



EPT Maths Playbook

Planning, Teaching & Learning in
Mathematics

Endeavour Partnership Trust

2026-27

Welcome to the EPT Maths Playbook



Purpose

The EPT Maths Playbook sets out our shared approach to planning, teaching and learning in mathematics across Endeavour Partnership Trust schools.

It is designed to provide clarity, consistency and support for all staff by capturing the key principles, practices and routines that underpin high-quality mathematics teaching. It establishes a common language for professional dialogue, coaching and development, while ensuring that all pupils experience a coherent approach to mathematics as they move through our schools.

This playbook is not intended to replace professional expertise. Instead, it provides a framework through which teachers can make informed decisions, drawing upon their knowledge of mathematics, pedagogy and the needs of the pupils they teach.

Our Curriculum

At EPT, we use the White Rose Maths Scheme of Learning as the foundation of our mathematics curriculum. White Rose provides a coherent progression of small steps that supports pupils in developing secure and connected mathematical understanding.

We recognise, however, that no single resource meets every need. Therefore, teachers are encouraged to enrich and enhance learning through the thoughtful use of a range of high-quality materials, including resources from NCETM, NRICH, Oak National Academy, Classroom Secrets and other trusted sources.

Professional knowledge, curriculum understanding and an awareness of pupils' needs remain central to effective planning. Teachers are expected to exercise professional judgement when selecting, adapting and designing resources to ensure that learning is purposeful, engaging and responsive.

Using This Playbook

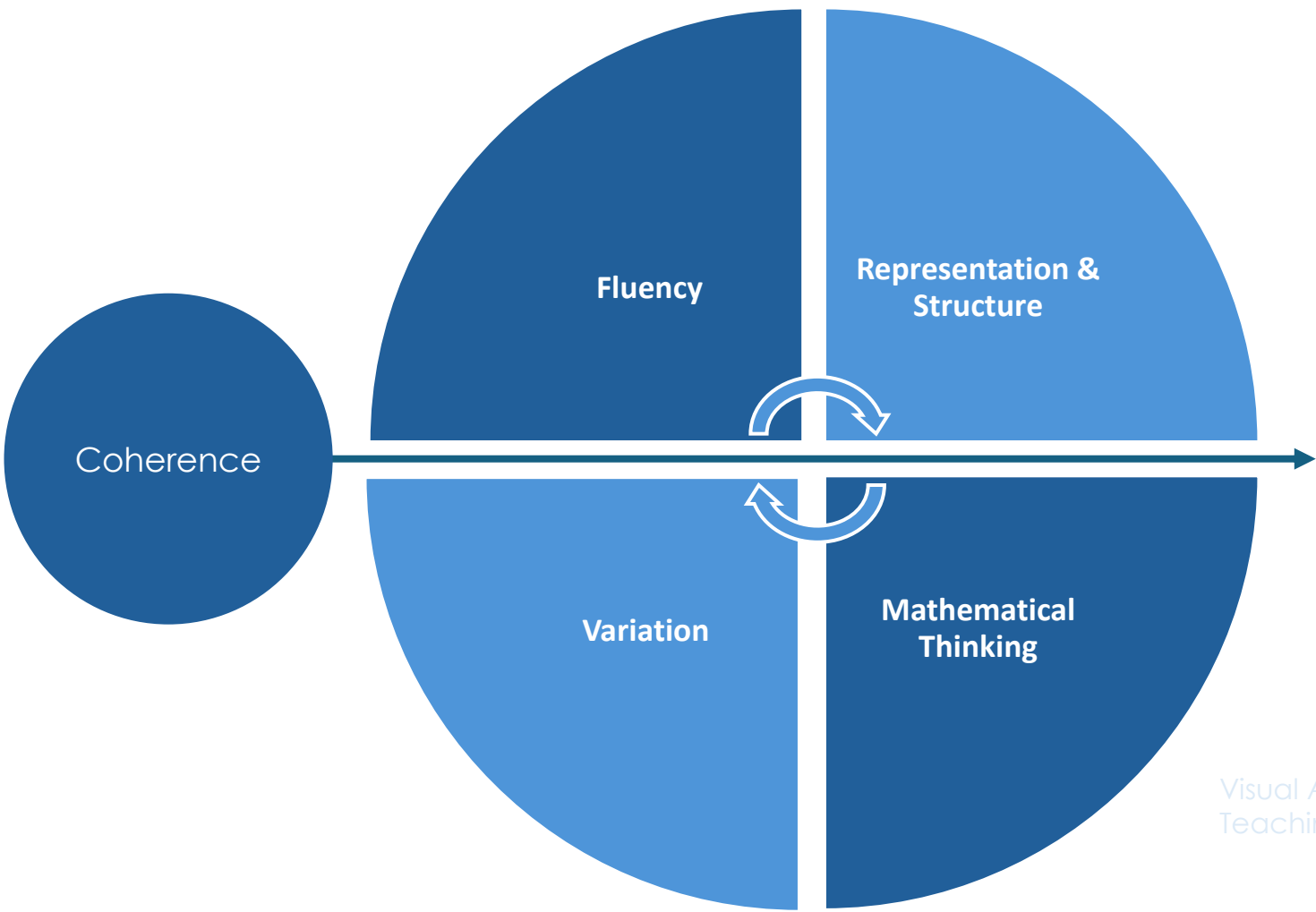
This playbook should be used to:

- Support planning and lesson design
- Guide classroom practice
- Inform coaching and professional development
- Promote consistency across schools and year groups
- Support reflective professional conversations

The playbook is intended to be a living document. As our practice develops, it will continue to evolve through collaboration, reflection and evidence-informed improvement.

Great mathematics teaching is not left to chance. It is planned, practised, refined and strengthened over time. This playbook captures our shared commitment to that process.

Teaching for Mastery in Maths – Core Principles



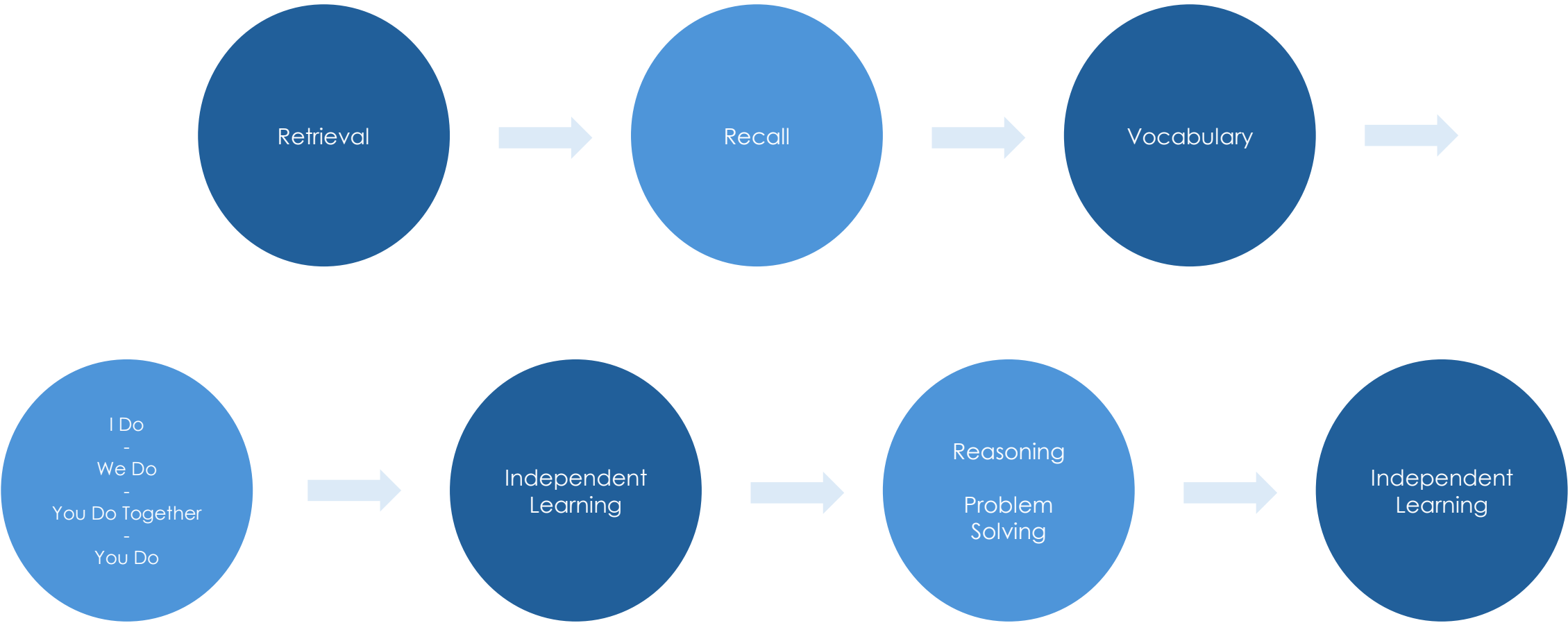
Ctrl + K: Click link symbol for linked sections.

Visual A - The Five Big Ideas of Teaching for Mastery – Page 5



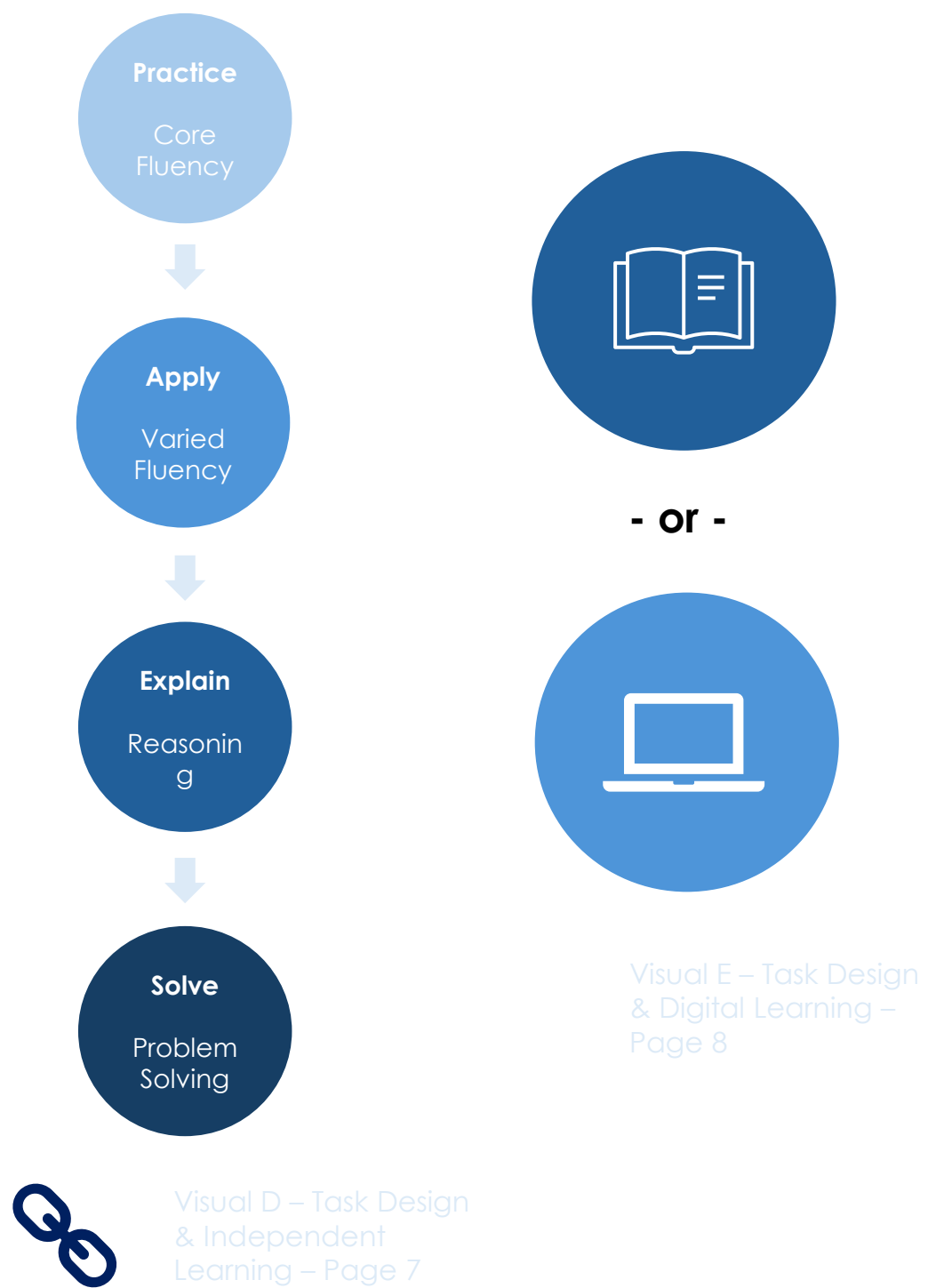
Visual B – Concrete, Pictorial Abstract – Page 5

Lesson Structure

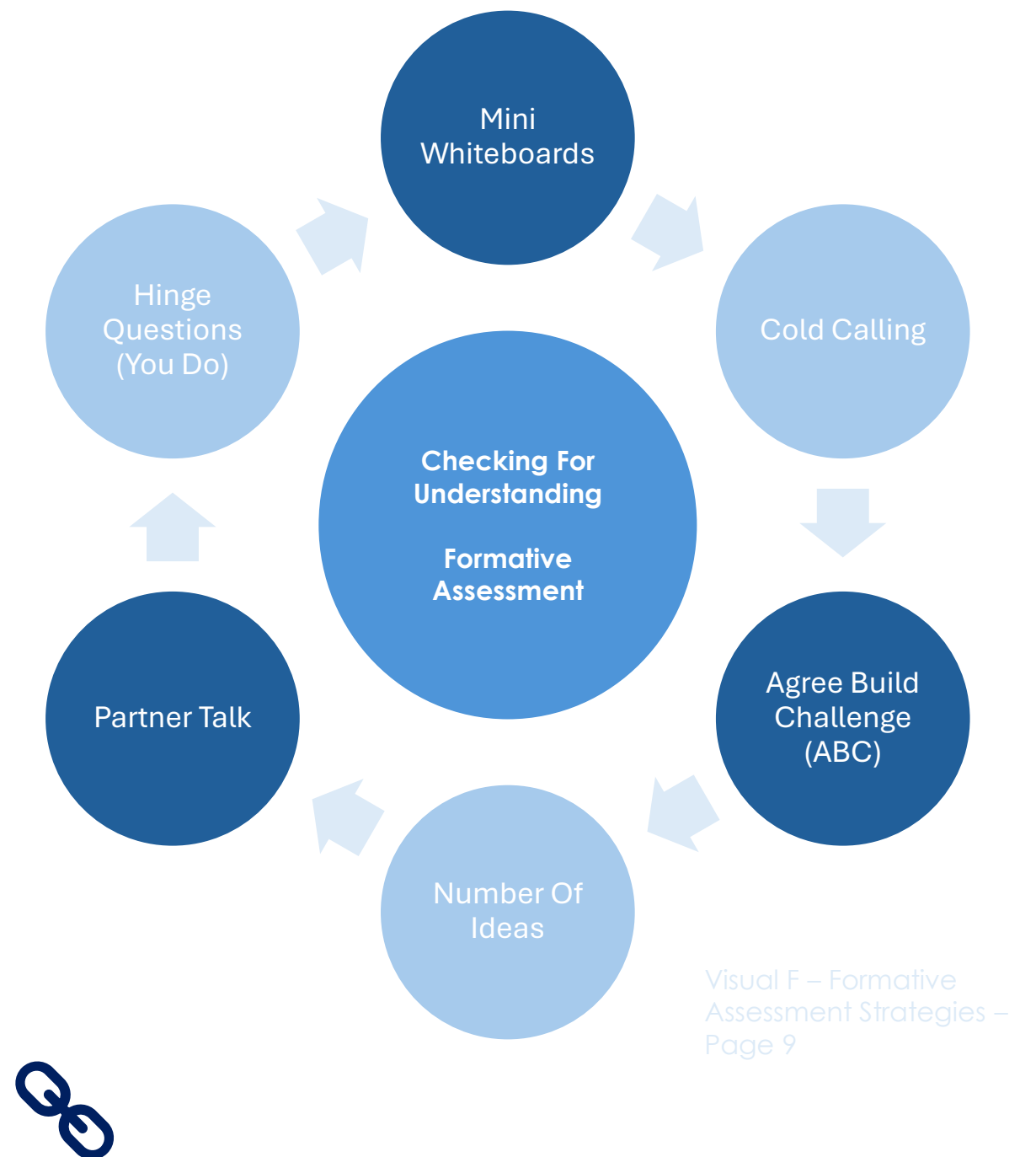


Visual C – EPT Core Maths Lesson Structure – Page 6

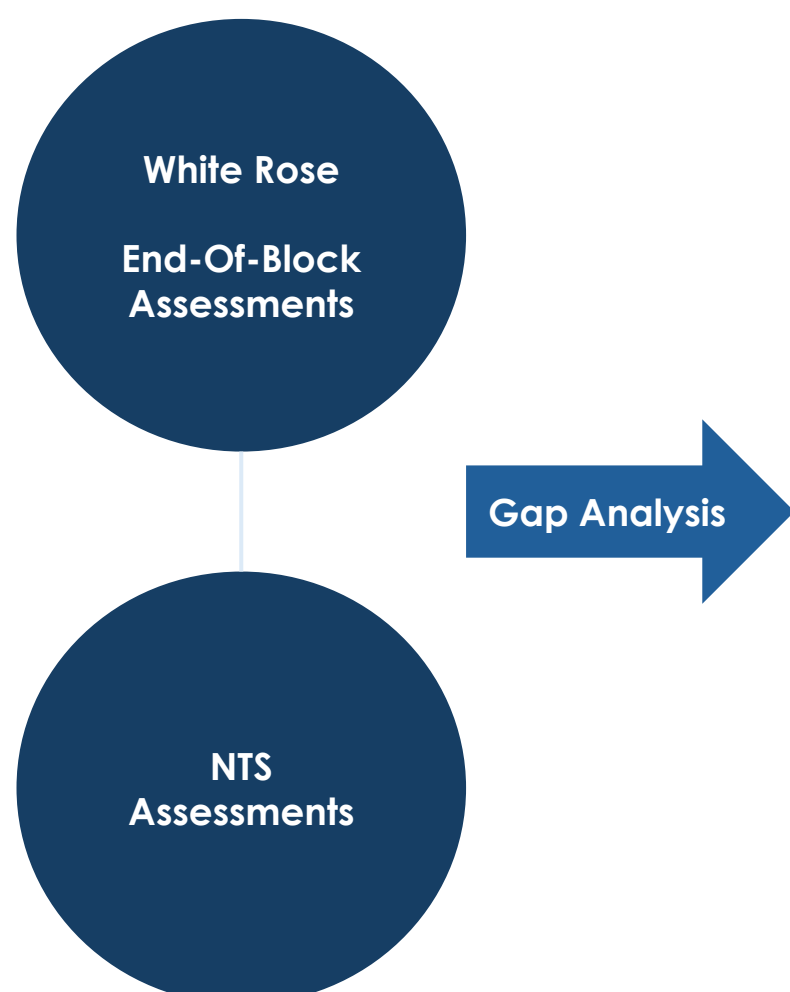
Task Design & Independent Learning



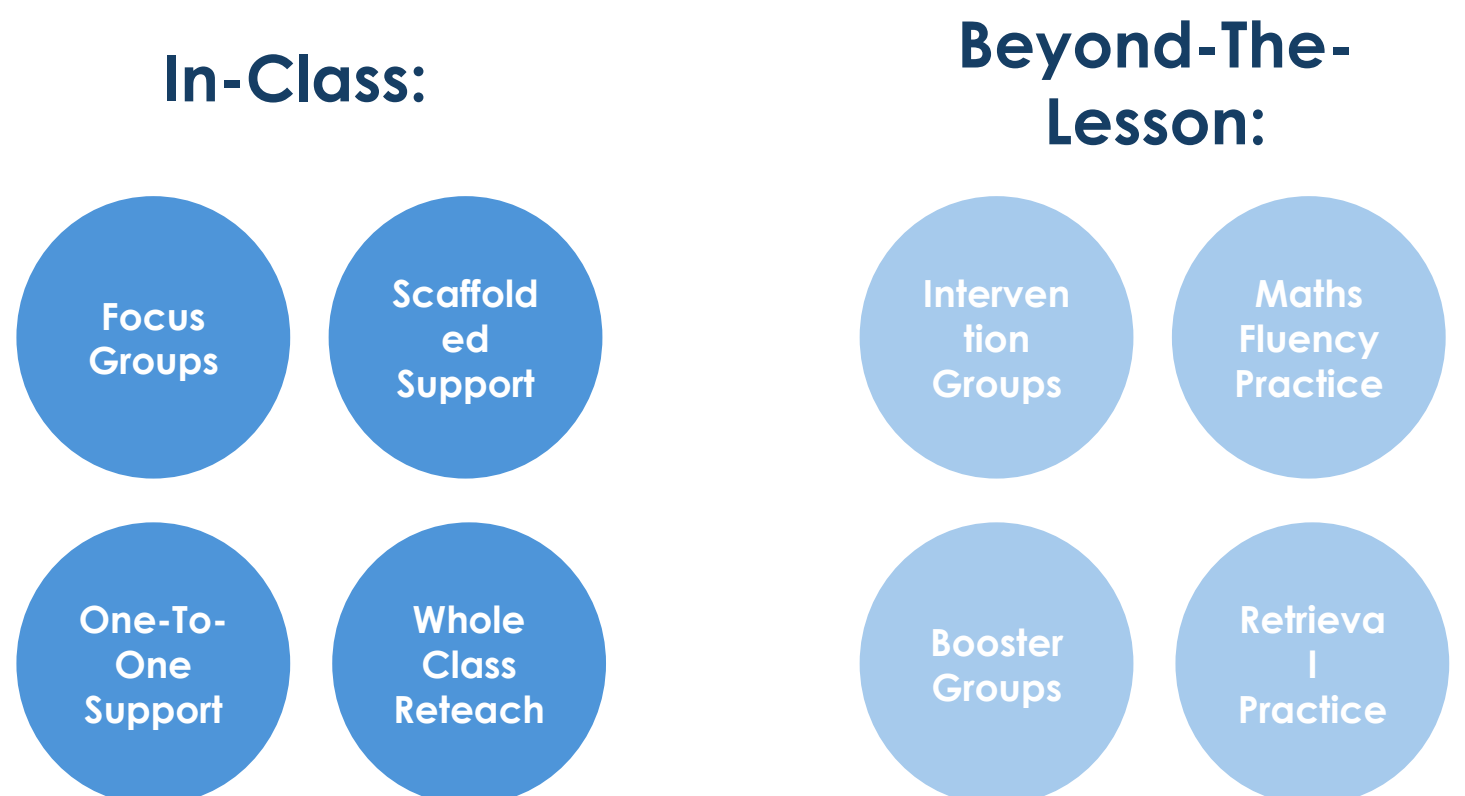
Formative Assessment



Summative Assessment



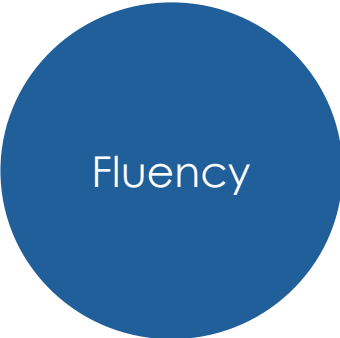
Responsive Provision



Visual G – Summative Assessment & Responsive Provision Strategies – Page 10, 11 & 12

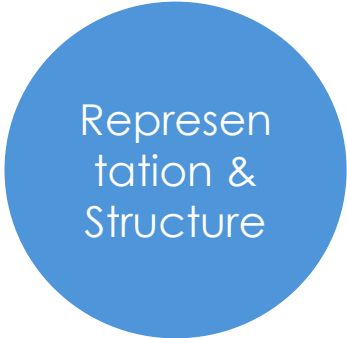
Teaching For Mastery In Mathematics

The Five Big Ideas



Accurate, efficient and flexible recall.
Seen through:

- Retrieval and recall
- Structured practice
- Fluency activities



Making mathematical relationships visible.
Seen through:

- Concrete resources
- Visual models
- Explicit teaching of structure



Explaining, justifying and reasoning.
Seen through:

- Partner Talk
- ABC discussions
- Number Of Ideas



Using carefully designed examples.
Seen through:

- Small purposeful changes
- Sequenced examples
- Identifying patterns



Learning through connected small steps.
Seen through:

- White Rose progression
- Secure prerequisite knowledge
- Logical sequencing

Pupils move between representations to develop secure understanding.

- Concrete - physical resources
- Pictorial - visual representations
- Abstract - numbers and symbols

What this looks like at EPT

- ✓ The Five Big Ideas are evident in lesson design and classroom practice
- ✓ Teachers use representations purposefully to reveal mathematical structure
- ✓ Mathematical discussion and reasoning are routine features of lessons

- ✓ Learning is sequenced through carefully planned small steps
- ✓ Teachers move flexibly between Concrete, Pictorial and Abstract representations
- ✓ All pupils access the same mathematical concept through appropriate scaffolds and support

Common Pitfalls

- X Moving pupils to abstract methods before conceptual understanding is secure
- X Using manipulatives without a clear mathematical purpose

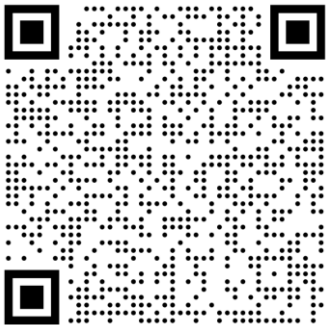
- X Treating CPA as a fixed sequence rather than a flexible approach
- X Prioritising procedural fluency over conceptual understanding
- X Providing different mathematics rather than scaffolded access to the same learning



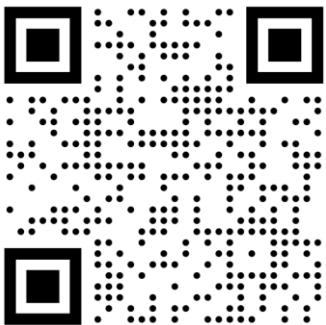
Click hand symbol for linked EPT examples.



- 1 [NCETM - Five Big Ideas in Teaching for Mastery](#)
- 2 [White Rose - Resources and Small Steps](#)



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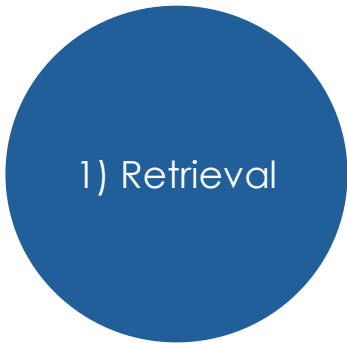
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Our Core Maths Lesson Structure



A consistent lesson structure supports high-quality teaching and learning by providing opportunities for pupils to rehearse, discuss, apply and reason mathematically.

It also enables teachers to gather evidence of learning and respond to pupils' needs throughout the lesson.



- Review and practice of previously taught curriculum content.
- Completed on mini whiteboards
 - Focused on fluency and retention
 - Provides immediate assessment information



- Reviews recent learning within the current unit.
- Activates prerequisite knowledge
 - Identifies misconceptions before new learning
 - Ensures pupils are ready for today's lesson



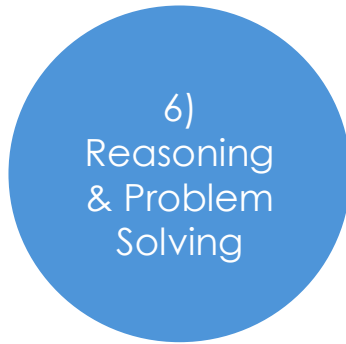
- Explicit teaching and revisiting of mathematical language.
- Introduced and explained clearly
 - Modelled by adults
 - Revisited throughout the lesson



- I Do** - Teacher models new learning, making thinking visible.
We Do - Guided practice with teacher support.
You Do Together - Collaborative rehearsal and discussion.
You Do (Hinge Question) - Independent practice used to determine readiness to move on.



- Pupils apply learning independently in books.
Provides evidence of understanding and identifies next steps.



- Planned opportunities for pupils to explain, justify, apply and generalise their learning.

What this looks like at EPT

- ✓ Retrieval and recall are purposeful and linked to curriculum learning
- ✓ Vocabulary is explicitly taught, modelled and revisited
- ✓ Mini whiteboards are used throughout lessons to gather evidence
- ✓ The EPT Direct Instruction model is used consistently
- ✓ Hinge Questions influence teaching decisions
- ✓ Independent learning provides a secure check of understanding
- ✓ Reasoning and problem solving are planned intentionally

Common Pitfalls

- X Retrieval becoming reteaching rather than retrieval practice
- X Recall activities not preparing pupils for today's learning
- X Vocabulary displayed but not explicitly taught
- X Moving pupils to independent work before understanding is secure
- X Hinge Questions that do not influence teaching decisions
- X Treating reasoning as an add-on rather than an integral part of learning



Click hand symbol for linked EPT examples.

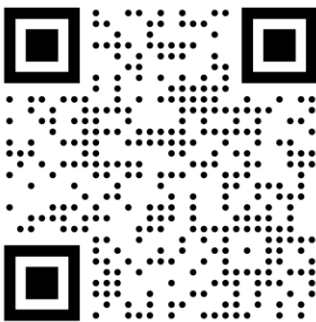


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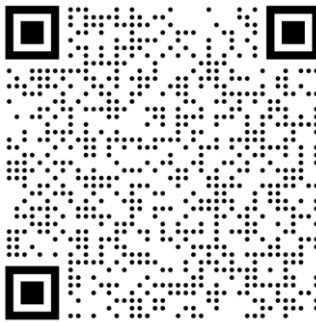
[White Rose Maths - Schemes of Learning](#)

2

[EEF - Metacognition & Self-Regulated Learning Guidance](#)



1



2

Task Design & Independent Learning



Independent learning provides pupils with opportunities to practise, apply, explain and solve using the learning that has been taught, modelled and rehearsed during the lesson. It should provide a final check of understanding and allow teachers to gather evidence of pupils' learning.

Independent learning should not introduce a new mathematical procedure, representation or concept that has not already been taught through the I Do, We Do, You Do sequence.

1) Practise

Replicates the taught small step.

The first independent questions should closely match the learning that pupils have rehearsed during I Do, We Do, You Do Together and You Do.

Pupils should first demonstrate the exact skill that has been taught before being expected to apply it in different ways.

2) Apply

Uses variation to deepen understanding.

Questions should require pupils to apply the same learning whilst exposing mathematical structure through variation.

This may include:

- Different representations
- Different question layouts
- Missing number problems
- Comparison questions
- "What changes? What stays the same?"

The mathematical skill remains the same.

3) Explain

Requires pupils to justify, convince and reason.

Pupils may be asked to:

- Explain their thinking
- Justify a method
- Spot and correct errors
- Compare strategies
- Prove whether a statement is true or false

The focus is on understanding rather than simply obtaining an answer.

4) Solve

Applies learning in increasingly complex contexts.

Problems should require pupils to use the learning from the lesson in unfamiliar situations.

Challenge should come from the context, reasoning or application rather than introducing new mathematical content.

What this looks like at EPT

- ✓ Independent learning follows the taught small step
- ✓ The first independent questions closely match the learning rehearsed during I Do, We Do, You Do
- ✓ Questions broadly move from Practise → Apply → Explain → Solve
- ✓ Variation is used to reveal mathematical structure and deepen understanding
- ✓ Reasoning and problem solving are routinely planned
- ✓ Tasks anticipate and expose common misconceptions.

- ✓ Challenge comes through depth of thinking rather than larger numbers or additional content
- ✓ Pupils are given sufficient opportunities to secure learning without excessive repetition
- ✓ Scaffolded resources support access to the same learning rather than reducing challenge
- ✓ Teachers use assessment to determine the most appropriate level of support
- ✓ Where assessment indicates that the taught small step is not yet appropriate for an individual pupil. In these circumstances, alternative learning may focus on the next most important mathematical step for that learner

Common Pitfalls

- X Retrieval becoming reteaching rather than retrieval practice
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- X Moving pupils to independent work before understanding is secure
- X Hinge Questions that do not influence teaching decisions
- X Treating reasoning as an add-on rather than an integral part of learning



Click hand symbol for linked EPT examples.

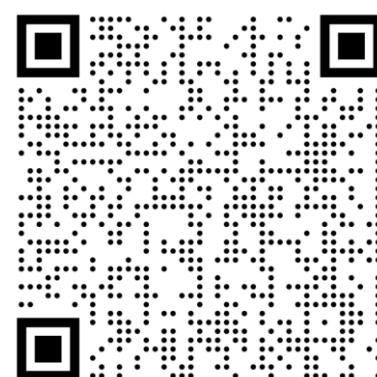
External Resources:

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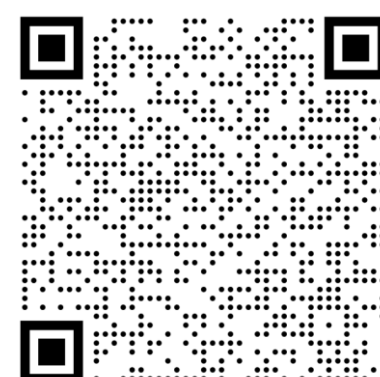
[EEF - Scaffolding](#)

2

[NRICH – Developing Mathematical Thinking](#)



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Task Design & Digital Learning



Digital technology is used to enhance mathematics teaching and learning, not replace high-quality classroom practice.

The EPT lesson structure, Teaching for Mastery principles and direct instruction remain consistent regardless of whether pupils complete independent learning in books or digitally. Technology should increase opportunities for practice, retrieval, feedback and responsive teaching.

Core Maths Lessons - Books or Digital?



In books

- or -



Through a teacher-assigned
Magma Maths lesson.

Regardless of the medium:

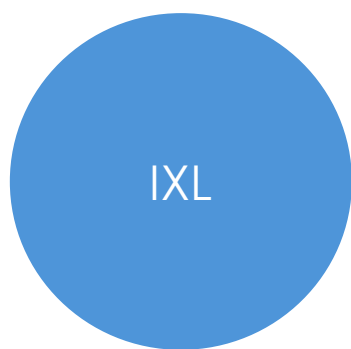
- ✓ The same lesson structure is followed.
- ✓ The same small step is taught.
- ✓ Direct instruction remains central.
- ✓ Questions broadly move from Practise → Apply → Explain → Solve.
- ✓ Teachers continue to gather formative assessment.
- ✓ Teachers respond to misconceptions.

The technology changes.

The pedagogy does not.

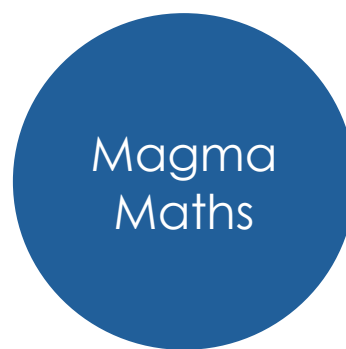
Digital Learning Beyond the Lesson

Digital platforms provide additional opportunities to strengthen mathematical understanding beyond the core lesson.



Used to:

- consolidate learning
- retrieval practice
- targeted intervention
- independent practice
- personalised practice informed by assessment



Can also be used beyond the lesson for:

- retrieval
- consolidation
- additional practice
- teacher-directed assignments

What this looks like at EPT

- ✓ Technology supports learning rather than replacing teaching.
- ✓ Teachers deliver the same high-quality lesson regardless of the learning platform.
- ✓ Digital tasks reflect the taught small step.

- ✓ Technology provides timely feedback and useful assessment information.
- ✓ Digital platforms are used purposefully, not simply because they are available.
- ✓ Digital learning complements classroom teaching and responsive provision.

Common Pitfalls

- X Technology replacing high-quality teaching.
- X Digital learning introducing content that has not been taught.
- X Using digital platforms as independent busy work.

- X Selecting technology because it is engaging rather than because it improves learning.
- X Viewing digital learning as separate from the mathematics curriculum.

External Resources:

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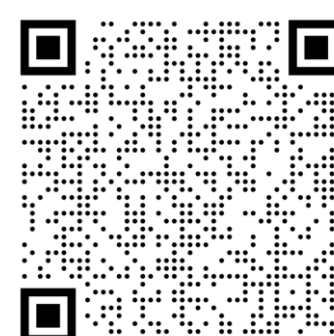
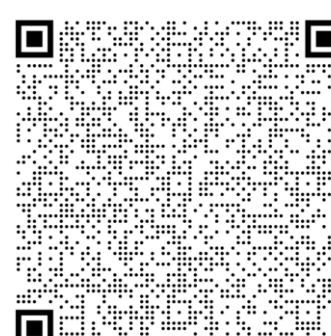
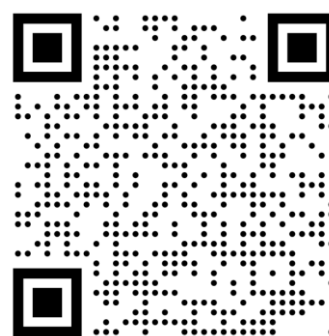
[Magma Maths – Library](#)

2

[IXL – Real-Time Diagnostic & Analytics](#)

3

[EEF – Using Digital Technology to Improve Learning](#)



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Formative Assessment Strategies



Formative assessment is the process of gathering evidence about pupils' learning and using that evidence to make immediate teaching decisions.

It enables teachers to identify misconceptions, adapt teaching and provide timely support so that learning remains secure and pupils make progress through the curriculum.



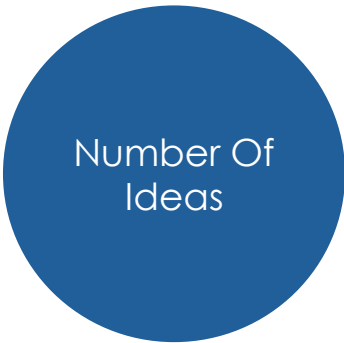
Used to gather responses from every pupil and make thinking visible.
Purpose:
Provides immediate evidence of understanding and misconceptions.



Used to ensure all pupils contribute and remain accountable for learning.
Purpose:
Promotes participation and provides a more accurate picture of class understanding.



Structures mathematical discussion and encourages pupils to engage with one another's thinking.
Purpose:
Develops reasoning, justification and mathematical language.



Encourages pupils to generate multiple approaches and solutions.
Purpose:
Promotes flexibility and encourages comparison of methods.



Provides structured opportunities for pupils to rehearse, explain and refine their thinking.
Purpose:
Strengthens understanding and supports mathematical communication.



A carefully designed question used to determine readiness to move on.
Purpose:
Informs immediate teaching decisions.

What this looks like at EPT

✓ Mini whiteboards are used routinely to gather evidence from every pupil
✓ Cold Calling ensures participation from all learners
✓ Mathematical discussion is structured through ABC and Partner Talk

✓ Number Of Ideas encourages multiple approaches and flexible thinking
✓ Hinge Questions directly influence lesson direction
✓ Teachers respond to evidence gathered throughout the lesson

Common Pitfalls

X Hearing only from volunteers
X Accepting answers without probing understanding

X Using discussion structures without purpose
X Asking Hinge Questions that do not influence teaching
X Gathering evidence without responding to it



Click hand symbol for linked EPT examples.

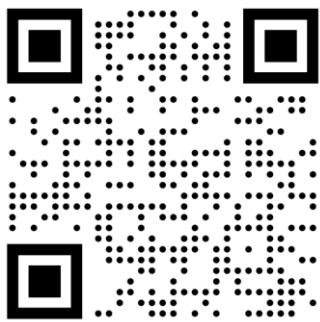


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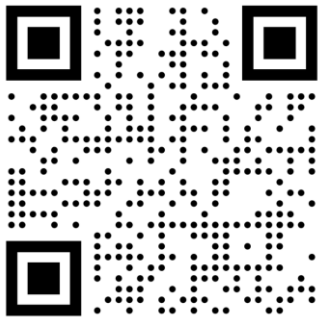
[Teach Like A Champion – Cold Calling](#)

2

[Dylan Williams – Hinge Questions](#)



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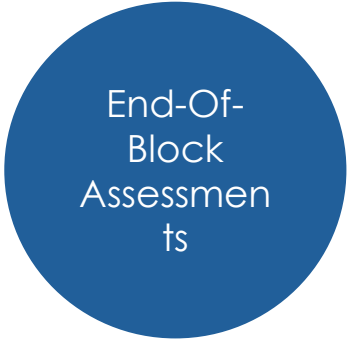
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Summative Assessment Strategies



Summative assessment evaluates learning over time and helps identify strengths, gaps and next steps.

Assessment information should be used to inform future teaching, intervention and curriculum planning.



Assess recently taught curriculum content at the end of a unit.
Purpose:

- Identify strengths and misconceptions
- Inform responsive teaching
- Support future planning



Provide standardised information about attainment and progress over time.
Purpose:

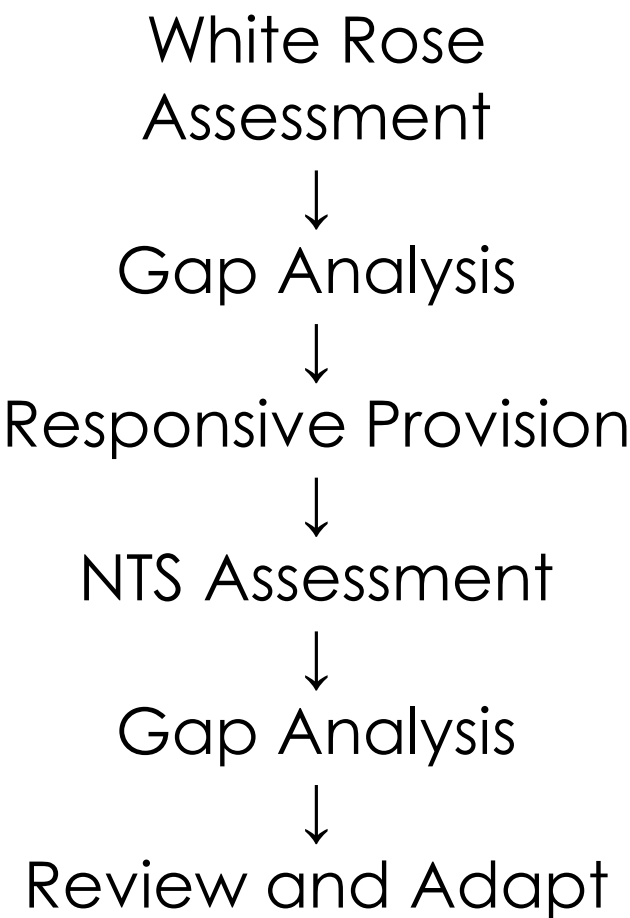
- Identify wider trends
- Support curriculum evaluation
- Inform strategic planning



Assessment information should be analysed and used to inform:

- Future planning
- Retrieval opportunities
- Responsive Provision
- Intervention
- Curriculum development

Assessment Cycle



What this looks like at EPT

- ✓ Assessments are completed consistently and accurately across the school
- ✓ Gap analysis identifies specific curriculum strengths and weaknesses
- ✓ Teachers use assessment outcomes to inform future planning

- ✓ Responsive Provision is linked directly to identified gaps
- ✓ Curriculum trends are identified and addressed over time
- ✓ Leaders use assessment information to evaluate curriculum effectiveness
- ✓ Assessment is used to improve teaching and learning rather than simply collect data

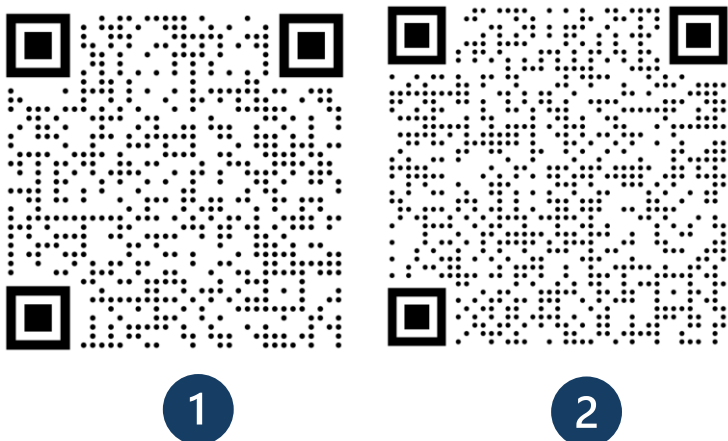
Common Pitfalls

- X Collecting assessment data without taking action
- X Focusing on attainment scores rather than understanding
- X Delaying intervention after gaps have been identified

- X Using generic support rather than targeting specific misconceptions
- X Ignoring curriculum trends that emerge from assessment information
- X Treating assessment as an accountability exercise rather than a tool for improvement



- 1 [NTS Assessments](#)
- 2 [EEF - Assessment and Feedback Guidance](#)

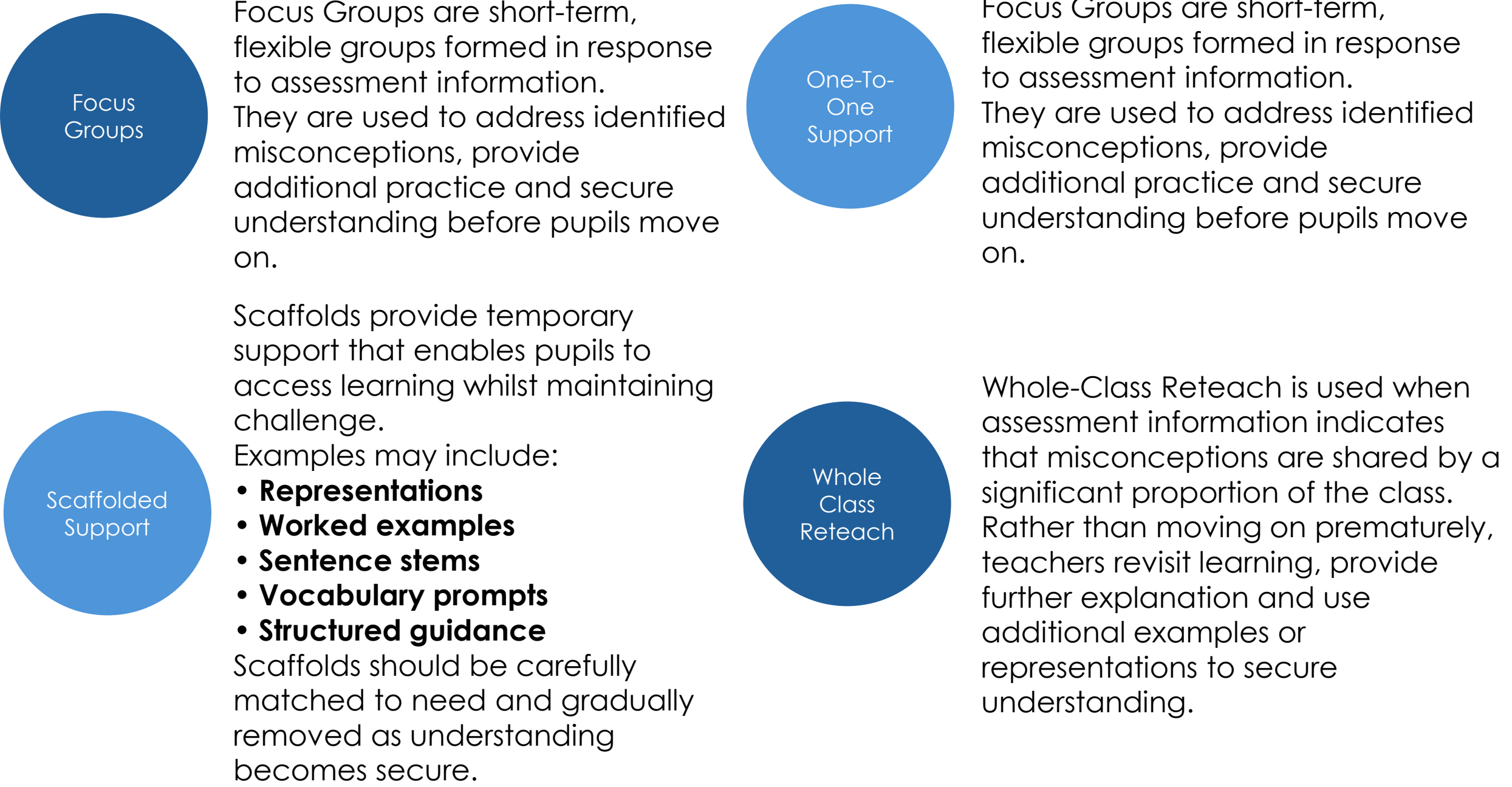


In-Class Responsive Provision



Responsive Provision ensures pupils receive the right support at the right time based on assessment information.

Support is timely, targeted and informed by identified need.



What this looks like at EPT

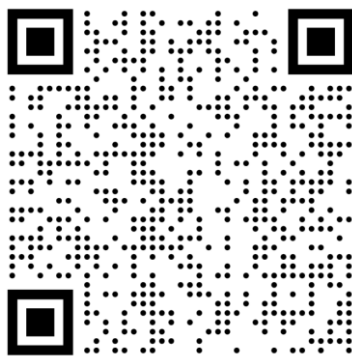
- ✓ Assessment information drives decisions about support
- ✓ Focus Groups are flexible and responsive
- ✓ One-to-One Support is timely and purposeful
- ✓ Scaffolds are used to increase access without reducing challenge
- ✓ Whole-Class Reteach is used when misconceptions are shared across the class
- ✓ Support is removed when it is no longer required
- ✓ High expectations are maintained for all learners

Common Pitfalls

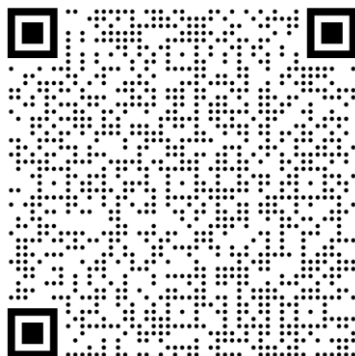
- X Fixed intervention groups that do not respond to assessment information
- X Generic support that is not linked to identified gaps
- X Delayed intervention that allows misconceptions to become embedded
- X Over-reliance on adult support
- X Scaffolds becoming permanent rather than temporary
- X Moving on before misconceptions have been addressed



- 1 [EEF Special Educational Needs in Mainstream Schools](#)
- 2 [EEF Five-a-Day Approach](#)



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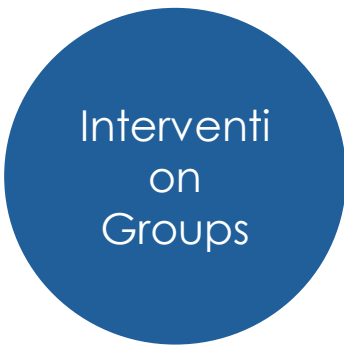
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Beyond-The-Lesson Provision

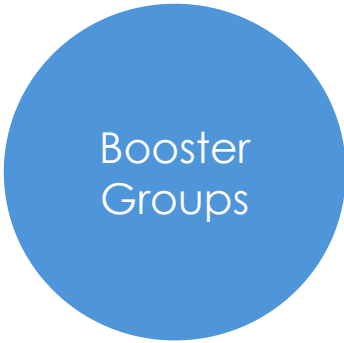


Beyond-the-Lesson Provision provides additional support informed by formative and summative assessment. It is used when pupils require further practice, reteaching or intervention beyond the core maths lesson.

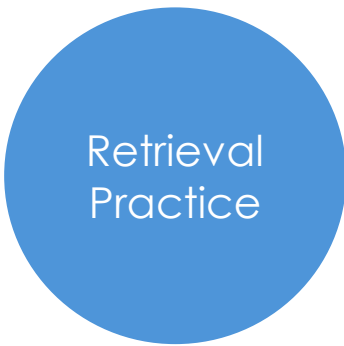
Provision should be timely, targeted and based on identified need. The aim is to secure understanding, address gaps and enable pupils to access future learning successfully.



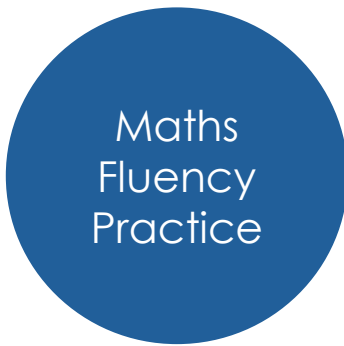
Targeted support focused on specific gaps in knowledge, skills or understanding identified through assessment. Interventions should be precise, short-term and linked directly to identified need.



Additional provision designed to consolidate learning, increase confidence and strengthen understanding. Booster groups may support pupils in securing key curriculum content or preparing for future learning.



Planned opportunities to revisit previously taught content and strengthen long-term retention. Retrieval activities should focus on identified gaps, prerequisite knowledge and curriculum priorities.



Additional opportunities to develop automaticity, confidence and flexibility with key mathematical knowledge and skills. Examples include:

- NCETM Mastering Number
- NumBots / Times Table Rock Stars
- IXL
- Magma Maths

Fluency provision should complement classroom learning and be informed by assessment information.

What this looks like at EPT

- ✓ Fluency provision is informed by formative and summative assessment
- ✓ NumBots, Times Table Rock Stars, IXL and Magma Maths are used purposefully
- ✓ Digital platforms complement high-quality classroom teaching
- ✓ Practice supports identified gaps and curriculum priorities

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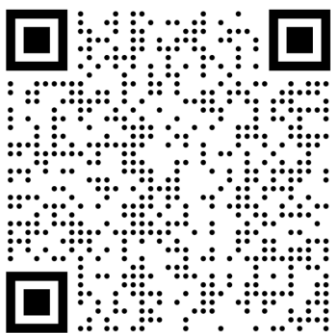
Common Pitfalls

- X Over-reliance on digital platforms as the sole source of practice
- X Fluency activities disconnected from classroom learning
- X Prioritising completion rates over understanding

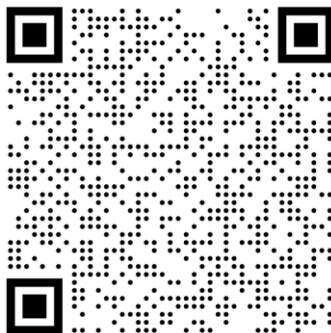
- X Focusing solely on speed rather than accuracy and flexibility
- X Using platforms without reviewing pupil engagement or impact
- X Providing the same fluency provision regardless of identified need
- X Treating fluency as separate from wider mathematical learning



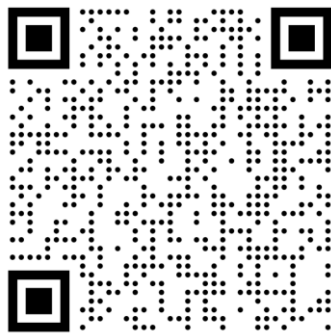
- 1 [EEF - Special Educational Needs in Mainstream Schools](#)
- 2 [EEF - Metacognition and Self-Regulated Learning](#)
- 3 [NCETM - Mastering Number](#)



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3

Teaching For Mastery In Mathematics

The Five Big Ideas



Resources coming soon!

Our Core Maths Lesson Structure



Resources coming soon!

Our Core Maths Lesson Structure



Resources coming soon!



Resources coming soon!