

# Teaching and Learning Handbook

A Practical Guide to the Presdales Way



"Memory is the residue of thought, the more you think about something, the more likely it is you'll remember it later."

Daniel Willingham (University of Virginia)

"Learning happens when people have to think hard."

Robert Coe (Durham University)

## Aim of the Handbook

The purpose of this Teaching and Learning Handbook is to provide clarity on how teachers at Presdales ensure that every lesson provides high quality teaching and learning. It provides details on the essential ingredients of a Presdales lesson and ensures a shared common language across the school.

It is a central working document that should act as a reference guide for all teaching staff and be used in conjunction with coaching conversations around teaching and learning.

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## Key Ingredients of a Presdales Lesson

#### Introduction

At Presdales, we believe there are essential ingredients that are non-negotiables in all lessons and without these, we cannot be sure as teachers that learning has taken place in the classroom.

As teachers, we need to create a purposeful learning environment in our classroom by ensuring there is adequate support, challenge and checking for understanding in every lesson. Lessons are most effective when the teacher provides direct instruction through effective modelling, appropriate scaffolding for all students, formatively assesses consistently throughout the lesson, uses professional judgement to act on information collated and then provide necessary feedback to support all students to make progress.

On the pages that follow the summary of key ingredients shown below, we look at each ingredient in depth including its definition, its rationale, key strategies to implement in the classroom, how EdTech can be used and further literature and research that will provide more detail and nuance.



## Retrieval



#### Definition

Retrieval practice is a strategy for recalling facts, concepts, or events from memory in order to enhance learning. The act of retrieving something from memory strengthens the connections holding it there, making it more likely that students will be able to recall it in the future.

#### Rationale

- Retrieval practice strengthens memory and enhances long-term retention. It's not just about rote learning but about deeply understanding and remembering information over time.
- By freeing up working memory, students can better engage in higher-order learning tasks such as critical thinking and problem-solving.
- Retrieval practice helps students apply what they've learned in new contexts, thereby promoting the transfer
  of learning.
- Regular retrieval practice can boost students' confidence in their learning abilities, as they see their progress over time.
- The process of recalling information encourages students to reflect on their understanding, helping them to identify gaps in their knowledge.
- The active nature of retrieval practice can make cognitive learning more engaging and enjoyable for students.
- Regular retrieval activities provide teachers with valuable insights into students' understanding, and supporting formative assessment practices.
- As students experience the benefits of retrieval practice, they're likely to adopt this strategy in their independent study, enhancing their self-directed learning skills.
- Regular practice with retrieval can help reduce test anxiety, as students increasingly become more comfortable with recalling information under pressure.

## Key strategies

#### Visual

- Show students an image and ask them to think about any previous content/key terminology they could use to describe/explain the image
- Students should identify and recognise key features of a diagram. For example, (a) you can add further prompts
  by adding the first letter of the label or (b) for challenge, labelling arrows can be removed. Explanations of key
  features they have labelled could also be included.

#### Verbal

- Discuss definitions, examples, questions and other terminology related to a subject-specific keyword.
- Students have a bingo grid of answers and walk about asking their peers one question each. The first person to have all the answers shouts "bingo".
- In pairs or small groups, students roll a pair of dice and use the vertical and horizontal numbers on a grid to answer a question in that box.
- The teacher will guide with a topic/concept and students have to give a key piece of information as their response to the register. No repeats are allowed but elaborations encouraged! (NB. Don't always start at the top of the register and teachers may want to give advance warning of the topic in the lesson before so students can prepare.)
- Promote verbal discussions amongst peers about previously covered content. The generic questions remove subject-specific cues/prompts to make it more effortful and challenging.
- Ask students to recall and write down (a) two things they learned today, (b) last lesson or (c) within a unit of your course. Feedback can come from peers (in pairs or groups), and/or class discussion.

#### Written

- Spend 5 minutes writing what you know about a part of a topic with no notes.
- In pairs or small groups, students roll a pair of dice and use the vertical and horizontal numbers on a grid to answer a question in that box.
- Exit tickets
- Retrieval pyramid: more accessible questions sit at the bottom, all of the class should be able to confidently
  answer, resulting in success for all and a boost to confidence. Questions higher up the pyramid provide
  additional challenge and are available to all.
- The teacher puts together a catalogue of misconceptions/errors based around general misconceptions made or specific ones that have been observed with the class. Students to rewrite, correct or improve the original statement
- Students write as much as they can from memory about a specific topic. Then everyone gets out of their seats and read their peers work, swapping and sharing their ideas.
- Flashcards
- Mixed topic homework

- ReadWrite App Use the image library to incorporate visual aids within lessons e.g. ask students to recall any subject specific vocabulary associated with an image
- <u>Socrative</u> Teachers can write questions (and now use AI generated questions) to make mini quizzes. These can be used at any point in the lesson. Quizzes on previous topics can be set throughout the school year/course. Explanations after each question can be written. Students can be emailed their results with the correct answers and explanations. Summaries of answers can be shown with a % of correct answers shown for every questions (students names can be hidden.) Whole class or individual student summaries can be downloaded for teachers use.
- <u>Educake</u> Readymade quizzes focussing on recall and key terminology
- <u>Kahoot</u> Readymade quizzes (or you can make your own) focussing on recall and key terminology. Can
  incorporate pictures, videos and music. You can download a summary of student's answers to use for future
  planning.
- Blooket Readymade quizzes focussing on recall and key terminology
- Quizlet Readymade flash cards to test knowledge on key facts. Students can also make their own.
- Quizziz An interactive platform where teachers can create and administer quizzes, facilitating retrieval practice
  by prompting students to recall and reinforce facts, concepts, or events from memory in a gamified and engaging
  manner
- <u>Seneca Learning</u> An online learning platform offering interactive courses and quizzes, suitable for retrieval
  practice as it prompts students to recall and reinforce knowledge through spaced repetition and interleaved
  practice.
- <u>Blooket</u> A gamified learning platform where teachers can create educational games, which can be used for retrieval practice by encouraging students to recall and apply their knowledge in a fun and interactive environment.
- <u>Mentimeter</u> An interactive presentation tool that allows teachers to create live quizzes and polls, which can be used for retrieval practice by prompting students to recall and reinforce their knowledge in a dynamic and engaging way.
- Questionwell An online tool that enables teachers to create and share customizable question sets, which can be used for retrieval practice by prompting students to recall and reinforce their knowledge of facts, concepts, and events.
- <u>Edpuzzle</u> Allows teachers to create interactive video lessons with embedded questions, encouraging students to engage with content and recall key information.

#### Literature & Research



Collection of books by Kate Jones on Retrieval Practice



Structural Learning
Retrieval practice: a teacher's guide



Tips for Teachers website

How to make the best used of technology for retrieval practice.



Presdales T&L Google Site
Practical Strategies for the Classroom

## Retrieval: Professional Development Reflection

Use this space to reflect, make comments, pose questions and/or write down ideas.





## Checking for understanding





WHAT, NOT IF









PROBE WITH A SHORT FOLLOW-UP WITH MORE CHECKING DIALOGUES

EXPLORE DIFFERENCES AND DETAILS

RE-TEACH, DEFER OR MOVE ON

#### Definition

Continually seeking opportunities to formatively assess students' understanding and using this to inform what happens next in the learning process. Formative assessment is integral and should take place at all stages of the learning process. It is a powerful tool to enable teachers to be effective and responsive in their approach. The emphasis is placed on 'low stakes' questioning/quizzing which informs next steps rather than any grade or mark.

#### Rationale

- Without checking for understanding, we risk moving on too soon, before students are ready
- Relying solely on students to self-report their understanding can give a false sense of security about the quality of learning that is happening
- If we use a range of strategies, then we can check the understanding of the whole class and decide on the best next step i.e. move on, re-teach the whole class, or provide small group or individual support
- Enables teachers to identify and correct misconceptions
- Teachers react and respond to students' progress more quickly, rather than waiting for a later summative assessment
- Prepares students to answer questions well (rehearsal)

## Key strategies

- **Cold calling** choose students to answer questions, rather than inviting them to raise their hand to answer. This is essential if you want to avoid getting an overly optimistic view of what the whole class understands. Provide thinking time and ensure that you foster a nurturing environment where students can get an answer wrong without feeling embarrassed.
- Think-pair-share gets students talking about their learning. It helps students rehearse their answers before sharing them with the whole class, and it allows the teacher to sample more responses as they roam the room. It's also a good go-to when multiple students say, "I don't know", during cold calling.
- Mini whiteboards effective for sampling a large number of responses and allows students to rehearse their
  answers before publicly sharing them. This technique enables a teacher to find out the progress of the whole
  class.
- Quizzing use a range of techniques such as hand signals, traffic lights, true/false questions and digital tools to check all the students' understanding of key facts and concepts. This could be done as a starter to provide a solid foundation for the lesson, a mid-lesson plenary to determine whether the class can move on to the next part of the lesson, or a final plenary to inform planning for future lessons.
- **Technology** Use of EdTech with student Chromebooks to formatively assess and gather information quickly. Platforms provide feedback to both teachers and students.
- **Questioning** Using closed and open questioning during new learning and varying questions types to include 'do you agree/disagree' with... and 'what is wrong with...' to check for secure understanding.
- **Visual representations** Encourage students to create a visual representation of information. This could be a 'brain dump' of last lesson. Then ask them to articulate orally through think-pair-share.

- <u>Kahoot/Blooket</u> making quizzing fun can lower the stakes and increase engagement. Kahoot has the
  advantage of the teacher being able to correct misconceptions as you go along, whereas Blooket enables
  students to answer the same questions more than once and improve their understanding through repetition.
- <u>Plickers</u> this is a multiple-choice quiz where you collect answers from students via an app but they don't have to have their own device.
- <u>Socrative</u> this is a platform you can subscribe to individually or as a department that allows you to create and share quizzes for use in the classroom or for homework. The ability to send personalised feedback via email is highly beneficial for students.
- <u>Diagnostic questions</u> this bank of multiple choice questions covers mainly Maths and Science as well as other subjects. Useful for diagnosing and dealing with common misconceptions/errors.
- <u>Padlet</u> Padlet is an online collaborative tool that allows teachers to create virtual bulletin boards where students can post text, images, videos, and links, facilitating real-time feedback and enabling teachers to quickly assess student understanding and engagement.
- Quizziz Quizizz is an interactive online platform that allows teachers to create and administer quizzes and polls, providing instant feedback and detailed analytics to effectively assess student understanding and progress.
- <u>Seneca Learning</u> Seneca Learning is an online learning platform that offers interactive courses and quizzes, helping teachers to track student progress and understanding through real-time analytics and personalised feedback.
- <u>Blooket</u> Blooket is a gamified learning platform where teachers can create and customise educational games, enabling them to assess student understanding through engaging and interactive gameplay with real-time feedback and performance tracking.
- Mentimeter Mentimeter is an interactive presentation tool that allows teachers to create polls, quizzes, and Q&A sessions, providing real-time insights into student understanding and engagement through live feedback and data visualisation.
- Questionwell Questionwell is an online tool that allows teachers to create and share customizable question sets for assessments, enabling them to effectively gauge student understanding and adjust instruction based on detailed performance insights.

#### **Barak Rosenshine**

<u>Principles of Instruction: Research-Based Strategies</u>
<u>That All Teachers Should Know</u>

TeacherHead: Tom Sherrington

Check for Understanding... why it matters and how to do it





Colin Foster

Checking for understanding is impossible

Dylan Wiliam

An introduction to formative assessment





## Check for Understanding: Professional Development Reflection

Use this space to reflect, make comments, pose questions and/or write down ideas.









#### Definition

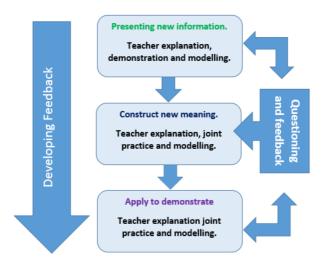
Modelling involves the teacher demonstrating a specific skill, thought or process for students. It can be visual or verbal. It provides a clear and concrete example for students so that they can see what success looks like. Modelling is a form of scaffolding; visual examples help guide students' learning.

#### Rationale

- Learning is not an instantaneous exchange of knowledge from teacher to student. Like a baton exchange in a relay race, successful learning depends on the receiver getting a firm grip.
- Modelling helps students understand new processes and ideas; effective models make abstract ideas concrete and accessible for all. It provides effective cognitive support to students.
- Modelling enables students to proactively transition beyond the novice learner by seeing exemplars of what success looks like and by the teacher breaking down new information into small manageable steps.
- When teachers model their thought process and show students what to do, it reduces the likelihood of students getting confused and making mistakes.
- The modelling approach of the 'I do' 'We do' 'You do' enables the cognitive load to gradually shift from the teacher to the learner.

## Key strategies

- Worked examples Create a resource bank of worked examples, a combination of teacher-created models and student-created exemplars. Use these in lessons to show students what success looks like and to critique and improve worked examples.
- **Small manageable steps** Break down processes or examples into small steps to reduce overburdening student cognitive load. Pause after a few steps and ask a student to summarise what has taken place so far and what they think will be the next step.
- Live modelling Model a process or example live on the whiteboard, interactive board or with the use of a visualiser. Students seeing a teacher live model each individual step by writing is much more effective than clicking through a pre-populated slideshow where the finished article appears instantaneously.
- 'I do' stage of modelling Teacher led
  - o Teacher fully models how to complete a task, problem or perform a skill.
  - o Model it live, narrating your thinking as you perform an action, write or draw.
  - o Provide a worked example or model and develop it through live modelling.
  - o Provide another model or example, discuss similarities/differences to last one to reinforce main ideas.
- 'We do' stage of modelling Interaction between teacher and <u>all</u> students
  - Design guided practice tasks that obtain high rates of student success.
  - o Students to experience sense of how success feels.
  - o Gradually reduce the level of support to build towards independence
  - o Gauge understanding and extend the handover of the baton with more guided practice if needed.
- 'You do' stage of modelling Student led
  - Independent practice with students carrying the baton.
  - Teacher uses check for understanding continuously to ensure high success rate (80%+)
  - Students should be able to recall knowledge from memory with little visual aid or support.



- Visualisers Use of a visualiser to live model a process or skill with clarity.
- Google classroom Use Google classroom to store and share modelled examples for students and your teaching team.
- G-Suite for Education (including Google Docs, Slides & Sheets) To model tasks for learning using Google Docs,
  Slides, and Sheets, you should create detailed instructions and materials in Docs, visually present information in
  Slides, and organise data in Sheets.
- Subject specific websites that allow online access to simulations, microworlds, virtual labs and field trips.
  - OpenSimulator An open-source platform that allows users to create and explore virtual worlds, often used for educational and research purposes.
  - Google Arts & Culture Offers virtual tours of museums, historic sites, and cultural landmarks around the world.
  - <u>Discovery Education Virtual Field Trips</u> Provides free virtual field trips on a variety of subjects, including science, social studies, and the arts.
  - Smithsonian National Museum of Natural History Offers virtual tours of their exhibits, allowing you to explore the museum from anywhere.
  - <u>National Geographic</u> Features virtual field trips to explore different parts of the world, nature, and wildlife
  - PhET Interactive Simulations Provides free interactive math and science simulations from the University of Colorado Boulder.
  - <u>Labster</u> Offers a wide range of virtual labs in subjects like biology, chemistry, physics, and more, with interactive 3D simulations.
  - <u>ChemCollective Virtual Labs</u> Focuses on chemistry virtual labs, offering simulations to conduct experiments and learn chemical concepts.
  - <u>BioInteractive</u> Provided by the Howard Hughes Medical Institute, it offers virtual labs and interactive biology resources.
  - The Concord Consortium Features virtual labs and simulations across multiple science disciplines including biology, chemistry, and physics.
  - <u>LabXchange</u> A free online platform from Harvard University that offers virtual lab simulations and resources for life sciences.
  - Playing History A collection of historical simulation games where players can explore different periods and events, designed for educational purposes.
  - BBC History Games Offers a range of online historical games and simulations covering various periods of history, particularly focused on British history.
  - HSTRY A platform that allows teachers and students to create and explore interactive timelines, often used for historical simulations and storytelling.

**Tom Sherrington** 

The Art of Modelling – It's All in the Handover



Structural Learning

I Do We Do You Do



Educational Endowment Foundation (EEF)

**Working with Worked Examples** 



Michael Chiles

The Sweet Spot: Explaining and Modelling with Precision



## Modelling: Professional Development Reflection

Use this space to reflect, make comments, pose questions and/or write down ideas.





## Scaffolding













A DETAILED LEVEL

**OVERVIEW LEVEL** 

PREPARE SCAFFOLDING SETS OFFERING VARYING LEVELS OF SUPPORT

#### Definition

Providing temporary assistance to students to support them in successfully completing tasks that they cannot yet do independently and with a high rate of success. These support aids are gradually removed once they are no longer required. Some supports are pre-planned prior to lessons and some are provided responsively during the lesson.

#### Rationale

- Nurture novice learners in the early stages of learning and develop their knowledge/skills and confidence.
- Process helps students move from being fully dependent on the teacher to being independent and fluent in applying skills to new contexts competently.
- Increases student proficiency
- Providing necessary support while learning something new means students stand a better chance of using that knowledge independently.
- Scaffolds and supports enable all students to establish clear starting points and fully engage in their learning.
- Scaffolds should always be deconstructed an eventually removed as students improve.

## Key strategies

#### Visual

- Use of images to support vocabulary learning
- A list of steps a student needs to take to complete a task
- Model exemplars of work so that students can see the desired end point
- Use of diagrams and visual representations of concepts and ideas
- Instructions visually on the whiteboard as well as verbally provides clarity and is explicit to all
- Interweaving questions to check for understanding and engagement when playing videos
- Use of a visualiser to live model, annotate diagrams/text...

#### Verbal

- Re-teaching tricky concepts to a small group or 1:1 during independent learning, using questioning to identify any barriers/misconceptions and address these appropriately
- Simplifying/re-phrasing questions posed to the class/individuals e.g. "What do we know?" or "Let's apply this to ... before ..."
- Signposting links to prior learning
  - e.g. "what have you done before that will help you with this task?"
- Rephrasing questions to students when they respond "I don't know" to support them to respond and make the question accessible for all learners
- Use of walking talking mocks
- Teacher modelling use of key terminology to encourage students to then use the language in their own responses.

#### Written

- Encourage students to refer to notes they have made or resources on Google Classroom that have been provided
- Use of writing frames adapt appropriately to the needs of the student. Consider cognitive load on students. Present in small manageable chunks so the frame supports and is not overwhelming.
- Use of sentence starters to support structuring of writing
- Providing 'fill in the gaps' resources that students complete as the lesson progresses
- Providing transcripts for audio/video resources

- ReadWrite App Use the image library to incorporate visual aids within lessons e.g. vocabulary
- YouTube Transcript Generate scripts for videos so that students can follow whilst watching and have a summary of the content presented
- <u>NearPod</u> Dissect videos by interweaving questions as various points to check for understanding and ensure
  active engagement in the lesson
- Visualiser Use a visualiser to live model, annotate diagrams/text
- Google Classroom Allows teachers to create and organise assignments, provide resources, and give feedback, enabling a step-by-step approach to learning tasks.
- Khan Academy Offers structured courses with sequential lessons and practice exercises, breaking down
  complex subjects into manageable segments.
- <u>Edmodo</u> Provides a platform for teachers to distribute tasks, share resources, and give feedback, helping to structure learning in smaller, manageable steps.
- Annotation Software Annotation tools allow students to mark-up digital texts, make notes, and engage in collaborative discussions, promoting deeper comprehension and critical thinking.
- Reflective Journals Tools like Google Docs, Microsoft Word, or dedicated journaling platforms like Penzu or
  Journey can be used for students to write reflections on their learning experiences, challenges, and strategies
  for improvement.
- Mind Mapping Software enable students to visually organise and connect their thoughts, helping them understand relationships between concepts and identify gaps in their understanding.
- <u>ChatGPT</u> To use ChatGPT to simplify a task or text, provide a clear description or copy of the content, ask
   ChatGPT to rephrase it in simpler language or outline the steps, and review the output to ensure it meets your
   needs for clarity and simplicity. Simplifying a task helps with scaffolding for learning by breaking down complex
   activities into manageable steps, making it easier for learners to understand and complete each part
   successfully, thereby building confidence and gradually increasing their ability to tackle more complex tasks
   independently.

#### Literature & Research

**Education Endowment Foundation** 

<u>Scaffolding – more than just a worksheet</u>



The National College

Scaffolding to support disadvantaged students



**Education Endowment Foundation** 

Visual-Verbal-Written



TeacherHead: Tom Sherrington

Scaffolding Classroom Dialogue



Scaffolding:	Professional	Development'	Reflection

Use this space to reflect, make comments, pose questions and/or write down ideas.





## Questioning



#### Definition

Questioning is a way to engage with the learner and elicit answers that demonstrate both knowledge and understanding. It is a vital way of checking for understanding. Questioning can take many forms; the approach taken will depend on the information a teacher is trying to elicit from their students.

#### Rationale

- Questioning helps both the learner and teacher to gauge knowledge and understanding
- Questioning can review, restate, re-emphasise and/or summarise what is important.
- Questioning can stimulate discussion and encourage critical thinking as well as determining how students are thinking.
- Questioning enables the teacher to probe students, gauge understanding and identify misconceptions/errors which will then inform next steps.

## Key strategies (linked to checking for understanding)

This section will look at different levels of questioning linked to Blooms Taxonomy. For strategies about how these can be implemented in the classroom, have a look at the 'check for understanding' page in this document.

Level	Purpose	Examples	
Remember	Identification and recall of information	Can you list in order? Can you recall? How did happen? How would you show? Describe what happens when What do you remember about? How would you define?	What did? How is? How would you describe? Where is? Which one? Who was? When did? How would you outline?
Understand	Explain ideas and concepts	How would you compare/contrast? Elaborate on What is the main idea of? What are the key differences and similarities?	What can you say about? Can you write in your own words? Can you give an example of? Tell me more about How could you generalise?
Apply	Use information in new situations	What would happen if? What other ways could you? How would you show? Why does work? How could you develop? What examples can you find that?	How could you develop? How would you change if? Judge the effects of on
Analyse	Draw connections among ideas	How could you classify according to? How is connected to? Discuss the pros and cons of	If happened, what might change? What can you infer from?
Evaluate	Justify a stand or decision	What criteria would you use to assess? What was data was used to evaluate? What is the most important? What is your opinion of?	How could you verify? What information would you use to prioritise? Rank by importance the Determine the value of
Create	Produce new or original work	What alternative would you suggest for? What changes would you make to? Predict the outcome if Devise a way to	How would you elaborate on the reason? How would you improve? What could you invent? How would you portray?

There are many different types of questions and the one selected by the teacher will depend on the information they are looking to elicit.

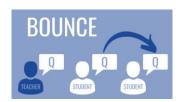
Туре	Purpose	Examples
Closed	Have two possible answers depending on how you phrase it:	Did you see/notice/know?
	"yes" or "no" or "true" or "false." You can use closed	What is?
	questions to get direct information or to gauge someone's	Do you want/have/need to?
	knowledge on a topic.	
Open	Facilitate lengthier, more thoughtful answers and discussions	What is the best way?
	among groups. These questions encourage the listener to	Why did you?
	respond with detail.	What was your first step in?
Funnel	A series of questions. Their sequence mimics a funnel	Did you enjoy?
	structure in that they start broadly with open questions, then	What did you like most about?
	segue to closed questions. The sequence can also take the	What sorts of things would you change
	opposite form.	about?
Leading	Encourage the listener to provide a specific response. Often,	Don't you think that
	speakers phrase these questions to encourage the listener to	Wouldn't it be useful if?
	agree with them.	
Rhetorical	Illustrate a point or focus attention on an idea or principle.	Wouldn't it be good if?
	Because speakers use rhetorical questions to persuade	Does it really matter that?
	others, these questions typically don't require a response.	
Probing	Follow-up responses to the listener's answer to a previous	What do you mean by?
	question. Probing questions help speakers understand a	What details do you have to support your
	listener's perspective, decipher their meaning and encourage	answer?
	more in-depth reasoning.	If what you said is correct, how would that
		effect?
<b>Bouncing</b>	Teacher poses a question; pauses to allow suitable thinking	Student B, can you add to student A's
	time; pounces on one student for an initial answer; and	answer?
	bounces the answer to another student who builds on the	X, how could you build on what Y said?
	response	

#### 'Hands down' approach to classroom participation









**POSE**: a question to <u>all</u> students

**PAUSE**: to allow <u>all</u> students time to think and provide a response.

**POUNCE**: on a student for an answer.

**BOUNCE**: the answer to another student to develop responses and build an exemplar response.

- <u>Kahoot/Blooket</u> making quizzing fun can lower the stakes and increase engagement. Kahoot has the advantage of the teacher being able to correct misconceptions as you go along, whereas Blooket enables students to answer the same questions more than once and improve their understanding through repetition.
- <u>Plickers</u> this is a multiple-choice quiz where you collect answers from students via an app but they don't have to have their own device.
- <u>Socrative</u> this is a platform you can subscribe to individually or as a department that allows you to create and share quizzes for use in the classroom or for homework. The ability to send personalised feedback via email is really beneficial for students.
- <u>Diagnostic questions</u> this bank of multiple choice questions covers mainly Maths and Science as well as other subjects. Useful for diagnosing and dealing with common misconceptions/errors.
- <u>Padlet</u> this can be used to collate students responses from a question, share responses with the class and collate data which can then inform subsequent planning and next steps.
- Quizizz Similar to Kahoot, Quizizz allows teachers to create quizzes and surveys with a wide range of question types. It offers self-paced learning options and integrates with learning management systems for easy tracking of student progress.
- Google Forms Google Forms enables teachers to create surveys, quizzes, and assessments with various
  question formats, including multiple choice, short answer, and dropdown. It also provides automatic grading
  and data analysis features.
- <u>Nearpod</u> Nearpod offers interactive lessons with built-in activities, including polls, quizzes, and open-ended
  questions. Teachers can create multimedia-rich presentations and engage students in real-time or self-paced
  learning experiences.
- <u>Edpuzzle</u> This tool allows teachers to create interactive video lessons by embedding questions, quizzes, and discussions within educational videos. It promotes active learning and helps teachers gauge student comprehension.
- <u>Mentimeter</u> Mentimeter is an audience response system that allows teachers to create interactive
  presentations with polls, quizzes, word clouds, and open-ended questions. It fosters student engagement and
  provides instant feedback.

#### Literature & Research

Cornell University and the Center for Teaching Innovation

**Cambridge University** 

**Using Effective Questioning** 



**Getting Started with Effective Questioning** 



Ross Morrison McGill

Teacher Toolkit Guide to Questioning



Jonathan Doherty, Leeds Trinity University

Skilful Questioning



## Questioning: Professional Development Reflection

Use this space to reflect, make comments, pose questions and/or write down ideas.





## Feedback and Feedforward



#### Definition

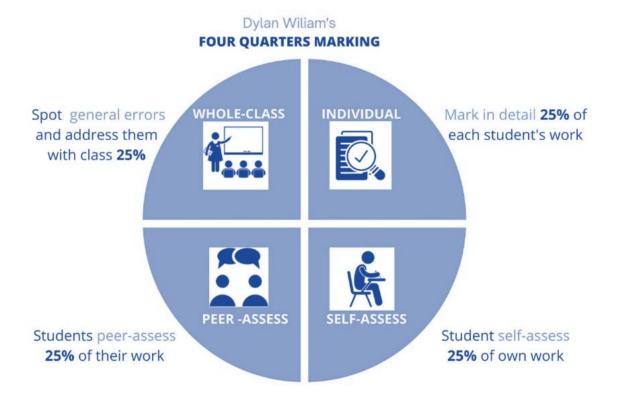
The Education Endowment Foundation (2021) defines feedback as being "information given to the learner about the learner's performance relative to learning goals or outcomes". Feedback can be delivered by teachers or peers and may be in an oral, written, formative, or summative form. Teachers give feedback regularly and often, and effective feedback can be fundamental to a learner's progress.

#### Rationale

- Feedback should focus on moving the learning forward and be constructive.
- Feedback should require more work for the recipient than the feedback giver and should be timely and precise.
- Feedback should be actionable; it should give learners the opportunity to re-draft, rehearse, revisit and respond, re-learn/re-test or research and record.
- Feedback should be designed to maintain or increase students' motivation and to encourage them to focus on learning goals rather than performance goals.
- There should be a continuous focus on formative assessment to inform student/teacher next steps, providing concrete steps for learners to follow to help them achieve a specific goal and address learning gaps.

### Key strategies

- Whole Class Feedback: This is an effective strategy which can be used to feedback on key errors and misconceptions in student's work. It looks to identify key trends across student's work and is a strategy which significantly reduces teacher workload.
- Using formative assessment as a feedback tool: We all do some form of formative assessment, whether through questioning or a more formal piece of writing. Addressing misconceptions as they happen is a useful approach to feedforward into summative assessment.
- **Use feedback sandwiches**: Start with a positive comment then some constructive criticism with explanation of how to improve and conclude with a positive comment or contextual comment: X was good ... because .... now/next time ...
- Feedback sheets: This is where you can have a list of key misconceptions and an opportunity for students to reflect by writing a What Went Well and an Even Better If. You can also give students the opportunity at the feedback stage to write 1 or 2 questions they would like answered to support them in making the identified improvements.
- **Self/peer assessment**: Provide students with clear success criteria so that they know what success looks like. Ask them to assess their own/their peers work against the success criteria, making a note of what has gone well and what are the key areas for development.
- **Dedicated time in lessons to make improvement**: Plan time within lessons for students to receive feedback, digest key areas of improvement and then act upon their feedback by making improvements to their work.

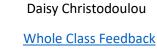


- Google classroom Set assignments on Google classroom and get students to submit them online. Teachers can mark assignments online and provide feedback to students (written or verbal) through Google classroom.
- **Flipgrid** Enables teachers to provide video feedback directly on assignments, documents and discussions within the Google classroom platform.
- Kaizena Integrates with Google Docs to provide voice comments on students' responses, promoting personalised and engaging feedback interactions with students.
- Socrative When assigning a quiz, you can ask the software to send a feedback email to students so that they have a full summary of how they performed in each question of the quiz. Ask students to look at questions they answered incorrectly and respond to the feedback.
- Question-Level-Analysis spreadsheet Set up a Google sheets document on Google classroom and ask students to input their marks for different questions/sections of a summative assessment. The teacher can then look at trends/patterns, spot any common misconception or gaps and then plan to address these.
- Visualiser This can be used to show student examples and providing direct explanation of why they are strong. It can also be used to 'live mark' and provide instant feedback so that students can immediately apply your feedback to their work.
- Audio Feedback Instead of written comments, teachers can record audio feedback to provide personalised explanations, encouragement, or suggestions. This approach can be especially beneficial for students who prefer auditory learning or struggle with reading comprehension.
- Video Feedback Teachers can create personalised video messages to provide feedback on student work. Video feedback allows for non-verbal cues, such as facial expressions and tone of voice, which can convey empathy, encouragement, and clarity.
- Screen Recording Teachers can use screen recording software to provide feedback on digital assignments, presentations, or projects. They can annotate student work, explain concepts, and demonstrate solutions in real-time, offering visual and interactive feedback.
- **Digital Annotations** Teachers can use digital annotation tools to mark-up student work with comments, corrections, and suggestions. Digital annotations can be more visually engaging and interactive than traditional written feedback, making it easier for students to understand and act upon.
- Online subject specific websites Find a subject specific website (e.g. Sparx in Maths) that will provide useful insights and feedback to the teacher. If you do not have a website that you subscribe to, speak to Liz Teal (Digital Learning Lead) about what is available for your subject.

#### Literature & Research

**Tom Sherrington** 

Five Ways to Give Effective Feedback







Michael Chiles

The Feedback Pendulum

Cult of Pedagogy

Moving from feedback to feedforward





## Feedback and Feedforward:

## Professional Development Reflection

Use this space to reflect, make comments, pose questions and/or write down ideas.





## Literacy



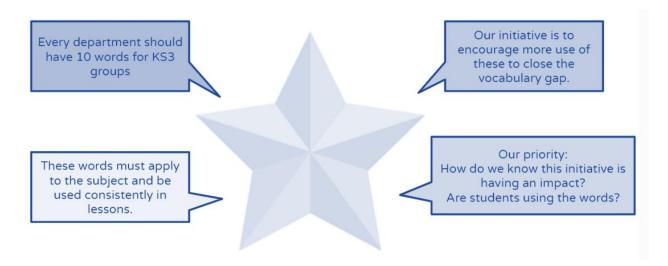
#### Definition

The word literacy is defined as the ability to read, write, speak and listen in a way that lets students communicate effectively and make sense of the world. It is the responsibility of all teaching staff to develop students' literacy skills through whole school approaches to developing student vocabulary, reading and oracy.

#### Rationale

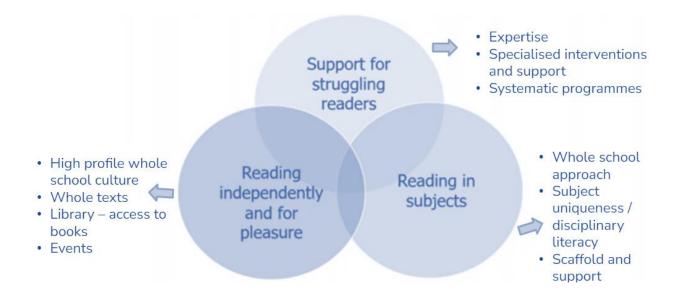
- Students who enjoy reading and writing are happier in their lives. They are 3 times more likely to have good mental wellbeing than those who do not enjoy it.
- Children who say they have a book of their own are six times more likely to read above the level expected for their age than their peers who don't own a book
- Children born into communities with the most serious literacy challenges have some of the lowest life expectancies in England
- Literacy is essential. Literacy skills help you develop and communicate. Without proficient literacy skills, it's easy for students to fall behind.
- At school, having the literacy skills to read, write, speak and listen are vital for success. If you find these things hard, then you struggle to learn. It affects your confidence and self-esteem.

## Our approach to developing student vocabulary (STAR words)



- We use STAR words to identify key subject specific words that we want each year group to be exposed to and be confident to use in their speaking and written work.
- STAR words should be taught specifically in lessons.
- STAR words should be introduced in lessons using the approach below:
  - O What does the word mean?
  - Use etymology/morphology to help them develop the definition.
  - Draw a picture. (Dual Coding support lower attaining and/or SEND students)
  - Use this in a sentence.
- If a student uses a STAR word five times in your subject (per term) they should receive an R1.
- To encourage students to extend their vocabulary we will award R1s for using 3 cross curricular STAR words.

### Our approach to Reading



#### Before the lesson:

- Prepare your text by text marking it: work out where you will pause to support with phrasing (/), work out which words you will stress to support comprehension of important meanings, work out which words you will define to support students who lack the prior knowledge/vocabulary.
- Come up with your quick fire comprehension tasks for students to complete after text has been read fluently by teacher:
  - Who, what, when, where, how questions
  - Put your finger on a word that... Put your finger on the part of the text that...

#### During the lesson:

- Teacher models a fluent reading of the pre-prepared text (tricky vocabulary defined), students track while teacher reads.
- Teacher could model a fluent reading for a second time. This time, students can highlight/underline any words/parts in the text that may be important (words stressed by teacher)
- Students respond to quick fire comprehension tasks set by teacher (mini-whiteboards could be used for this)
- SUMMARY CHALLENGE: students are tasked to write a two sentence summary of what they have read using the two sentence starters below:
  - This text/story is about...
  - The main points are...

#### Reading in subjects:

Stages	Key Questions	Possible sentence stems
1. Predicting	<ul> <li>What do you already know about the topic?</li> <li>What clues are there in the title, headings / subheadings, images, etc.?</li> <li>Recap what we read / learned before – how might this link?</li> <li>What are you expecting? What might happen next?</li> </ul>	<ul> <li>Based on the title, I predict this is going to be</li> <li>I already know these things about the topic/story</li> <li>I think the next chapter or section will be about</li> <li>Based on (a clue), I predict</li> <li>Based on what said/did,</li> </ul>
2. Clarifying	<ul> <li>Was anything confusing or unclear?</li> <li>Is there anything that you do not understand or doesn't make sense?</li> <li>What words and phrases do you not understand and need to find out?</li> <li>When / where did you lose track of the reading?</li> <li>Can I work out the meaning from rereading any section?</li> </ul>	<ul> <li>I don't really understand</li> <li>A question I have is</li> <li>A question I'd like answered by the author is</li> <li>One word/phrase I do not understand is</li> </ul>
3. Questioning	<ul> <li>What do you need / want to know now?</li> <li>Can you ask questions to help you learn more about the text?</li> <li>What questions could you ask to test your understanding?</li> <li>WHO, WHAT, WHERE, WHEN, WHY, HOW?</li> </ul>	<ul> <li>Who is?</li> <li>What is/does?</li> <li>When/where is?</li> <li>Why is significant?</li> <li>Why does happen?</li> <li>What are the parts of?</li> <li>How is an example of?</li> <li>How do and compare?</li> <li>How are and different?</li> <li>What is most important?</li> <li>What is your opinion of?</li> </ul>
4. Summarising	<ul> <li>What are the main / most important ideas of this text or section?</li> <li>What does the writer want you to remember or learn from this?</li> <li>What method of summarising would be most helpful? (bullet points, lists, section summaries, subheadings, flowcharts, Venn diagrams, etc.)</li> </ul>	<ul> <li>This text is mostly about</li> <li>The topic sentence is</li> <li>The author is trying to tell me</li> <li>First</li> <li>Next</li> <li>Finally</li> </ul>

## Our approach to Oracy

Student discussion and dialogue are integral parts of learning. This can take many forms, for examples dialogue between a teacher and student, a whole class discussion, or conversations between a small group of students as part of their learning.

Evidence suggests that quality classroom discussion has the following benefits:

- improves attainment as well as students' reasoning and problem solving skills
- develops students' resilience
- develops students' collaboration skills, enabling them to be a more effective team player
- provide a great opportunity for formative assessment
- enables knowledge, skills and strategies to be shared across the class

## THINK, PAIR, SHARE





ESTABLISH TALK
PARTNERS FOR
EVERY STUDENT



SET THE QUESTION WITH A GOAL AND A TIMEFRAME



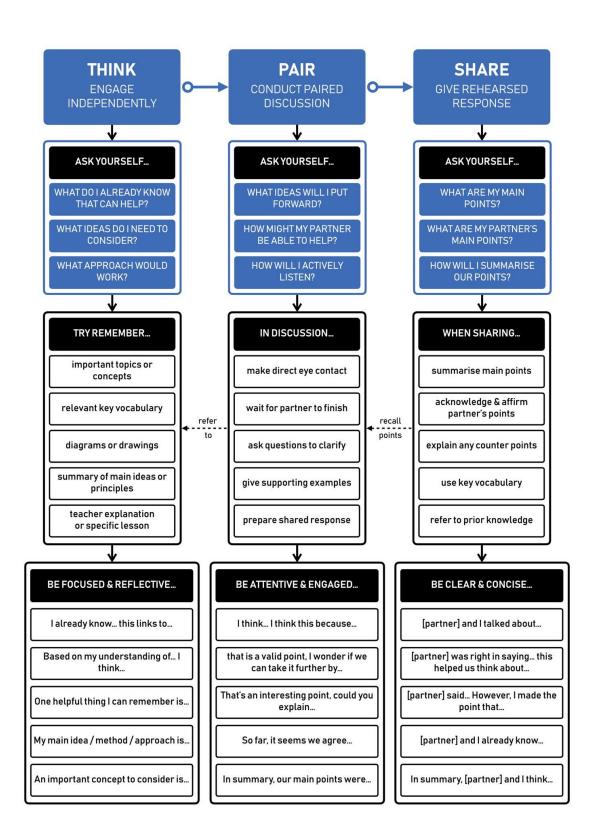
BUILD IN THINKING TIME



CIRCULATE TO LISTEN AS PAIRS ARE TALKING



USE COLD CALL TO SAMPLE PAIRS' RESPONSES



## Use of digital technology

- Accelerated Reader Programme promotes literacy by offering personalised reading practice and assessment.
  It motivates students to read by providing a vast library of books, quizzes to assess comprehension, and immediate feedback, fostering a love for reading, improving comprehension skills, and encouraging independent learning.
- Reading Plus Programme enhances literacy by improving reading proficiency and comprehension through
  personalised instruction. It offers adaptive exercises, diverse reading materials, and comprehension activities,
  fostering critical thinking, vocabulary development, and fluency skills, ultimately boosting reading confidence
  and academic achievement.
- <u>Sora online e-books</u> enriches literacy by providing access to a vast collection of digital books and resources. It
  promotes reading engagement through personalised recommendations, diverse genres, and interactive
  features, fostering a love for reading, expanding vocabulary, and improving comprehension skills, ultimately
  enhancing academic success and lifelong learning.
- Accessit online library enhances literacy by offering a comprehensive digital resource hub. It provides easy
  access to a wide range of curated educational materials, fostering independent learning, critical thinking, and
  research skills. With features like personalised recommendations and collaborative tools, it promotes reading
  engagement and supports academic success.
- Vocabulary Apps Apps such as Quizlet or Vocabulary.com provide interactive games and flashcards to help students build and practise vocabulary skills, improving reading comprehension and language acquisition.

Professional Development Reflection

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Use this space to refle	ect, make comments, pose questions and/or write down ideas.



Literacu:



## Reflective notes

Use this page to plan, make notes and summarise your thoughts on the lesson study carried out as part of your learning triangle coaching observations and conversations.

