Teaching and Learning Policy

	Name	**Signature**	**Date**
Headteacher's Approval	Charley Oldham		June 2022
Chair of Governors' Approval	Kate Coulson		March 2024
Recommended Review Date:	March 2025		

Version Number

This document is issued and maintained in accordance with Cogenhoe Primary School procedures. Any changes must be clearly identified and discussed with the Governors. The most recent version must be detailed to staff and kept with the other policies for all appropriate stakeholders including parents where applicable.

Version	Date	Description of Change	Changed By
1	March 2024	Principles changed	Sian Blackwell

Teaching and Learning Policy

At Cogenhoe Primary School, we strive to ensure that each and every child consistently experiences high quality teaching and learning which is engaging, creative and challenges every learner to reach their full potential. As professionals, we all have individual attributes which contribute to the high quality teaching and learning experiences at Cogenhoe Primary. Effective elements of this are shared with other members of staff to impact on the practice of others. Whilst we celebrate these strengths, we also have non-negotiables that as a team we believe must be demonstrated and embedded in every area of learning.

1. **Rationale**

This document is a statement of the aims, principles and strategies for teaching and learning at Cogenhoe Primary School. It is the method through which we offer a rigorous knowledge-led curriculum and its implementation is the responsibility of all the members of the school community. The aim of this document is to help the teachers in the school become the most effective practitioners they can be by using principles established from research, cognitive science and experience. The impact of quality teaching and learning is the progress pupils make and the outcomes they achieve.

2. **Through the Cogenhoe Way we aim to**

- **Inspire every child to be the best that they can be**
- provide an ambitious curriculum which motivates and engages every child to have high aspirations
- achieve deep understanding, by helping children connect new knowledge with existing knowledge so they are fluent and unconsciously competent at applying their knowledge as skills
- deliver academic excellence
- secure knowledge into long-term memory
- develop secure schemas with connected networks of ideas
- equip children with knowledge and cultural capital that they need to prepare them for Life in all its Fullness
- give all pupils access to the best that has been thought and said and engender an appreciation of human achievement
- enable children to become confident and curious learners, actively engaged in their own learning
- develop children's self-respect and for the cultures and values of others
- develop a Growth Mindset so that children embrace challenge

3. Strategies for Teaching and Learning

We advocate research-based principles of instruction that are 'faithfully' adopted and 'intelligently' adapted from research in cognitive science, research on master teachers and research on cognitive supports. The sources of these principles are referenced and found in the bibliography. We encourage all teachers to read these to develop their knowledge and understanding of the art of teaching. Teaching at Cogenhoe Primary School should be guided be these principles.

Barak Rosenshine's Principles of Instruction

1. **Begin a lesson with a short review of previous learning (Reactivation)**
   This might be a review of vocabulary, events or a previously learned concept or additional practice to learn facts and skills where overlearning is required to develop automatic recall. Effective teachers review knowledge that is essential for the lesson. At Cogenhoe, some teachers use multiple-choice quizzes, timed tests, counting activities or review knowledge organisers.

2. **Present new material in small steps with pupil practice after each step: Only present small amounts of new material at any one time, and then assist pupils as they practise this material.**
   Our working memory can only hold a few bits of information at once - too much information swamps the working memory. The most effective teachers present only small amounts of **new material** at one time, and they teach in such a way that each point is mastered before the next point is introduced. They check pupil's understanding on each point and reteach when necessary. In a study, the most effective teachers spent about 23 minutes of a 40-minute lesson in teaching, demonstration, questioning and worked examples. In contrast, the least effective spent only 11 minutes presenting new material. The most effective teachers use this extra time and Teaching Assistants to provide additional explanations, check for understanding and provide sufficient instructions so pupils can learn to work independently without difficulty. The less effective teachers in the study gave much shorter explanations, and then passed out activities and were then observed going from pupil to pupil having to explain the material again. They did not use Teaching Assistants effectively to support learning.

3. **Ask a <u>LARGE</u> number of questions and check the responses of <u>ALL</u> pupils: Questions help pupils practise new information and connect new material to their prior learning.**
   Questions provide necessary practice and allow a teacher to determine how well material has been learned and whether there is a need for additional instruction. This can also help to uncover misconceptions. Teachers at Cogenhoe also ask pupils to explain the process they used to find the answer. Teachers might ask pupils to:
   - Summarise the main idea in one or two sentences or repeat the procedures to a challenge partner;
   - Write the answer on a mini-whiteboard and hold it up;
   - Explain how you worked out the answer;
   - Raise hands if they agree with an answer someone else has given.

4. **Provide models: Providing pupils with models and worked examples can help them learn to solve problems faster.**

Teacher modelling and thinking aloud while demonstrating how to solve a problem are examples of cognitive support. A worked example is a step-by-step demonstration of how to solve a problem or how to perform a task. The presentation of worked examples begins with the teacher modelling and explaining the steps that can be taken to solve a specific problem. The teacher also identifies and explains the underlying principles for these steps.

5. **Guide pupil practice: Successful teachers spend more time guiding pupils' practice of new material**
   After presentation of new material, the most successful teachers guide pupil practice. This might consist of the teacher working the first problems on the whiteboard, serving as a model for pupils. It could include a visualizer being used to demonstrate or a pupil working out a problem on the board. This provides additional models, more time for checking for understanding, asking questions and correcting errors and more time having pupils work out problems with teacher guidance. Pupils are then better prepared for independent work. Some pupils might receive further guided practice as part of a 'surgery' or guided group.

6. **Check for pupil understanding: Checking for pupil understanding at each point can help pupils learn the material with fewer errors.**
   Effective teachers frequently check to see if all pupils are learning the new material. **They check for understanding by asking questions, by asking pupils to summarise the presentation up to that point, or to repeat directions or procedures.** This helps pupils to make connections with other learning in their long-term memory and to alert the teacher to when parts of the material need to be retaught. A less effective teacher might simply ask "Are there any questions?" Other ways to check for understanding are to ask pupils to think aloud while completing tasks, to explain or defend their position to the class, or to challenge or support others. This can help to limit misconceptions. The wrong way to check for understanding is to ask only a few questions, call on volunteers to hear their (usually correct) answers, and then assume that all of the class either understands or has now learned from hearing the volunteers' responses. Another error (particularly with older children) is to assume that it is not necessary to check for understanding, and that simply repeating the points will be sufficient.

7. **Obtain a high success rate: It is important for pupils to achieve a high success rate during classroom instruction.**
   Research suggests that the optimal success rate to be about 80% - as judged by oral responses during guided practice and individual work. It shows that pupils are learning the material and that they are being challenged.

8. **Provide scaffolds: The teacher provides pupils with temporary supports and scaffolds to assist them.**
   Scaffolds are a form of guided practice. They include modelling the steps by the teacher or tools, such as cue cards, word banks, checklists to guide or evaluate their work, or a model of the completed task against which the pupil can compare their work. Others may be in the form of prompts – such as question stems to help pupils ask questions while they read or the opportunity to ask the teacher to think aloud when solving a problem. Teachers should carefully consider who needs what type of scaffold, rather than regularly provide the same scaffold to all.

9. **Require and monitor independent practice: Pupils need extensive, successful practice in order for skills and knowledge to become automatic and embedded in long-term memory.**
   Independent practice is necessary because a good deal of practice (overlearning) is needed in order to become fluent and automatic in the recall of knowledge or a skill. Independent practice should involve the same material as the guided practice and pupils should be fully prepared. Research shows that pupils were more engaged when their teacher helicoptered the room, and monitored their individual work – the optimal time for these contacts was 30 seconds or less. Cooperative learning can increase achievement if it provides extra instruction through someone else (the other pupil) explaining the material to the pupil.

10. **Engage pupils in weekly and monthly review: Pupils need to be involved in extensive practice in order to develop well-connected automatic knowledge**
    Pupils need extensive and broad reading and extensive practice in order to develop well connected networks of ideas (schema) in their long-term memory. When one's knowledge on a particular topic is large and well-connected, it is easier to learn new information and prior knowledge is more readily available for use. For this reason, we employ weekly reviews in mathematics, opportunities to retrieve knowledge at the start of lessons, weekly reviews as part of Home Learning, knowledge organisers for revision and end of unit assessments.

    These principles are presented in the Appendix in thematic interpretations suitable as a reminder or for display.

Retrieval Practice
At Cogenhoe Primary School, teaching is designed to help learners to remember in the long term the content they have been taught and to integrate new knowledge into larger concepts. We use retrieval practice methods as described above routinely. We aim for pupils to remember all that is in the curriculum. For optimal retrieval practice, teachers must space out the practice, rather than cramming. Memory is more enduring when practice is spaced out as pupils need to forget a little to benefit from spaced practice.

4. Classroom Talk and Questioning

The central mechanism in effective classroom talk is good use of questioning. Good teachers ask a large number of questions and both closed and open questions play an important role. While we should make deep knowledge the goal, shallow knowledge will always come first and without closed questions to check it, there is no point moving on to deeper concepts.

Cold Calling:
Principle: All pupils should be involved in engaging with the teacher-pupil dialogue with time to think, and not be allowed to hide, dominate or be overlooked.
Practice: No hands up. Teachers ask questions and then select pupils to respond based on their knowledge of the class, avoiding the pitfalls of hands-up or calling out. This is an inclusive process that

involves all pupils, front, back, in the corners, shy, confident…everyone. It's not a one-off strategy; it should be routine and the default mode for most questions. It does not require the use of lollipop sticks.

No Opt-Out:
Principle: Pupils should feel safe in answering when unsure but, if they don't know or get things wrong, they should be given the opportunity to gain confidence by consolidating correct or secure answers. Also, pupils should not be allowed to opt out by saying 'I don't know'.

Practice: If a pupil or several pupils get an answer completely or partially wrong or they say they don't know, move to other pupils or provide the correct answer. But then go back to all those pupils who made errors or couldn't answer giving them a chance to now say the right answer. This gives them an opportunity to practise but if done routinely, it also means that pupils soon learn there is no value if offering 'I don't know' as a defence, in the hope of being left alone. Highly effective teachers maintain an expectation that it's not OK not to try. They eliminate the option for pupils of opting out: muttering 'I don't know' or shrugging impassively when asked a question. There are five basic strategies for responding to pupils who get the answer wrong or cannot provide an answer.

1. You provide the answer; the pupil repeats the answer.
    Teacher: What's the subject of this sentence, Ryan?
    Ryan: Happy.
Teacher: Ryan, the subject is *mother.* Now you tell me. What's the subject?
    Ryan: The subject is *mother.*
Teacher: Good, Ryan. The subject is *mother.*

2. Another pupil provides the answer; the initial pupil repeats the answer. A variation is to ask the whole class.

3. After the pupil answers incorrectly, you provide a cue the pupil uses it to find the answer.
    Teacher: When I ask for the subject, I am asking for who or what the sentence is about. Now, Ryan, see if that can help you find the subject.

4. Another pupil provides a cue, the initial pupil uses it to find the answer.

5. Another pupil provides the answer, the initial pupil repeats the answer and is then asked a question to apply this knowledge. This gives extra practice and also shows that the success was no fluke.
Teacher: Can you also tell me the subject of the next sentence?

Checking for Understanding:
Principle: As explained through Rosenshine's 3rd principle, teachers should not assume that knowledge aired and shared in the public space of the classroom has been absorbed. It's necessary to check for understanding from pupils to determine whether they understood what you meant.
Practice: After any exposition or question exchange with a particular pupil, ask a number of others to relay back what they have understood. Even if they are answering a question that someone else has

already answered, it's valuable for others to be given a chance to offer their version, showing what they have understood and, in so doing, giving the teacher feedback about how successful the teaching has been. It's especially powerful to ask multiple pupils, often yielding various different responses which throw up subtle points for further teaching.

Probing:
Principle: In order to explore a pupils' schema in any depth, you need to ask them several questions; asking several pupils one question each provides shallow responses compared to when each pupil has to provided multiple responses.
Practice: Aim to try 3-5 questions before moving on, probing for understanding, checking for misconceptions, adding extra challenge, providing scaffolding to engineer success.

Say it again, better:
Principle: It's normal for first responses to be half-formed as pupils think aloud and formulate ideas. A second opportunity to respond allows them to finesse their answers, adding depth, accuracy and sophistication. It's important not to inhibit pupils when they are unsure; it's also important not to allow them to assume mediocre answers are good enough.
Practice: When pupils offer a short, half-formed of partially incorrect answers, say, 'thanks, that's interesting….now say it again better. Try again but make sure you add in X and link it to idea Y' giving them an immediate opportunity to give an improved response. Modelling this for pupils is vital.

Think, Pair, Share:
Principle: In pairs, all pupils have space to think, to air their initial thoughts, to confess their lack of knowledge and to prepare to give good answers, to rehearse. They are all involved and subsequent discussions then have lots of material to explore. It prevents 'blood out of stone' silences inhibiting discussion and it prevents 'forest of hands' or calling out cultures taking hold.
Practice: Give the class a specific time-cued task – e.g. to decide on four main points in order of importance, in three minutes – get them all talking in pairs, with a reminder at after half the time has elapsed to allow their partner to talk, and then, on time, bring them back together with a signal. Then engage in probing, cold call questioning asking them to report back what their three points were.

Whole-Class Response:
Principle: Sometimes it is useful or even essential to get a response from every single pupil at the same time. This provides quick feedback to you as the teacher about the success of the relevant teaching and learning exchanges, identifies individuals who need further input and can help direct subsequent questions or exercises as you respond to the feedback you gain.
Practice: Mini-whiteboards are quick and allow for responses to multiple-choice questions as well as practising sentences, calculations and diagrams. Set the question, give some response time and then, on cue ….*3,2,1 Show Me*…. pupils show their answers at once. A simple A, B, C, D = 1,2,3,4 show of fingers also works very well for multiple-choice. **It's vital to engage with the responses and then to adjust your teaching accordingly, consolidating, re-explaining or moving on as appropriate**.

5. Working Memory and Cognitive Load Theory

Dylan William has described cognitive load theory as 'the single most important thing for teachers to know'. The human brain can only process a small amount of new information at once, but it can process

very large amounts of stored information. Information is processed in the working memory, where small amounts of information are stored for a very short time. The average person can only hold about four 'chunks' of information in their working memory at one time.[7] We need to help pupils to process, store and retrieve information effectively:

1. **Tailor lessons according to pupils' existing knowledge and skill and use worked examples.** When teaching new content to pupils without much pre-existing knowledge, teachers should provide pupils with lots of detailed, fully guided verbal and visual instruction and worked examples (this is a problem or task already solved or completed with every step fully explained). As the pupils' knowledge and skill increases, teachers should provide a mix of guided instruction and problem solving practice.

2. **Gradually increase independent problem-solving as pupils become more proficient.** Finally, as pupils become very proficient, teachers should provide minimal guidance and allow pupils to practise their skills with lots of problem-solving tasks. Some pupils will progress to independent problem-solving faster than others. To provide a need for greater independence, teachers will omit steps from a worked example or gradually give pupils fewer worked examples.

3. **Cut out inessential information.** Pupils do not learn effectively when their attention is directed to inessential information. This could be in the content of the instruction or multimedia presentations. Pupils' working memories can become overloaded when they are required both to listen and to read written presentations at the same time. The best strategy to avoid overloading pupils' working memories is for the teacher to either read the text out loud (without presenting it on the slide), or allow the pupils to read it themselves – not both. It is still okay for the teacher to read the text out loud and present a relevant image or diagram on the PowerPoint slide at the same time. Present information in small chunks.

4. **Simplify complex information by presenting it both orally and visually.** Pupils can process complex information more easily when it is presented in both oral and visual forms at the same time. When there are two or more sources of information that can only be understood in reference to each other, cognitive load can be managed by presenting information both orally and visually. This strategy increases the capacity of pupils' working memories, creating more mental space for learning. Accompany diagrams with narrated explanations, not written explanations.

6. Differentiation

Differentiation applies to the level of support and scaffolding learners need to reach common, aspirational goals. Not all learners learn things at the same-rate – some will need more help, more time or more guidance. In practical terms, differentiation involves setting the same learning objectives and planning different ways to support pupils to get there.

Differentiation at Cogenhoe, can involve:

1. Setting common high-challenge learning objectives which are defined in detail, with success criteria. Differentiation involves teachers sharing learning objectives and success criteria with children so that they can:

   - assume greater responsibility for their own learning
   - measure their own success and achievement
   - identify more clearly their own learning needs
   - assist the teacher in meeting those needs
   - identify areas for improvement

2. Scaffolding planned with guided practice leading to independent practice. Scaffolding can of course be removed – it is a temporary support. Scaffolding could be in the form of distinct tasks or writing scaffolds for some pupils.

3. Providing appropriate help, possibly with different but carefully selected resources.

4. Providing distinct tasks.

5. Embedded tiering: this supports the organisation of a class where pupils progress at different rates, allowing everyone to find a suitable challenge level (seeking an optimal 80% success rate).

6. Different modes of questioning and feedback, tailored to push pupils forward from wherever they are.

7. Planning

We have high expectations of our children and aspirations for their future. When planning, teachers should consider prior assessment and use this diagnostically to identify strengths in learning and to identify gaps which need addressing.

We consider the Zone of Proximal Development, *What is just beyond what my pupils know and can do?* This is to allow the creation of opportunities for pupils to think while respecting cognitive limits. Activities that require cognitive work that poses a moderate to high challenge should be planned for pupils to practise or apply their knowledge and understanding.

Good planning and use of assessment is essential to effective Learning and Teaching. The school plans in different stages:
   a. **Long term** plans based upon the National Curriculum and Early Years Framework.
   b. **Medium Term** plans which show objectives for every subject for the year. Knowledge organisers are used to outline the key knowledge that pupils should be taught to recall in topics.
   c. **Short Term** plans are the final part of the cycle. Teachers plan weekly to provide specific learning objectives and outcomes for each session. Assessment opportunities are planned for and provide the formative evidence for future planning.
   d. **Experiences, trips and visits** are planned to enrich the curriculum and to provide real-life contextual learning opportunities.

When planning work for children with special educational needs and disabilities we use the information and targets set out in their individual plans. We may pre-teach in order to prepare children for new vocabulary, knowledge or skills.

8. Evaluation and Assessment

At Cogenhoe, assessment is for and with pupils rather than 'done to' pupils. Good assessment and evaluation improves the quality of teaching and learning and as such is integral to the whole process. In conjunction with this policy please also read the **Marking and Feedback Policy**. The school particularly values assessment as an on-going process and uses Assessment for Learning strategies. Assessment for Learning includes:

- Learning objectives and success criteria explained to pupils.
- Staff to encourage pupils to self-assess and peer assess their work against the LO.
- Edit and improve lessons in English to have a greater focus of exchanging outstanding work amongst pupils.
- Questioning to check for understanding
- Use of the plenary which should refer clearly to the learning objective. It should be an opportunity to reflect upon what has been learned and to revisit teaching points.

9. Effective Working with Teaching Assistants

We follow recommendations set out in the MITA programme "Maximising the Impact of Teaching Assistants"

Set Expectations
The majority of our Teaching Assistants are in school before 8.30 to ensure they have essential liaison time with the class teacher before the children arrive. Teaching Assistants should be informed of the specific needs of the pupils, of the weekly and daily plans and intended learning outcomes. It is essential that TAs are fully prepared for their role in the classroom.

Be Strategic
The gradual release model is used to ensure pupils develop as independent learners and improve resilience to problem solving and reasoning. Teachers can deploy Teaching Assistants during lessons to free up opportunities for them to work with targeted learners. Teaching Assistants play a visible role in teaching, scribing answers on whiteboards, demonstrating equipment and reinforcing instructions.

Feedback
Effective and efficient lesson planning starts with a good understanding of what pupils could and couldn't do at the end of the last lesson. Teachers need to be clear about what they want Teaching Assistant to feedback on.

10. Knowledge Organisers

Knowledge organisers capture the key information, terminology, and dates or quotes for a topic. The information on the knowledge organiser is the minimum that needs to be known, rehearsed and stored over time in the long-term memory, in order for pupils to become fluent in the material. It is a given that plenty of other technical vocabulary and facts will be encountered and learnt through the topic.

Pupils benefit from knowing up front that the knowledge organiser contains the essential information they need to know in order to succeed. Pupils are not expected to know the content from the start, but incrementally over time. This is done by setting some information to be learnt through retrieval practice for homework, revisiting in class and low stakes testing or quizzing. It is fine for pupils to make mistakes as the act of revising and checking for the correct answer deepens learning. Pupils benefit from the 'testing effect' which is the finding that there are gains in long-term memory and retention of knowledge by active retrieval through testing. If the quizzes are given on a regular basis, pupils will be able to see the progress they have made, over time. This is satisfying and rewarding for pupils, helps to build confidence and means that they are more likely to persevere with difficult material, when they understand it can be mastered over time.

11. Common Teaching Pitfalls

1. **Accepting mediocrity**. This includes accepting poor verbal answers, bad presentation or half-hearted pieces of writing without challenge. It also means routinely accepting work from pupils that, whilst arguably 'complete', is far below the standard they are personally capable of. With verbal answers, encourage **Say it again, better**. Routine re-drafting is a good way to set the bar higher for everyone; first efforts can always be improved. See the video on *Austin's butterfly* for more on this concept.
https://modelsofexcellence.eleducation.org/resources/austins-butterfly
   Pupils have high standards of presentation when teachers set clear expectations and follow up when pupils do not meet expectations.

2. **Rushing practice**. Pupils need lots of practice with feedback alongside; doing the same things over and over again, getting slightly harder. Lessons need adequate time for practice.

3. **Interrupting practice**. Children need quiet and extended time to think. If pupils are focused on a task, teachers must avoid the temptation to interrupt with new information or tips. During practice, allow them to concentrate.

4. **Guess what's in my head**. Ask yourself often: Given what you have told a pupil before, could a child answer or are they relying on knowledge that would have had to access from someone else? If the latter, you are probably playing 'Guess what's in my head'.

5. **Lacking assertiveness (presence).** An important pitfall to avoid is not being assertive enough; or not addressing low level behaviour issues. Standing still and straight, making eye contact, you need to reach everyone with your voice and your gaze, picking up the small stuff. If you

want pens down, you want everyone's pen down; if you want eyes front, that includes everyone. Stop low-level chat and off-task behaviour. Do not allow pupils to read their own books in your lessons. Be patient but firm and insistent. At any time, you can re-set, re-explain or re-establish the level of focus and attention you require.

6. **Over-use of group work:** Allowing pupils to help each other throughout the lesson or during independent practice creates unnecessary talk and distractions. If you want pupils to help each other, set a time for co-operative learning during guided practice before independent practice.

   Co-operative learning can be effective if their collective success requires each individual to be successful and they all have a clear role. Without these stipulations, you are likely to get worse outcomes than if they had worked individually.

Review

This policy is reviewed by staff and governors annually.

Glossary

Broad and rich curriculum describes a syllabus with clear and deliberate consideration about what is on the syllabus, how it is taught and why this benefits pupils – for all subjects – not just Maths and English – with first-hand learning experiences.

Cognitive load theory refers to the effort being used in the working memory.

Cognitive science is the study of the mind and its processes.

Cognitive support describes the help provided to help pupils have sufficient cognition (cognitive release) to concentrate and engage with new learning. This might be providing prompts, such as questions stems to aid reading comprehension, or teacher thinking aloud, while modelling writing, or worked examples for maths problems that provide a step-by-step demonstration. These can be a form of **scaffolding.**

Co-teaching or **team teaching** is when two educators work together to plan, organise, instruct and make assessments on the same group of pupils, sharing the same classroom.

Cultural capital is a concept by the sociologist Pierre Bourdieu to describe the assets of person that promote social mobility. Examples of this are education, intellect, manner of speech, knowledge of classical art, music, cuisine and dress sense, e.g. an adult on a business lunch in a French restaurant who cannot understand the menu might be marked out as lacking cultural capital.

Differentiation describes the range of methods teachers use to accommodate a diverse range of learners.

Dual coding is a theory that postulates that both visual and verbal information is used to represent information, that visual and verbal information are processed differently and along distinct channels in the human mind and therefore both visual and verbal codes can be used when presenting or recalling information.

Fluency it is the ease with which a person can perform a task which in turn relies on the ease with which a person can retrieve information quickly from memory. It is also called retrieval fluency.

Formative assessment is a range of formal and informal assessment procedures conducted by teachers during the learning process in order to modify teaching and learning to improve pupil attainment. As well as being used to re-shape and re-calibrate the curriculum. It typically involves feedback for both pupil and teacher that focus on the details of content and performance.

Instruction: Direct instruction refers to instructional practices that are led by teachers. This can be described as the **I** of **I/We/You**.

Instruction: Guided practice is the part of the lesson where the teacher spends time helping pupils to rehearse new material by asking questions and having pupils elaborate, rephrase and summarise. The teacher will supervise pupils as they rehearse and practise new steps in a skill. This can be described as the **We** of **I/We/You**.

Instruction: Independent Practice is the part of the lesson when pupils practise the material after sufficient guided practice. It should involve the same material as the guided practice. This can be described as the **You** of **I/We/You**.

Knowledge and **skills:** knowledge describes facts and information acquired through experience or education. A **skill** is the ability to perform a task with determined results. Skills are the 'know-how' in applying the 'known'.

Learning Dispositions refer to the way that learners engage in the learning process. At ST LEONARD'S, we have
defined learning dispositions as: Communication, Collaboration, Curiosity, Determination, Independence, Reflection and Resilience.

Mastery is a strategy proposed by Bloom that maintains that pupils must achieve a level of mastery (i.e. 80-90% on a test) in knowledge before moving forward to learn subsequent information.

Modelling is a teaching strategy where the teacher demonstrates the new concept or approach to learning and pupils learn by observing.

Overlearning is the continued practice or study of material beyond the point of initial learning. The term is used to refer to the theory that this form of learning leads to **automaticity**.

Retrieval practice is a learning strategy where we focus on getting information out without referring to notes. This might involve practice tests, creating flashcards or writing or drawing everything known on a topic (from memory).

Scaffolding a method by which a pupil learning is supported (temporarily) so that pupils can access, practise, perform and have understanding.

Schema describes a mental structure we use to organise and simplify the knowledge of the world around us. They can be related to other schemas. We have schemas about almost everything.
Schema activation refers to an array of activities designed to activate relevant prior knowledge.

Spaced repetition is a learning technique that incorporates increasing intervals of time between subsequent review of previously learned material in order to exploit the psychological spaced effect.

Summative assessment is used to evaluate learning at the end of an instruction period by comparing it against some standard or benchmark.

Worked examples are step-by-step demonstration of how to perform a task or solve a problem. A worked example is often presented with the teacher modelling and explaining the steps that can be taken to solve a specific problem. The teacher also explains the underlying principles for these steps. Pupils might have access to this or other worked examples as a form of cognitive support or scaffold while practising. It is effective practice to remove steps of the worked example as learners become more proficient – **faded worked examples**.

Working memory is a cognitive system with a limited capacity that is responsible for temporarily holding information available for processing.

Appendix A – Principles of Instruction grouped into themes

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"*

Appendix B – Principles of Instruction linear model

THE PRINCIPLES OF INSTRUCTION

Taken from THE INTERNATIONAL ACADEMY OF EDUCATION
By BARAK ROSENSHINE
Based on strategies to optimise how we acquire and use new information

01 DAILY REVIEW

MON · TU · WE · TH · FR

Daily review is an important component of instruction. It helps strengthen the connections of the material learned. Automatic recall frees working memory for problem solving and creativity.

02 NEW MATERIALS IN SMALL STEPS

Our working memory is small, only handling a few bits of information at once. Avoid its overload — present new material in small steps and proceed only when first steps are mastered.

03 ASK QUESTIONS

The most successful teachers spend more than half the class time lecturing, demonstrating and asking questions. Questions allow the teacher to determine how well the material is learned.

04 PROVIDE MODELS

Students need cognitive support to help them learn how to solve problems. Modelling, worked examples and teacher thinking out loud help clarify the specific steps involved.

05 GUIDE STUDENT PRACTICE

Students need additional time to rephrase, elaborate and summarise new material in order to store it in their long-term memory. More successful teachers built in more time for this.

06 CHECK STUDENT UNDERSTANDING

Less successful teachers merely ask "Are there any questions?" No questions are taken to mean no problems. False. By contrast, more successful teachers check on all students.

07 OBTAIN HIGH SUCCESS RATE

A success rate of around 80% has been found to be optimal, showing students are learning and also being challenged. Better teachers taught in small steps followed by practice.

08 SCAFFOLDS FOR DIFFICULT TASKS

Scaffolds are temporary supports to assist learning. They can include modelling, teacher thinking aloud, cue cards and checklists. Scaffolds are part of cognitive apprenticeship.

09 INDEPENDENT PRACTICE

Independent practice produces 'overlearning' — a necessary process for new material to be recalled automatically. This ensures no overloading of students' working memory.

10 WEEKLY & MONTHLY REVIEW

WEEK 1 · WEEK 2 · WEEK 3 · WEEK 4 · WEEK 5 · WEEK 6 · WEEK 7 · WEEK 8

The effort involved in recalling recently-learned material embeds it in long-term memory. And the more this happens, the easier it is to connect new material to such prior knowledge.

Summarised by Oliver Caviglioli | @olivercaviglioli | teachinghow2s.com