Lighthouse Schools Partnership
Pedagogy Framework

Introduction

The Lighthouse Schools Partnership's Pedagogy Framework is based on Barak Rosenshine's Principles of Instruction. They provide us with a framework of instructional techniques to use within our classrooms, allowing our teachers to design and create a lesson that fits the need of their students. When skilfully chosen, adapted and delivered, the LSP Pedagogy Framework will ensure every LSP student is receiving high quality, evidence informed teaching every lesson, every day.

These principles give us a common language and understanding to use within and across our schools and Trust. They will support coaching and CPD at both school and Trust level and allow our teachers to have professional discussions about the art, craft and science of teaching.

The ten principles have been split into four strands with key aspects within each strand. These are not a checklist! The principles should be used to carefully create and deliver a series of lessons by drawing on different elements in different degrees to secure the learning objective or outcome for that lesson.

This booklet provides an overview of each strand and element. It gives you an overview of the research and what this looks like in the classroom. It provides reflective questions for our teachers and links to WalksThrus and further reading to support your continued professional development.

Barak Rosenshine's PRINCIPLES OF INSTRUCTION

A thematic interpretation for teachers by **Tom Sherrington** @teacherhead

VISUALISED BY **OLI CAV** Oliver Caviglioli @olicav

REVIEWING MATERIAL

1 Daily review

10 Weekly and monthly review

Daily review is important in helping to resurface prior learning from the last lesson. Let's not be surprised that students don't immediately remember everything. They won't! It's a powerful technique for building fluency and confidence and it's especially important if we're about to introduce new learning — to activate relevant prior learning in working memory.

QUESTIONING

3 Ask questions

6 Check for student understanding

The main message I always stress is summarised in the mantra: ask more questions to more students in more depth. Rosenshine gives lots of great examples of the types of questions teachers can ask. He also reinforces the importance of process questions. We need ask how students worked things out, not just get answers. He is also really good on stressing that asking questions is about getting feedback to us as teachers about how well we've taught the material and about the need to check understanding to ensure misconceptions are flushed out and tackled.

SEQUENCING CONCEPTS & MODELLING

2 Present new material using small steps

4 Provide models

8 Provide scaffolds for difficult tasks

Small steps — with practice at each stage. We need to break down our concepts and procedures (like multi-stage maths problems or writing) into small steps so that each can be practised.

Models — including the importance of the worked-example effect to reduce cognitive load. We need to give many worked examples; too often teachers give too few.

Scaffolding is needed to develop expertise — a form of mastery coaching, where cognitive supports are given — such as how to structure extended writing — but they are gradually withdrawn. The sequencing is key. Stabilisers on a bike are really powerful aids to the learning and confidence building — but eventually they need to come off.

STAGES OF PRACTICE

5 Guide student practice

7 Obtain a high success rate

9 Independent practice

Teachers needs to be up close to students' initial attempts, making sure that they are building confidence and not making too many errors. This is a common weakness with 'less effective teachers'. Guided practice requires close supervision and feedback.

High success rate — in questioning and practice — is important. Rosenshine suggests the optimum is 80%. i.e. high! Not 95-100% (too easy). He even suggests 70% is too low.

Independent, monitored practice. Successful teachers make time for students to do the things they've been taught, by themselves… when they're ready.   *"Students need extensive, successful, independent practice in order for skills and knowledge to become automatic"*

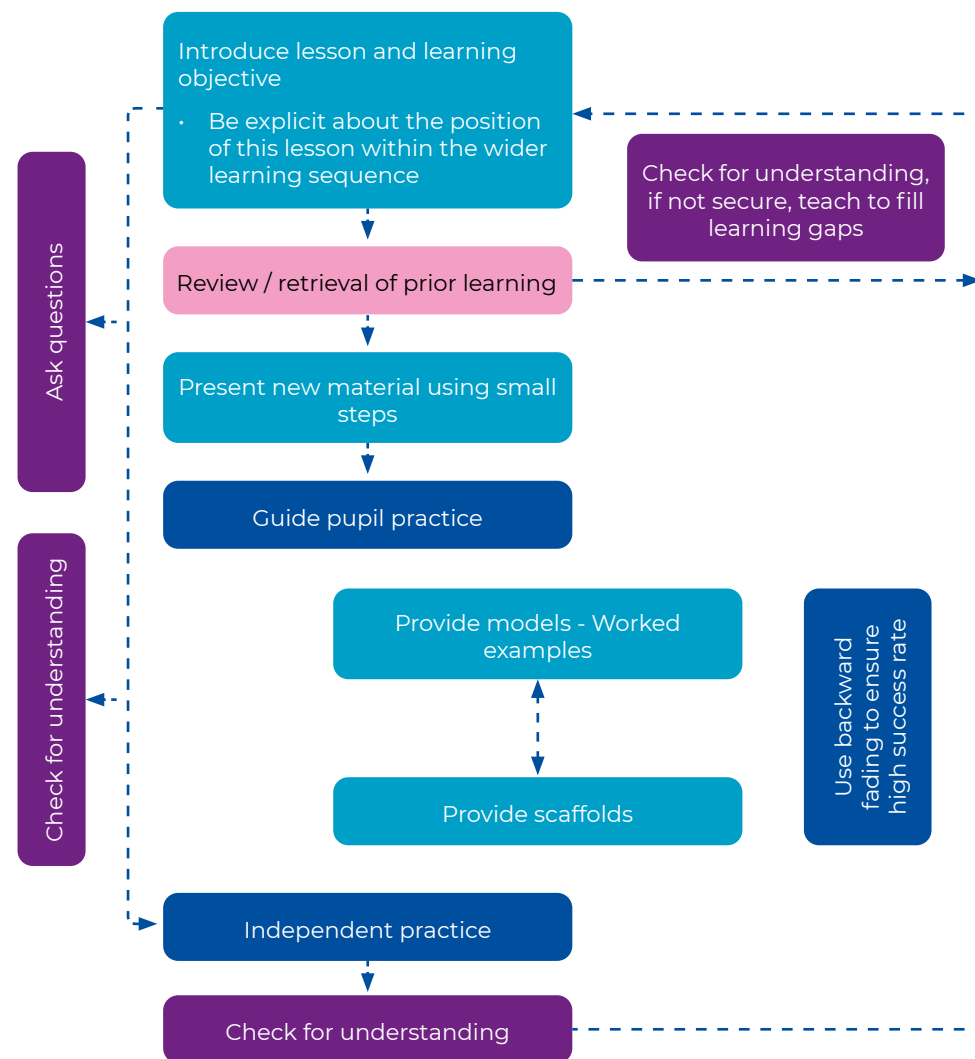| LSP Assessment Principle		LSP Assessment Procedures to Support this Principle
	Daily/last lesson review	Learning from the previous lessons can be resurfaced. This is a powerful technique for building fluency and confidence and is important when we are about to introduce new learning.
	Weekly /monthly/ termly review	Previously learned material is not forgotten and frequent revisiting of a range of materials forms a more extensive schemas in our students.
Questioning and checking for understanding		**We ask more questions, to more students, in more depth so that…**
	Ask questions	Effective questioning lies at the heart of great teaching and is a highly interactive, dynamic and responsive process.
	Checking for understanding	To give us feedback about how well the material we've taught has been understood, and to ensure misconceptions are flushed out and tackled.
Sequencing concepts; modelling and scaffolding		**We plan these elements of instruction before we get into the classroom so that …**
	Present new materials using small steps	Practice with each stage by breaking down our concepts and procedures into small steps so that each can be practised.
	Provide models	Models are a central feature of providing good explanations and help students to learn to solve problems faster.
	Provide scaffolds for difficult tasks	Students develop expertise so scaffolds can be gradually withdrawn.
Stages of practice		**We present new material in small steps with student practice after each step so that…**
	Guide student practice	We closely supervise students' initial attempts to build confidence and make sure they don't make too many errors.
	Obtain a high success rate	We set tasks that, with sufficient practice, allow students a high success rate. Tasks with high success rates allow students to reinforce error free, secure learning, improving fluency.
	Independent practice	We make time for students to do the things they've been taught (when they are ready!)

Lesson design and structure

The pedagogy framework is not a lesson plan. Different lessons in a learning sequence will require a different focus: some might have more explanatory modelling; others more questioning or more independent practice. You might have whole lessons of practice and whole lessons of teacher modelling and questioning. You might not do 'review' every lesson. However, over a series of lessons that relate to a secure sequence, you might expect all elements of the principles to feature in some form.

Within a lesson you may move onto, between and back to different strands of the framework. Some, (for example, checking for understanding) will run strongly through all lessons.

Effective teachers will carefully plan how and when to use each strand and aspect. This model shows a suggestion of how strands and aspects can be embedded and used in different parts of the instructional process in an individual lesson.

Ask questions

Check for understanding

Introduce lesson and learning objective
- Be explicit about the position of this lesson within the wider learning sequence

Check for understanding, if not secure, teach to fill learning gaps

Review / retrieval of prior learning

Present new material using small steps

Guide pupil practice

Provide models - Worked examples

Use backward fading to ensure high success rate

Provide scaffolds

Independent practice

Check for understanding

Behaviour and relationships

The framework does not explicitly talk about relationships and behaviour. However, it's implicit that the principles are being used in a positive environment conducive to learning, where students feel safe and that they belong, aligned to the 6 principles of Nurture UK.

Consistent use of language, routines and firm boundaries delivered at a whole school level support us to teach with high expectations of all students.

Embedded in the principles of questioning and checking for understanding with plenty of 'process questions', is the idea you are getting to know your students; you learn what they know and how they think in order to decide whether you need to re-teach, give corrective feedback and so on. There is something about really caring about your students that suggests you're interested in what they have to say and addressing where they have gaps in their understanding.

Strong relationships and high expectations for behaviour create an environment for all students to thrive as individuals and learners. They form the foundation for quality teaching in every classroom.

Last Lesson Review: begin the lesson with a short review of previous learning. Daily review can strengthen previous learning and can lead to fluent recall.

What the research says.

Last lesson review is an important part of instruction. Review can help us strengthen the connections among the material we have learned. The review of previous learning can help us recall words, concepts and procedures effortlessly and automatically when we need this material to solve problems or to understand new materials. Daily review is an important part of practice.

Reflective questions:

- Have I selected key knowledge and skills from prior learning that will help students complete todays learning?
- Have I designed a review task that will enable me to assess the understanding of all students in my class.
- What will I do if students are not secure in the materials we are reviewing?

WalkThrus:

| P&R \| 112 QUIZZING | P&R \| 114 ELABORATIVE INTERROGATION | P&R \| 116 USING A KNOWLEDGE ORGANISER | P&R \| 114 ELABORATIVE INTERROGATION | P&R \| 118 MULTIPLE-CHOICE QUESTIONS | P&R \| 120 FLASH CARDS | P&R \| 130 THE FACE IT REVISION MODEL | P&R \| 128 A REPERTOIRE OF RETRIEVAL ROUTINES |
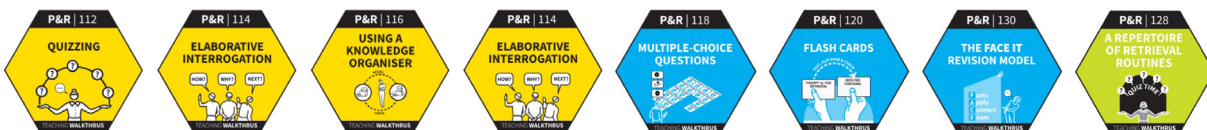
Further reading:

- 10 Techniques for retrieval practice
- EEF Blog: Does research on 'retrieval practice' translate into classroom practice?

Videos:

- TLAC Retrieval Link 1
- TLAC Retrieval link 2

In the classroom.

- Review should be time efficient and does not dominate the lesson - lessons begin with a short (5-8 minute) review of previously covered material.

- The review could focus on vocabulary, formulae, events or previously taught concepts.

- The review provides additional practice in facts and skills needed for recall to become automatic.

- Last lesson review is particularly important for teaching material that will be used in subsequent learning.

- Strong review involves everyone – it includes all students checking their knowledge not just a few or one at a time

- Checking should be easy and accurate so it is possible for all students to find out what they have got right and wrong.

- Review should be generative as students need to explore their memory to check what they know and understand.

- The review diet should be varied using a mix of teacher led self quizzing, written and verbal quizzing, self explanation, multiple choice and open response texts. This allows students to explore their schemata in different ways, strengthening future recall.

Weekly and monthly review: Previously learned material is not forgotten and frequent revisiting of a range of materials forms more extensive schemata in our pupils.

What the research says.

Evidence suggests that pupils secure stronger long-term recall if they engage in retrieval practice with a set of ideas after some time has passed. Rosenshine suggests that more effective teachers include periodic review of material learnt in the past week or month to reduce the rate of forgetting and supporting pupils to retain accurate schema in the long term.

Reflective questions:

- How can I embed review processes into my lessons whilst also keeping curriculum delivery on track?
- How can I build a routine time slot to ensure I have a rhythm for reviews?
- How can I make connections between the materials being reviewed and pupils' current learning?

WalkThrus:
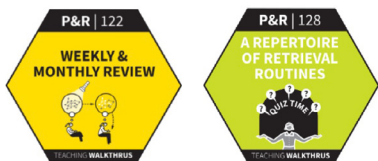
Further reading:

- Kate Jones, Retrieval Practice , Reminders versus retrieval practice

Videos:

- TLAC Retrieval Link 1
- TLAC Retrieval link 2

In the classroom.

- Plan what prior materials you are going to review and when this will take place.

- Choose an appropriate retrieval practice activity to test pupils' recall of the previous learning. This could include quizzing, peer supported retrieval, elaborative interrogation, rehearsal and performance.

- Retrieval activities should engage all pupils and allow you to assess the understanding of the class.

- Having engaged all pupils in their recall of previous knowledge you should then take time to establish where common gaps are. If students have forgotten things, give time reconsolidate their knowledge base.

- If pupils can no longer perform tasks or explain concepts, take time to re-teach the key ideas and return to this later.

- Where possible, show pupils how to make connections between the review material and other topics they have been taught, including the current one. This will help them to strengthen their wider schema, linking ideas together rather than making them seem isolated and disconnected.

? Ask questions: to provide opportunities for student practice and to allow a teacher to determine how well material has been learned.

What the research says.

More effective teachers ask more questions, involving more students, probing in more depth and taking time to explain, clarify and check for understanding. In addition, they ask students to explain the process they have used to answer a question in order to narrate their thinking.

Reflective questions:

- Do my questions include all students in my class ?
- Have I taught students how to be an effective 'talk partner'?
- Have I planned my probing questions?
- Do I (my school) have a well-embedded 'signal, pause, insist' technique to allow dynamic movement from whole class listening to paired discussion?

WalkThrus:

Q&F | 90 COLD CALLING
Q&F | 92 THINK, PAIR, SHARE
Q&F | 98 SAY IT AGAIN BETTER
Q&F | 100 PROBING QUESTIONS

Further reading:

- EEF report on supporting students' independence through questioning
- Brilliant questioning sequences

Videos:

- How do you know Link 43
- Cold call montage Link 72
- What you said is Link 79
- Doug Lemov Field Notes

In the classroom.

Consider how you deliberately and skillfully use a range of questioning techniques to check students' understanding and support their learning. These include:

Cold calling

- Select students to answer
- Involve everyone in thinking
- Students feel safe in answering when unsure
- If they don't know, they should be given the opportunity to gain confidence by consolidating correct or secure answers
- Go back to students who say they don't know or gave a wrong answer, giving them a chance to now say the right answer

Say it again, better

- Set a standard for the depth of verbal responses you expect from students
- Support them to produce high quality responses
- Ask a question and acknowledge the first response
- Give supportive formative feedback
- Invite student to 'say it again, better'

Think, pair, share

- A routine for structured discussion
- Talk partners for every student
- Give a specific, time-cued task
- Build in thinking time
- Circulate to listen
- Use 'cold calling' to sample pairs' response

Probing questions

- Ask questions that make students probe their schema for the ideas being discussed
- Listen to the answer and probe further
- Ask another student to continue

? Check for understanding: the centre of the whole process

What the research says.

To be sure all pupils have formed secure understanding, teachers should not assume that knowledge aired and shared in the public space of the classroom has been absorbed and learned by any individual. It is necessary to check for understanding from all pupils to determine whether they understood what you meant. The information a teacher receives by checking should inform the next steps in a learning sequence. Place 'checking for understanding' right at the centre of teachers' thinking during their lessons.' *Tom Sherrington*

Reflective questions:

- How do I know all pupils have the level of understanding I am aiming for?
- Instead of 'have you understood?' have I asked, **'tell me what you have understood?'**
- Am I prepared to move on, re-teach or defer?

WalkThrus:

Further reading:

- EEF Guidance report on metacognition ; Five ways to: check for understanding
- Dylan Wiliams: Hinge Questions (film)

Videos:

- TLAC: Chapter 3, Clip 015: Show Me
- TLAC: Chapter 7: Clip 077: How can we use this?
- Doug Lemov Field Notes

In the classroom.

In order to make sure you are continuously checking for understanding, carefully planned activities need to be build into your lessons during all parts of the delivery. Consider how you can use a range of techniques to check for pupil's understanding:

Avoid asking:
- 'Are there any questions?
- 'Have you understood?'

- Present information in small steps (see principle 5)
  - If we check for understanding with smaller amounts of material, we are likely to be supporting pupils informing stronger, more reliable schemata

- Show me boards

- Cold calling (see principle 3)

- Probe with a short dialogue or question (see principle 3)

- Think, pair, share (see principle 3)

- Re-teach, defer or move on
  - Have pupils understood to sufficient depth to enable you to move on?
  - Do you need to re-teach key aspects or provide more practice there and then?
  - Is it better to defer a re-teaching phase to a future lesson?

- Ask multiple pupils the same question
  - This will often yield a variety of responses which will throw up subtle points for further teaching to be supporting pupils informing stronger, more reliable schemata

Present new material using small steps: practice with each stage by breaking down our concepts and procedure into small steps so that each can be practised.

What the research says.

Rosenshine tells us that the most effective teachers understand the need to deal with the limitations of working memory and succeed in breaking down concepts and procedures into small steps. They spend more time providing explanations, modelling and guiding practice at each stage. In order to form secure schema, students need to assimilate new learning connecting what they already know.

Reflective questions:

- Do I know what knowledge and understanding have the children brought to the lesson?

- Have I broken down the learning into small enough steps?

- What are the first new ideas that I think students should have?

WalkThrus:

E&M | 90
CHUNKING

Further reading:

- EEF blog: Working with worked examples - Simple techniques to... | EEF

Videos:

- TLAC Binominal Link 007

In the classroom.

- Consider first how the learning can be broken down into a series of linked steps

- Check students existing knowledge before proceeding onto the next step and address the gaps where they exist

- Begin with the basics on which the rest of learning depends – this will often be vocabulary based

- These introductory steps will then need building upon, breaking down the concepts and skills further looking for common misconceptions

- Introduce each step clearly using appropriate modelling to ensure all students can access the learning

- For students to succeed they will usually need to practice the steps one by one

Provide models: Models are a central role feature of providing good explanations and can help students to learn to solve problems faster.

What the research says.

Providing models is a central feature of giving good explanations. Models can be: physical representations of a completed task; conceptual models; or explicit narration of our thought processes. Rosenshine explains that modelling with the teacher thinking aloud as they demonstrate how to tackle a task provides students with vital cognitive support. Students learn successfully from studying a series of complete worked examples as it reduces the cognitive load allowing them to develop methodology, rather than learning initial application to a particular question.

Reflective questions:

- Have I explained the small steps of decision making within the construction of a model
- Have I unpicked fully with the children the similarities and differences between models to ensure a depth of understanding?
- Have I modelled the reflective learning we want to see within the students by being explicit in our review of the model?

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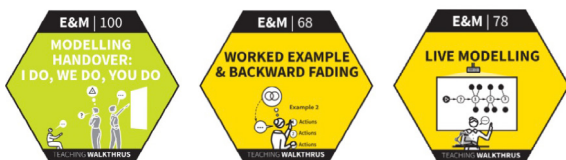
Further reading:

- Five ways to secure success through modelling
- Durrington Research School: Mastering Modelling

Videos:

- Doug Lemov Field Notes

In the classroom.

- Introduce the first example of a question, go through the problem on the board, producing a model answer. (This can be prepared but it is often more successful modelled live)

- For every step, narrate the process of thinking through the problem/task

- Initially students, should be listening, not copying

- Stand back from the modelled example and evaluate whether it meets the success criteria

- Talk through each your steps with the children and check their understanding with specific questioning e.g. What did I do here? Why did I choose this?

- Repeat this process drawing attentions to similarities and differences, regularly narrating your thinking

- Next, provide partially worked examples for the students to follow that mirror the previous worked examples, checking for variations in understanding and misconceptions

- Judge when students are ready to complete the next phase independently

- Ensure tasks set emulate the model

- Ensure that editing is clearly modelled

Provide scaffolds for difficult tasks : Used to support ambitious goals and develop expertise so that scaffolds can be gradually withdrawn.

What the research says.

Rosenshine tells us that it can be important for students to undergo a form of 'cognitive apprenticeship' where they learn strategies from a master teacher who models, coaches and supports them to develop a level of independence.

The key is that scaffolds are temporary; they support the development of understanding but should be withdrawn according to need so that students don't become reliant on them. Scaffolds must be a ladder not a crutch.

Reflective questions:

· Is the child ready to learn independently and can the scaffolds be removed?

· Do I know with confidence what each child can do independently?

· Are the children being scaffolded to complete a task or supported to become independent?

WalkThrus:

Further reading:

· How to use scaffolding in your lessons

· Scaffolding: more than just a worksheet

In the classroom.

· Break down the task into steps that children will need to follow in order to achieve success

· Consider the difficulties that students will encounter and create/provide resources that support them to make these steps successfully

· Detailed scaffolding will look different according to the task and the children within your class but could include word lists, diagrams, concept maps, sentence starters, phrases or connectives, prompts, number support for specific children (or at the early stages of a unit of work all children)

· Checklists of success criteria will provide scaffolding at an overview level

· Scaffolding should be used to vary the level of support according to need but be aligned to an overall expectation of producing work of a high standard

· Sometimes scaffolding can be self-selected by the students but this will need careful monitoring to ensure it meets their needs.

· The classic sequence of modelling follows an 'I do, we do, you do' sequence. The culmination of practice and instruction should be that students are ready to access learning independently

· If scaffolding has achieved its purpose, it should promote confidence and resilience within the learner.

· Choosing when to remove the scaffold is an important decision made easier by clear ongoing assessment within the small steps of a lesson or unit of work and a good knowledge and understanding of the individual child.

Guide student practice: We closely supervise student's initial attempts to build confidence and make sure they don't make too many errors.

What the research says.

Rosenshine suggests that unless there is sufficient rehearsal and practice, students will forget new material. When there has been sufficient rehearsal including rephrasing, elaborating and summarising new material, students are able to retrieve it and are able to make use of it for new learning. For this to be most successful, teachers need to devote time to securing a high success rate when students begin to learn this new material.

Reflective questions:

- Have I incorporated multiple opportunities for students to practice each step of the learning?

- What models and scaffolds have I provided to ensure a high success rate?

- Am I checking that all students are achieve success as they practice each step of the learning?

WalkThrus:

Further reading:

- Modelling teaching – it's all in the handover

Videos:

- TLAC: Chapter 8 Clip 002 – Guiding students through individual tasks in small chunks

In the classroom.

- Guide the early stages of practice, making unsure that students are getting the details correct , practising doing things right rather than doing things wrong.

- Introduce the new idea of skills using a range of modelling and explaining techniques in order that it seems achievable to students.

- Provide models and scaffolds to ensure a high success rate when students are learning new material.

- Give time to reteach materials if students are struggling too much .

- Move students are onto individual practice if they are gaining fluency quickly.

Obtain a high success rate: We set tasks that, with sufficient practice, allow students a high success rate. Tasks with high success rates allow students to reinforce error free, secure learning, improving fluency and practice.

What the research says.

Rosenshine refers to research that shows that more effective teachers set questions and tasks with sufficient practice to engineer a high success rate – with an optimal level around 80%He suggest lowering this to 70% is too low. If students are getting too much wrong they are effectively practising making mistakes. This can then form part of what is learned and be hard to overcome.

Reflective questions:

· Am I teaching in small steps to best achieve a high success rate?

· Is there enough opportunities for guided practice?

· Am I continuously assessing the learning of all students to understand if they are being successful in their learning?

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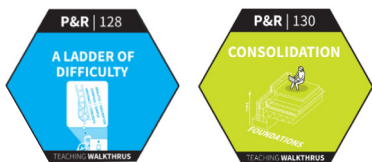
Further reading:

· Obtain a high success rate

In the classroom.

· High expectations of all students: having high teacher expectations can significantly improve academic achievement.

· Present information in small steps, regularly checking student understanding throughout lesson, ask questions and monitor independent practice closely.

· Place greater emphasis on identifying misunderstanding early on so students do not practise making errors by getting too much wrong.

· Dedicate time to re-modelling and re-teaching information so students can develop stronger foundational knowledge.

· If the success rate is too high, you may need to challenge students by making tasks harder, asking them to engage in more critical thinking, or provide them with ample opportunities to learn independently.

Independent practice: We make time for students to do the things they have been taught (when they are ready!)

What the research says.

When guided practice is followed by independent practice (when students work alone and practise new learning) the independent practice is needed to become fluent and automatic in a skill. This allows material to become automatic and not take any space in working memory. Independent practice provides students with the additional review and practice they need to become fluent.

Reflective questions:

- Have I gradually moved from guided to independent practice?

- How am I going to evaluate students success to ensure they are increasing their fluency?

- Do I provide greater challenge when students are successful in independent practice?

WalkThrus:

P&R | 128
INDEPENDENT PRACTICE

Q&F | 104
FEEDBACK THAT MOVES FORWARD

Further reading:

- Responsive teaching in action
- Encourage independent practice

In the classroom.

- Check that students have the required level of confidence before moving to independent practice.

- If they are not yet ready do not move onto independent practice

- Set materials that mirror those used in guided practice or use an extension of these that increase levels of challenge as student's fluency increases.

- Evaluate the success of independent practice providing feedback to ensure their level of fluency is increasing.

- Reduce guidance over time, expecting students to self-assess their performance

- As their success rate and confidence increases give students greater levels of challenge

Notes

Notes