know what to do"
- Share mark-schemes so that they evaluate their work and self-diagnose gaps
- Set further independent practice for homework

PRINCIPLE 10: WEEKLY AND MONTHLY REVIEW

The Hele's Model of Learning underpins our curriculum design and has memory for learning strategies including retrieval practice, spacing and interleaving at its very core. Extensive research that shows to go from a novice to expert learner, students need to understand how their learning links together. This creation of strong schema must be at the centre of effective curriculum design and enactment. Expert teachers constantly zoom in and out so that students understand how the jigsaw pieces fit.

Knowledge organised into patterns occupies less space in our limited working memory. This organisation works like Velcro because it is easier for new knowledge to stick to it!

Useful classroom strategies include:

- Effective, repeated use of Knowledge Organisers:
- Co-operative learning strategies used to encourage students to retrieve prior learning or see connections
- Regular knowledge checks to review what students did last week, last month, last term and last year
- Graphic organisers, i.e. mind -maps
- Note-taking, i.e. Cornell notes
- Reading
- Annual exams

Strategy	Review ideas	Why is this effective?
Strategy 1: Look, cover, write, correct	• Write down all key words from your KO, without looking • Write the 5 most important facts you remember about… • Brain dump: write everything you can remember about … • Spelling test…	Every time students go back over previous learning and make their brain work hard to retrieve it, they remember more. Self-quizzing is one of the most efficient and effective ways of learning.
Strategy 2: Elaboration	• Annotate your knowledge organiser with further information, detail and examples. • Choose 5 key terms / words and ask your partner to define them…	Knowledge Organisers are brief overviews of each topic. By adding more detail, students make links and connect with other information.
Strategy 3: Processing	• Rewrite or reorder a section i.e. put dates into a timeline, put facts into alphabetical order, list the points from the most to the least important/interesting.	Presenting information in a different form (list, mind-map, picture etc) helps students remember information.
Strategy 4: How & Why?	• Write how and why questions to help you think deeply about what you have learnt. • E.g. write five how or why questions that you would ask ..	Students remember what they think about.
Strategy 5: Flashcards	• Write a question on one side and the answer on the other. NB: flashcards can be purchased from the School Library for £1.20 for 100.	Flashcards can be used to self-quiz. This is the most efficient and effective way to check what students remember and what they don't. Used as regular review tasks can help students prepare for their annual exams.

PART 4

INSTRUCTIONAL COACHING TOWARDS OPTIMAL IMPLEMENTATION

In this section, we outline how every teacher at Hele's School can develop their classroom delivery.

Instructional coaching is a form of teacher development based upon a cycle of short observations and follow up, action-based conversations. Instructional coaching takes a 'one step at a time' approach with conversations focused on the highest leverage action step to improve teacher effectiveness.

The aim of instructional coaching is to partner coaches with teachers to help them incorporate research based instructional practices into their teaching. The goal is to improve teaching and learning in an iterative, practical and developmental manner.

Rationale

School improvement is teacher improvement and raising standards depends on the quality of teacher delivery. Students can make three times more progress with the most effective teachers than with the least.[27]

Instructional coaching can make teaching more effective, more satisfying and more successful. Instructional coaching can improve teaching quality and consistency and remove variance within a school setting.

The incremental approach is based on the impact cycle of: identify, learn and improve. This approach encourages teachers to engage with and apply new knowledge through reflection, rehearsal and modelling. Frequent conversations lead to rapid improvement as the sequential completion of action steps lead to significant changes.

The aim is to be continually helping teachers improve. Instructional coaching is not designed solely for teaching the basics to novice teachers. It is effective for all teachers, as Dylan William famously says, "every teacher needs to improve, not because they are not good enough, but because they can be even better."

[27] Incremental Coaching: How can it help your teachers develop? Ambition School Leadership

Evidence Base

Coaching is not new. Varying coaching models have long been adopted in education as part of school CPD.

Teacher development is complex and multi-layered because teaching is complex and multi-layered. Consequently, instructional coaching must be complex and multi-layered if it is to meet the needs of highly qualified professionals who approach it from a range of backgrounds. We have used the DfE standards for teachers professional development to design and deliver an instructional coaching programme.

The standard describes 5 key headline ideas [28]

1. Professional development should have a focus on improving and evaluating pupil outcomes
2. Professional development should be underpinned by robust evidence and expertise
3. Professional development should include collaboration and expert challenge
4. Professional development programmes should be sustained over time

And all of this is underpinned by

5. Professional development must be prioritised by school leadership

This programme has been inspired by professional experience, research, observation and learning from; Multi Academy trusts, research and teaching schools, teacher and leadership development organisations and educational thinkers and academics.

There is often a gap between knowledge of something and translating that knowledge into action or habit referred to as the "knowing-doing gap"[29].We often read something or attend training sessions and resolve in the inspiring moment to change our behaviour but quite often there is little action as a follow up and we lapse into our old behaviours pretty quickly. It's a very human thing… we get distracted, lose focus and move our attentions elsewhere. So, the $1,000,000 question is "how do we close that gap?"

Research suggests that (at any stage or age) deliberate practice combined with direct instruction is the most effective method of turning knowledge into action, habit and/or mastery. This should not only apply to the pedagogy of our classrooms but how we improve teacher effectiveness and engage in professional development. You will see this reflected in the instructional coaching cycle of improvement.

"The way to close the knowing-doing gap is through memorisation and practice. Memorisation and practise of the right things, broken down in the right ways.[30]

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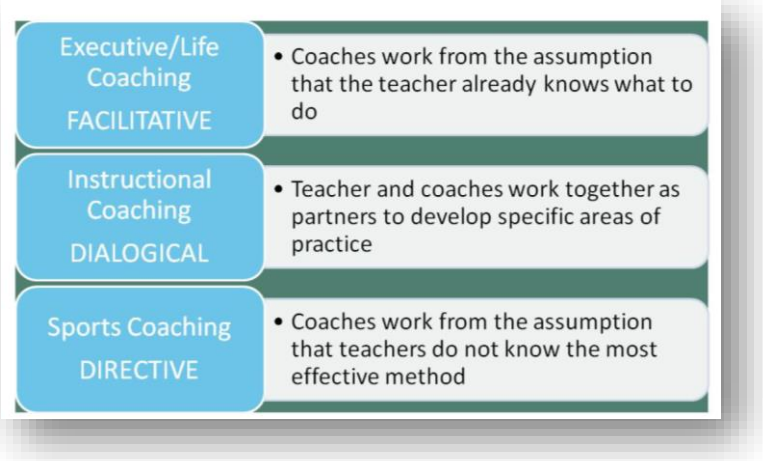
[28] Standard for Teachers Professional Development (DfE)
[29] The Knowing Doing Gap- Jeffery Pfeffer
[30] Making Good Progress- Daisy Christodoulou

We're not inventing a new process here rather. Instead, we are curating and discussing the growing evidence around the impact of coaching and education, with an aim to identify the most effective way to implement instructional coaching.

What is instructional coaching?

Instructional coaching (sometimes referred to as precision or incremental coaching) is midway between the two more common models of coaching; executive/life coaching and sports coaching.



The partnership approach implies a sharing of perception between the coach and colleague. Then, in the learning or follow up conversation phase, the expertise of the coach takes centre stage.

It is essential that the coach possesses a high level of knowledge, pedagogical, subject or disciplinary expertise.[31]

Instructional coaching is strengthened by, and its impact relies upon, a high-quality curriculum which is clearly articulated and enacted. There also needs to be a shared expectation of quality and excellence for the classroom that allows every teacher to pursue of the same goal.

instructional coaching is a regular, frequent and ongoing style of short drop-ins or observations and action based, follow up conversations or feedback sessions focused on identifying practising and developing a precise leverage action step.

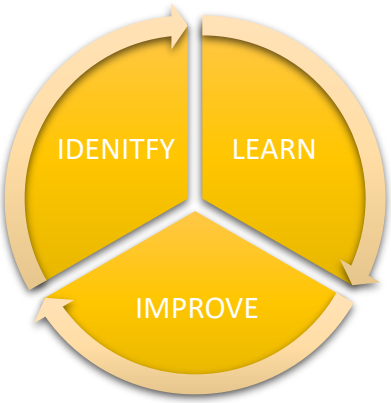
One to one coaching is tailored to teachers' needs and/or whole school, or department improvement priorities.

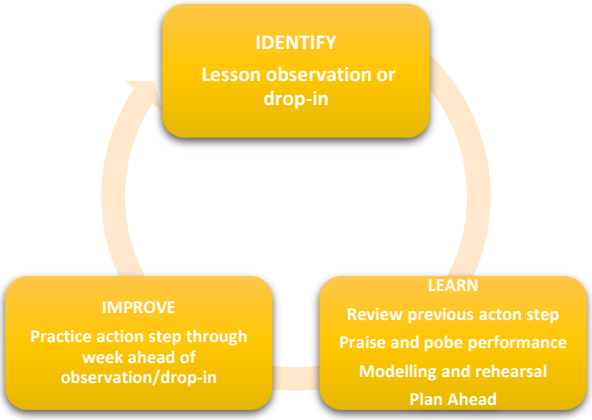
[31] Teaching Walkthrus- Tom Sherrington referencing Instructional Coaching: A Partnership Approach to Improving Instruction, Kim Knight 2007

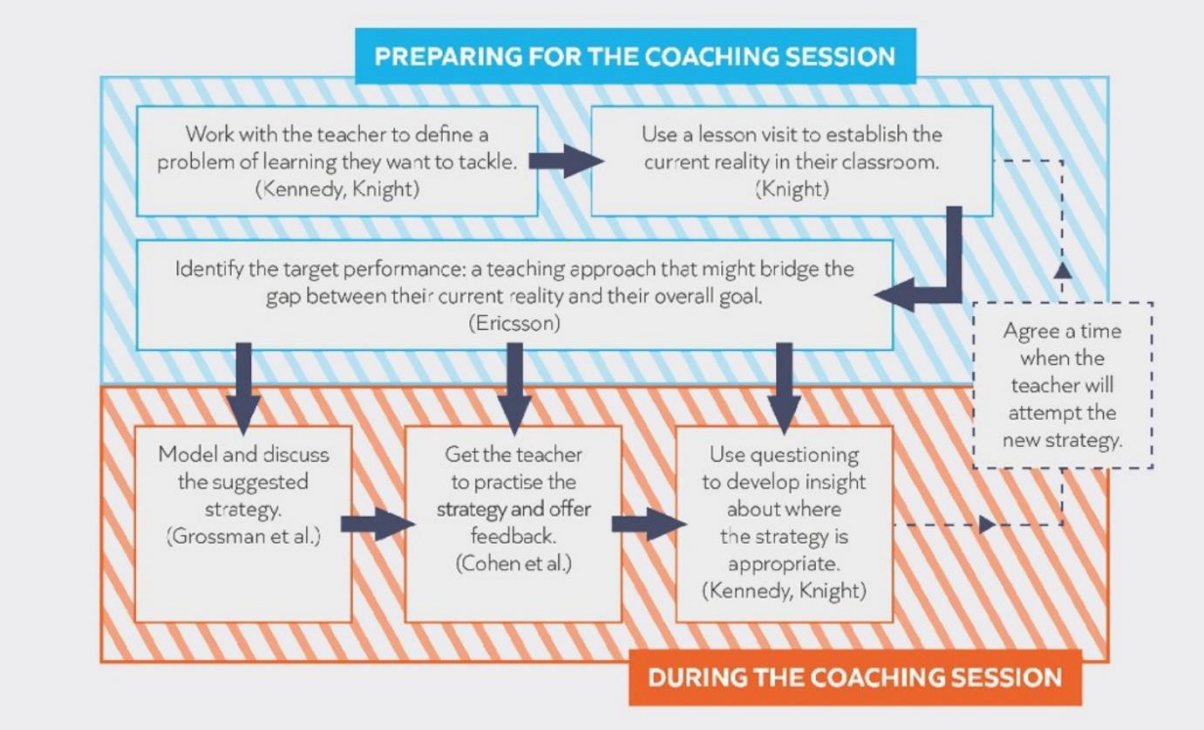
The instructional coaching cycle of improvement

Instructional coaching differs from traditional executive or leadership coaching which might deal with a wide range of personal and professional development issues.

Instructional coaching focuses specifically on teaching practise and curriculum enactment, one action step at time, with each step being followed up until the colleague has demonstrably embedded it into their practice.







The way a school implements instructional coaching is vital, intervals between lesson droppings and follow up conversations are minimal and instructional coaching is planned into the strategic direction of the school.

Instructional coaching is disciplined and structured, with common elements, training and quality assurance required for the coaches and teachers.

Instructional coaching, and its success and impact on teacher effectiveness and ultimately improved student outcomes, requires a school's readiness and vision to move towards a culture where people see feedback as a gift and all believe they can improve, that there is a spirit of inquiry and desire to learn.

Coaches have an ownership of the outcomes of the instructional coaching.

Addressing misconceptions regarding Instructional Coaching

- It is not part of the PDR process. Coaches do not talk to their teachers once or twice a year, it is not related to pay increases
- Instructional coaching is formative rather than summative
- When appropriate, instructional coaching can be directive and feel more like sports coaching
- Instructional coaching can be judgemental. However, the judgements will be agreed between the coach and teacher.

Actionable Steps

Over the next few pages you will find a series of actionable steps which can be practiced to ensure your classroom practice is as a effective as possible.

Issues which can lead to sub-optimal lessons are outlined in the first column of each table. Each issue is paired with a corresponding actionable step which can be discussed, modelled and rehearsed with an allocated coach. Colleagues can then practice the actionable step in class before inviting a coach to drop in, observe and offer specific feedback.

At this point, we need to emphasise the importance of pedagogical expertise in the make-up of an effective Instructional Coach. As Jim Knight (University of Kansas) writes in The Impact Cycle[32]:

"Instructional coaches run the risk of being inefficient if they don't have a repertoire of effective practices to share with teachers. [Instructional Coaches need to] *"read, re read and read again the instructors manuals or research articles that described the teaching practises they will be sharing using prepared one-page summaries* (our actionable steps) *of the teaching practises they shared to make it easier for colleagues to learn quickly about the interventions. Ideas are most*

[32] The Impact Cycle: What instructional coaches should do to foster powerful improvements in teaching, Jim Knight

likely to survive and spread if they are easier to use and more powerful than the memes they are replacing. "

Principle 1: Daily Review

Potential Issue	Principle	Actionable step
Resources for GIGO not ready for students to begin on entry.	1a	Ensure resources are displayed/distributed before students enter….so that no time is wasted.
GIGO not completed in silence.	1b	Insist on silence and WMP if required…so that climate for learning is optimal.
GIGO is not retrieval based.	1c	Review planning to ensure GIGO retrieves core prior knowledge and vocabulary for the lesson OR to increase fluency….so that a secure schema is built.
GIGO does not focus on relevant prior knowledge/vocabulary or interleaving to increase fluency.	1d	Review planning to ensure GIGO retrieves core prior knowledge and vocabulary for the lesson OR to increase fluency...so that a secure schema is built.
Not all students are completing the GIGO.	1e	Observe students carefully and question or challenge students who do not seem to be engaging… so that they remain focussed on their work.
Answers are not provided.	1f	Provide answer slide….so that students can self-correct their work.
Not all students GPM their answers.	1g	Observe students carefully and question or challenge students who do not seem to be engaging, so that they remain focussed on their work.
Teacher does not use verbal cues to make concrete connections between prior knowledge and the current lesson.	1h	Script/plan explicit verbal cues to make concrete connections between the prior knowledge and the current lesson... so that it "sticks" to what they already know.
Teacher misses opportunities to make links to previous knowledge or other aspects of the curriculum.	1i	Script/plan explicit verbal cues to make concrete connections between the prior knowledge or other aspects of the curriculum, so that it "sticks" to what they already know.
Teacher misses opportunities to check knowledge is secure before proceeding with the lesson.	1j	Check prior knowledge is secure before proceeding with the lesson (ie cold call questioning, review previous learning) so that a secure schema is built.
The GIGO is not linked to the Knowledge Organiser	1k	KO & GIGO are cross referenced at the planning stage to include all relevant Tier 2 and 3 vocabulary.

Principle 2: Present material in small steps

Potential Issue	Principle	Actionable step
Teacher instruction is not engaging or well-presented or lacks pace.	2a	Adapt the method of delivery for teacher instruction by ... so that students can quickly grasp the key facts.
Teacher giving too much information at once so that students are confused.	2b	Give clear, explicit instructions and information so that students have complete clarity about what they need to know and do.
The explanation is not clear and precise.	2c	Plan and script the initial delivery so that different wording isn't a barrier to novice learners.
The knowledge is not sequenced correctly.	2d	Re-sequence the knowledge or instructions so that students build a schema.
Synonyms are used in the initial delivery causing confusion for novice learners.	2e	Plan and script the initial delivery so that different wording isn't a barrier to novice learners.
Teacher is talking for too long.	2f	Ensure your explanations are interspersed with tasks so that you avoid cognitive overload.
Students don't have time to practice/consolidate before moving on.	2g	Build in time for rehearsal and practice so that knowledge is processed in manageable chunks.
Task is not broken down into a simple set of instructions.	2h	Provide clear instructions so that the cognitive load is managed.
Students are not clear of the big picture, the component parts and how they connect.	2i	Start with the big picture, then break into component part adding further detail, but remember to make the connections with the big picture very explicit so that students build strong schema.

Principle 3: Ask Questions

Potential Issue	Principle	Actionable step
Not all students are answering questions or engaging in interactive parts of the lesson	3a	Use a variety of questioning techniques (give an example; cold calling, no opt out, timed pair share, MWB etc) so that all students are thinking about key learning.
There is no evidence of cold calling / follow-up questioning, say it again, say it better	3b	Use cold calling questioning, probing questioning so that all students are thinking about key learning.
There is a lack of verbal questioning or questioning is not varied and focuses only on factual recall	3c	Use a wider variety of questioning such as • Why do you say that? • Can you give me an example? • Why do you think that is? • Is there an alternative way? … so that students provide higher quality answers
Teacher questions are poorly phrased and unclear or use over simplified vocabulary	3d	Plan questions that are specific and accurate so that students understand what they are being asked. Use Tier 2 and 3 vocabulary in questions so that students develop an understanding of how to express themselves in your subject.
Teachers miss opportunities to question students on links to previous knowledge or other aspects of the curriculum	3e	Ask specific questions that link what you were teaching to … so that students can reference new knowledge to something they already know.
Questioning is misdirected and shows a deficit in Know Your Class – question either too hard or too easy	3f	Use KYC to ask questions that challenge students so that they are able to answer at an appropriate level.
Questioning does not identify gaps in knowledge either at individual or class level	3g	Use MWB and "show me" so that you can check the understanding of all learners.
Teacher misses an opportunity to extend a student's disciplinary literacy by accepting an over simplified verbal answer	3h	Ask students to 'say it again, but better' so that they speak with fluency.

Principle 4: Provide models/ examples/thinking aloud

Potential Issue	Principle	Actionable Step
Teacher moves from Instruction to Guided Practice too quickly	4a	Use models and worked examples before moving to guided practice so that students build confidence
The model provided is too complex or takes too long	4b	Break models down into small chunks so that you avoid cognitive overload.
The model provided introduces a new idea, or "I do " is modelled clearly; "we do" introduces a new feature	4c	Pre plan all models so that they are focused solely on the idea being taught.
Students are making common mistakes.	4d	Clarify in advance where common mistakes are made so that students can avoid them.
Some students don't use the model as intended	4e	Circulate to ensure all are using the model provided appropriately so that errors and misconceptions can be addressed quickly.
Students are reliant on model for too long	4f	Remove scaffold/template more quickly for those ready to practice independently.
Teacher modelled thinking is complex and rambling	4g	Organise your thinking and script the model so that it is focused solely on the task you are explaining.
Students forget a stage of the process when using the model provided	4h	Provide a template of the steps to free up working memory.
Some students are ready to move on before others	4i	Provide completion tasks (eg cloze tasks) as further scaffold for those who require additional support.
Students not engaging at modelling stage	4j	Ask probing questions " What next/ Why would I do XYZ/ How could I change this?" (cold call/ TPS) to check that students are following the process.
Teacher is talking for too long	2f	Ensure your models are interspersed with tasks so that you avoid cognitive overload.

Principle 5: Guide Student Practice

Potential Issue	Principle	Actionable step
Teacher moves the lesson from teacher instruction straight to independent practice.	5a	Incorporate a guided practice phase to the lesson so that students build confidence before independent practice.
Teacher does not interact or question students during guided practice ("we do").	5b	Direct appropriate questions inviting students to contribute their ideas to a guided task so that the process is genuinely "we do".
Teacher does not break task into manageable chunks during guided practice.	5c	When planning, be clear which steps must be taken to produce a piece of work so that students are supported to succeed and not overwhelmed.
Teacher does not make links with prior learning in guided practice.	5d	Refer to prior learning or wider examples so that students see their learning in context within the curriculum.
Students are not given the tools or support to be able to access the lesson.	5e	Put scaffolding in place (give an example) so that students are able to access the task. OR Amend your resources/explanation by… so that students understand what you are trying to convey.
SEND students are not supported appropriately.	5f	Act on advice provided by…so that all students are able to make good progress. OR Work more effectively with your LSA by … so that … is able to make progress.
Teacher is not circulating and providing live feedback.	5g	Circulate around the room and provide live feedback so that
Some students require more scaffolding/further practice	5h	Identify students who require more practice/support and adapt task accordingly so that the students are all able to secure a high success rate.
Some students are more fluent and ready to move to independent practice sooner.	5i	Identify students who are ready to move on and provide deliberate practice task sooner so that the students are develop fluency.
Co-operative learning structures are not used to help guide practice.	5j	Build in an appropriate co-operative learning structure to the guided practice phase so that students are able to rehearse/rephrase/elaborate/summarise new information to embed it in the long-term memory.
Students completed insufficient repetition.	5k	Increase the repetition before moving to the independent, deliberate practice phase so that students build fluency and automaticity of recall.

Principle 6: Check Student Understanding

Potential Issue	Principle	Actionable step
Not all students are answering questions or engaging in interactive parts of the lesson.	6a	Use a variety of questioning techniques (give an example: cold call, bounce, say it again say it better etc) so that all students are thinking about key learning.
Students are unclear what they need to do.	6b	Give clear instructions and model your expectations so that students know what excellence looks like and how to achieve it.
Teacher is not gauging the understanding of all learners.	6c	Use MWB and "show me" so that you can check the understanding of all learners.
Students put hands up to answer questions.	6d	Insist on cold call so that no student can opt out.
Teacher asks a question to an individual student and then moves straight on to the next student.	6e	Ask a series of carefully chosen questions to the same student so that you can check deeper understanding.

Principle 7: Obtain High Success Rate

Potential Issue	Principle	Actionable step
Not all students are confident before moving on.	7a	Extend guided practice or revisit key knowledge before moving on so that all students achieve a high success rate.
Errors and misconceptions are not challenged.	7b	Circulate the room and live mark so that errors and misconceptions are quickly addressed.
Teacher doesn't check to avoid errors and misconceptions occurring.	7c	Circulate the room and live mark so that errors and misconceptions are quickly addressed.

Principle 8: Scaffolds for difficult tasks

Potential Issue	Principle	Actionable step
Students are unsure how to start the task.	8a	Provide sentence starters/writing frames/questions/models/clear steps so that students are able to access the task.
The lesson moves from teacher instruction directly or too quickly to independent practice.	8b	Provide more guided practice so that students build confidence and competence before working independently.
Students are not yet ready to work independently.	8c	Use co-operative learning structures for verbal rehearsal so that students can articulate and consolidate their learning before writing.
Students have not yet secured a high success rate and lack confidence.	8d	Use mini-whiteboards and ask them to "show me" so that students secure more practice before moving to independent practice.
Students are not able to clearly articulate their learning.	8e	Question to scaffold thinking so that students can rehearse a process, deepen understanding or draw links with prior knowledge.
Students are not clear of the process and thinking required to complete the task.	8f	Provide meta-cognitive thinking aloud by the teacher so that the process is explicitly modelled to the students.
Students are making common mistakes.	8g	Clarify in advance where common mistakes are made so that students can avoid them.
Quality of work is not of a high standard.	8h	Compare work with that provided by an expert so that students can analyse the differences.
Some students are finding the task too easy.	8i	Remove scaffolding from more fluent/confident learners so that they increase automaticity.
Some students are finding the task too hard.	8j	Increase the scaffolding for less fluent/confident learners so that they gain a higher success rate (desirable difficulties).
Teacher does not remove scaffolding at the optimal time.	8k	Carefully plan how to remove scaffolding at the right time for each student when they have demonstrated mastery of new knowledge so that all students are able to achieve success and increase fluency.

Principle 9: Independent Practice

Potential Issue	Principle	Actionable step
Some students are unable to complete the task without support.	9a	Diagnose the barrier: • consider providing more guided practice • review whether the task is too different to the ones worked through together • reduce the cognitive demands of the task by providing scaffolding • reduce the cognitive demands of the task by reducing the level of challenge …so that students build automaticity, fluency and achieve a good success rate.
Students are talking to their peers.	9b	Insist on silence during this phase of the lesson so that all students are thinking hard.
Students complete the task but require scaffolds to do so.	9c	Plan future lessons with further opportunities for practice and consider how to fade the scaffolding so that students build automaticity, fluency and achieve a good success rate.
Students make errors during independent practice.	9d	Teacher to systematically circulate to identify error, provide live feedback so that students can address errors and misconceptions do not become embedded.
Some students lose concentration and momentum during the task.	9e	Teacher to systematically circulate using: • 3:30:30 • Simple walk-by • Non-verbal cues • Basic read/review • Pick-up read …so that students are held to account and refocussed.
Some students are not using the modelling, scaffolding, structure provided.	9f	Teacher to systematically circulate to ensure fidelity to the models and provide live feedback so that students can produce high-quality work.
Students do not complete the task.	9g	Set completion for homework or continue next lesson so that powerful knowledge is secured.

Principle 10: Weekly and Monthly Review

Potential Issue	Principle	Actionable step
Students are not embedding learning in their long-term memory.	10a	Systematically plan the use of X strategy to review prior learning so that learning is embedded in the long-term memory.
Students do not understand links in their learning.	10b	Script/plan explicit verbal cues to make concrete connections between the prior knowledge or other aspects of the curriculum, so that it "sticks" to what they already know.
Opportunities are missed to make links with prior learning.	10c	Script/plan explicit verbal cues to make concrete connections between the prior knowledge or other aspects of the curriculum, so that it "sticks" to what they already know.
Knowledge organisers are not effectively used.	10d	Use of KO strategies built into long, medium and short term planning so that students develop strong schema.

Climate for Learning and Disciplinary Literacy

Potential Issue	Principle	Actionable Step
Low-level disruption.	CRS	Consistent use of warn, move, park so that learning is not disrupted.
Teacher uses over simplified vocabulary.	V1	Model the use of Tier 2/3 vocabulary in your teacher instruction so that students develop an understanding of how to talk like a …
Teacher uses vocabulary that the students do not understand.	V2	Check for student understanding of key Tier 2/3 words and explicit teach so that students understand what they need to do.
Guided reading is unfocused	R1	State that the guided reading will be completed using 'Control the Game"- Include CtG instructional slide in lesson PPT
Students listening passively to teacher reading aloud	R2	Model Control the Game- teacher explicitly instructs students where to highlight and what annotations should be made
Student missing opportunities to recognise and consider use of tier 2/3 vocabulary	R3	Use 'Control the Game' to highlight and explain examples of tier 2 and 3 vocabulary when they appear in the guided reading.
Not all students are actively engaged in independent reading	R4	Use 'Read and Tell' to ensure that independent reading adheres to PIES principles- include R&T guidelines in lesson PPT
Independent reading lacks accountability	R5	Use Read and Tell to ensure students work cooperatively to share the cognitive load of reading tasks and record learning in exercise books/on MWB

Curriculum Implementation Briefing Notes

Principle	Notes/Points for Consideration	Possible Actionable Step
Daily review		
Present material in small steps		
Ask questions		
Provide models/ examples/thinking aloud		
Guide student Practice		
Check student understanding		
Obtain high success rate		
Scaffolds for difficult tasks		
Independent practice		
Weekly and monthly review		

Related Reading

- *Leverage Leadership 2.0,* Paul Bambrick Santoyo
- *Teach Like a Champion,* Doug Lemov
- Practice Perfect, Doug Lemov
- *Teaching Walkthrus: Five step guides to instructional coaching,* Tom Sherrington
- *incremental Coaching: How can it help your teachers develop?* Ambition Schools Institute
- *Practise with Purpose: The emerging science of teacher expertise,* Deans for Impact
- *Get Better Faster,* Paul Bambrick Santoyo
- *Introducing Coaching,* Reach Academy Trust
- *The Impact Cycle: what instructional coaches should do to foster powerful improvements in teaching*, Jim Knight
- *Everyone Succeeds,* Steve Margetts