



Astrea Academy Trust

INSPIRING BEYOND MEASURE

Astrea Principles of Learning

Evidence, Expectations, Good Practice
and Processes for Implementation

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1. Introduction

The Astrea Principles of Learning outline the Trust's expectations around learning within its family of schools. This includes all aspects of teaching and learning and the professional development of teachers and associate professionals. This document also outlines the processes used to support learning across the organisation. Although Astrea's expectations around learning are outlined, all Astrea schools have the autonomy to develop their own policies around learning that meet the needs of their pupils and local context. Schools should therefore use this document as a guideline for developing their own policies, procedures and systems. This document also outlines several systems to support continuous professional development and learning across the organisation.

2. Our purpose - Education, not schooling

Inspiring Beyond Measure

Education is the growth of character, learning power and personality as well as academic learning. We are educating a generation that will be the catalyst for building social and cultural capital in some of the country's most challenging areas. Our five key pupil dispositions support pupils' growth and are the building block to maximise their impact within their communities and society as a whole. These dispositions are: Contribution, Happiness, Empathy, Aspiration, Resilience

Our five core value partners - Responsibility and Leadership; Enjoyment and Innovation; Aspiration and Development; Collaboration and Inclusion; Honesty and Integrity - underpin how we work. They drive our teacher standards and are the building blocks for creating a community of learners within our schools. A culture of excellence and craftsmanship must be role-modelled by adults and this is mirrored in the pursuit of excellence and craftsmanship we expect from pupils.

All children, regardless of background, have an entitlement to an education that extends their potential and equips them to be successful citizens of the future. Our promise is that all children receive this education through the highest standards of learning, facilitated by the very best adults working with them. In our pursuit of progress, attainment and qualifications, we must never forget this aim and be true to our values.

3. Astrea Teacher Standards

The statements below outline the standard that Astrea expects all teachers to achieve. Appropriate support, coaching and training is systematically provided to help all teachers realise this professionally high standard that all children deserve. These are aspirational standards based on the National Teachers' Standards¹ and contextualised to sit alongside Astrea's mission and values.

The standards below have been grouped into the Trust's five core value partners, which are equally applicable to pupils, staff and the work of the Trust itself.

¹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/283566/Teachers_standard_information.pdf

Responsibility and Leadership

- Teachers have a deep and up to date understanding of their subject/s and the curriculum they teach along with an overarching understanding of the whole journey learners are on.
- Teachers uphold and model the values and dispositions of the Trust.
- At all levels, leaders lead people and their areas of responsibility with high impact, deploying resources and other professionals effectively to support the development of others.
- Teachers take responsibility for pupil progress and outcomes relating to academic learning, character and learning power

Enjoyment and Innovation

- Teachers are explicitly enthusiastic, passionate and positive in their practice.
- Teachers effectively engage learners through relevant, emotive and interesting learning opportunities.
- Teachers ensure pupils are able to develop a love of learning in a safe and positive environment.
- Teachers engage in innovation as a member of a learning organisation, contributing to the continuous development of pedagogy, curriculum and school systems.

Aspiration and Development

- Teachers apply effective pedagogy within the classroom, are self-reflective in their practice and are proactive in their own professional development through Astrea career opportunities.
- Teachers set high expectations of themselves and all learners.
- Teachers ensure learners are given the necessary guidance and support to manage difficulty and ensure they operate at their 'challenge threshold'.

Collaboration and Inclusion

- Teachers know the needs of all learners in their care and give every child the provision to ensure that they are able to achieve their potential.
- Teachers use high level questioning and feedback effectively to ensure all pupils make appropriate progress.
- Teachers support the school in engaging with all its stakeholders including initiatives to support the local community.
- Teachers communicate positively with parents sharing a language of learning.

Honesty and Integrity

- Teachers are committed to being the champion of every child in their care.
- Teachers are engaged and active participant in the life of the whole school and supporting the Trusts commitment to help every child achieve the learning experiences they are entitled to.
- Teachers uphold public trust in the profession, maintaining high standards of ethics and behaviour within and outside of school.

4. The Quality of Teaching and Learning

4.1 Learning Review

To assess the quality of teaching and learning as part of the Astrea Teacher Standards a holistic approach is used. Those areas of the Astrea Teachers Standards pertinent to the quality of teaching are highlighted in table 1 below.

The Astrea Teacher Standards for the Quality of Teaching

- Teachers have a deep and up to date understanding of their subject/s and the curriculum they teach.
- Teachers take responsibility for pupil progress and outcomes relating to academic learning, character and learning power.
- Teachers are explicitly enthusiastic, passionate and positive in their practice.
- Teachers effectively engage learners through relevant, emotive and interesting learning opportunities.
- Teachers ensure pupils are able to develop a love of learning in a safe and positive environment.
- Teachers apply effective pedagogy within the classroom.
- Teachers set high expectations of all learners.
- Teachers ensure learners are given the necessary guidance and support to manage difficulty and ensure they operate at their 'challenge threshold'.
- Teachers know the needs of all learners in their care and give every child the provision to ensure that they are able to achieve their potential.
- Teachers use high level questioning and feedback effectively to ensure all pupils make appropriate progress.

The Learning Review is specifically focused on these standards and will provide supporting evidence for the school's appraisal process which, in turn, will draw on the full list of Standards to appraise that teacher. School leaders should refer to the Learning Review Form for School Leaders document for detailed advice and support on how the Learning Review and Improving Outcomes Process should be implemented within school. A summary of these processes is outlined below.

The accumulation of the Learning Review Process is represented in Figure 1. These four areas of focus are analysed over time to identify whether teachers are achieving the Astrea Teacher Standards in terms of their quality of teaching.

Every member of teaching staff will take part in a 4Learning Review each academic year. However, it is at the Principal's discretion as to how the review should be used as part of the school's ongoing quality assurance and monitoring programme. For example, student progress meetings should occur at specific points across the year, not as a one-off activity. The process should be led by a senior leader, but middle leaders should be involved throughout to collect evidence.

In-lesson Learning – During the lesson, the reviewer will be looking at four key indicators of learning: engagement, challenge, questioning, and the learning structures used. Finally, a measure on overall learning will be given. These four indicators will be scored on a sliding scale for the effectiveness of each category. The purpose of this approach is to avoid a box ticking exercise and allow the reviewer to focus on the lesson rather than form filling. These scales along with specific notes on aspects of the lesson will form the basis of a coaching conversation between the reviewer and the teacher immediately or shortly after the lesson where areas for development and excellence can be identified. See Appendix C Form A1 and A2.



Figure 1: 4 Learning Review Process

Pupil Voice – During the learning review a number of children will be spoken to about their learning this academic year. Form 2 in Appendix C outlines a common set of questions used as part of this process. The focus of these interviews is about the child and their learning.

Pupils' Work – All work can be considered during the review to identify progress. A sample of books will also be brought to the coached feedback where reviewer and reviewee will discuss the evidence across a range of work and a sample representative of those pupils taught by the teacher. See Appendix C Form 3.

Progress Data – The reviewer will consider the progress data presented for the class by the teacher. This will be looking at the pupils' progress in the current academic year and current Key Stage. All relevant information will be taken into account to contextualise the performance of the classes being reviewed. Relevant performance data might include summative assessment data, progress data, attitude towards learning, interventions and pupil characteristics and provisions including SEN. Schools should use a standardised format to present this information that is fit for purpose.

The four-parts of the process should be used to assess the quality of inputs that contribute to effective learning. The process excludes pupil outcomes, such as summative assessments and examination results to ensure such proxies for learning do not become the focus of teachers and not the learning itself. We must focus on the product of teaching, not the measure.

The review process should aim to answer five questions that give an indication of the quality of inputs to the learning process.

1. Are pupils engaged during lessons and show positive behaviours for learning?
2. Does the teacher have high expectations of pupils demonstrated by a climate of challenge during lessons?
3. Does the teacher know their pupils through formative assessment and adjusts plans and teaching accordingly?
4. Does pupils work demonstrate progress in content and quality over time?
5. Is the teacher actively engaged in professional learning to improve subject knowledge and pedagogy?

4.2 Outcomes of the Learning Review

Through the Learning model, teachers will either be identified as meeting the standard or working towards the standard. Every teacher can be better at what they do and the key to this process is to help reviewers and teachers collaboratively identify these areas and put in place an agreed set of actions for improvement. Where teachers are meeting the Astrea standards this will be achieved through self-reflective practice and annual professional appraisal. Where teachers have been assessed as working towards the Astrea Teacher Standard, they will take part in the Improving Outcomes Process, an informal six-week action plan with up to six weeks of support to help the teacher achieve the Astrea Standards for the Quality of Teaching.

Areas of Development and Areas of Excellence – No matter what stage of our career we are at, we are all learners and personal reflection and improvement is an expectation of all Astrea teachers. The 4Learning Review will help teachers identify their areas for development, which may also feed into Joint Pedagogy Development (see 7.3). During the 4Learning Review, areas of excellence may also be identified in some areas of teaching practice. Teachers with an area of excellence will be identified through the Astrea Excellence Register. This informs the appointment of Ad Astra teachers who share their practice by supporting other teachers.

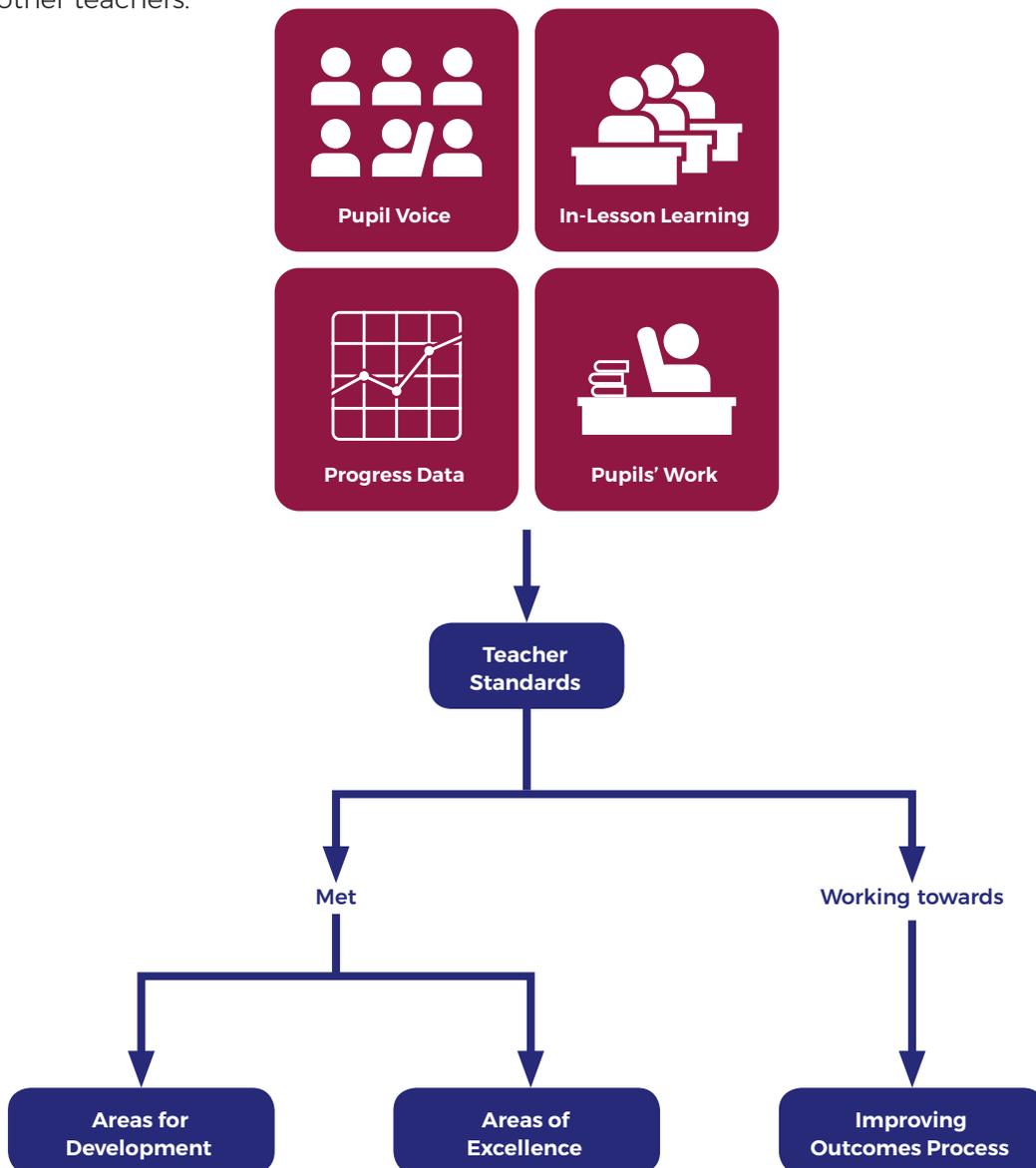


Figure 2: 4Learning Review Outcomes

4.3 Improving Outcomes Process

The Improving Outcomes Process is to be used when The Learning Review indicates that a teacher is working towards the Astrea Standard for the Quality of Teaching. Where concerns are raised through the appraisal process that do not relate to teaching and learning but some other aspect of professional conduct the Teachers' Support Form should be used to set specific targets, success criteria and the support to be provided by the school or Astrea (see Astrea Appraisal Policy) This six-week process is not formal and stands outside of formal capability procedures. The process is intended to be supportive and is based on robust systems of support and guidance to enable teachers to improve their practice. **The High Impact Practice Programme (HIPP)** may also be used to help teachers identify appropriate targets as part of this process.

Where the overall Learning review indicates that the teacher has met the Astrea Standards for the quality of teaching but there was significant weakness identified during the lesson observation, a follow-up observation should be offered to the teacher. However, this will not trigger the Improving Outcomes Process if the second observation is judged to have met the Astrea Standard for quality of teaching.

Where the triangulation of information through the Learning Review process found the teacher to be working towards the Astrea Standard for the Quality of Teaching a follow-up lesson observation will be the first part of the six-week process.

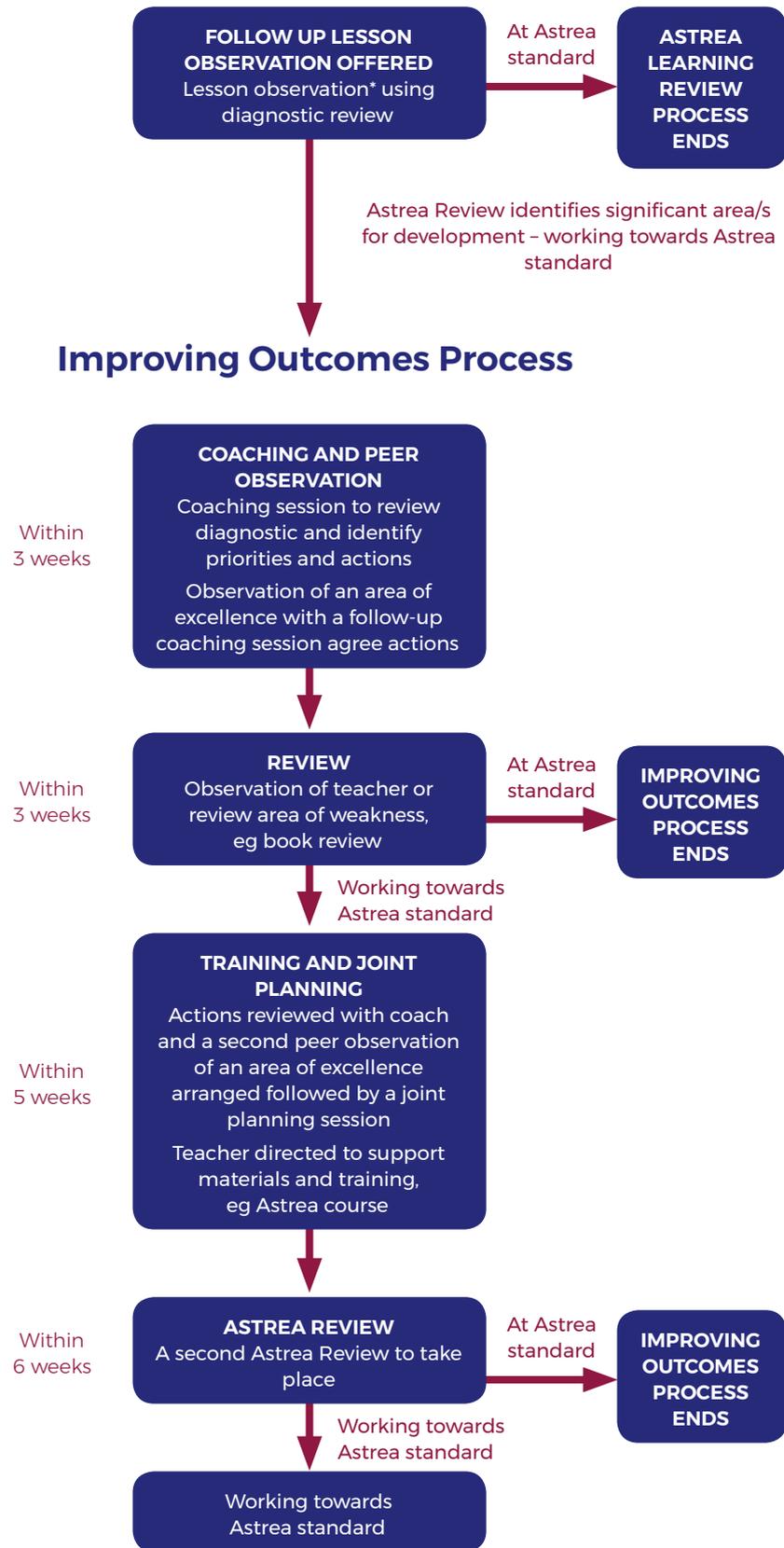
A comprehensive explanation and guidance on the Improving Outcomes Process can be found in the Learning Review Form – appendix A. A summary of this process is shown in figure 3 below.

5. The Importance of Knowledge and Experience

The more pupils know, the more they learn. Indeed, knowledge is the foundation of a good education. Learning occurs when pupils connect new content to prior learning. The more pupils know the more they want to know, and the more they know the more they can discuss and debate what they know. They can reject parts of it, make their own decisions, build an understanding and an appreciation of the world around them. Knowledge leads to greater understanding as pupils developing their interconnected schema to make subconscious links between discrete pieces of knowledge, appreciate meaning, inference and reference. It is impossible for pupils to make proper critical judgements without a secure base of knowledge. Through a broad platform of cultural literacy pupils become better readers, fluent communicators and critical thinkers. Fundamentally, a secure base of knowledge builds confidence and motivation allowing pupils to enjoy the process of learning. E. D. Hirsch outlines the importance of a knowledge curriculum, which chimes with Astrea's values and vision for all pupils:

Our society cannot afford a two-tiered system in which the affluent have access to superior education, while everyone else is subjected to a dull and incoherent classroom experience. Academic excellence, educational equity, and fairness demand a strong foundation of knowledge for all learners. (Hirsch, 2009).

Knowledge is the foundation of a good education, but experience is also a central ingredient for learning. Learning involves observing, doing, or living through things – it is associated with skill development, practical knowledge, and action. Unique experiences are an important part of going to school. We must work hard to plan and create these opportunities, not simply because they are an exciting part of learning, but because experiences build cultural capital, the character we want pupils to show and because they develop an appreciate the world and how it works.



* Where possible Iris Connect recordings will be used to demonstrate areas of excellence from across the Trust and conduct observations in addition to or in place of an active observer. Recordings will then be used to support self-reflection and the coaching process.

Figure 3: The Improving Outcomes Process

Suggested approaches to a knowledge and experience curriculum

- The curriculum should be crafted by subject experts to ensure that all pupils achieve a broad and deep understanding of subjects.
- Teachers should have high expectations for what they want pupils to know and expect pupils to recall or demonstrate that knowledge.
- Schools should make the knowledge they expect all pupils to acquire at each key stage and in each subject explicit to pupils and parents.
- Knowledge should be captured – key points of learning through classroom discussion should be written down, revisited and assessed. If pupils are to learn something it is not simply enough for them to have discussed it.
- Building on secure subject knowledge, pupils should have the opportunity to explore that knowledge and apply it in different contexts.
- Pupils should be given the opportunity to express their learning through expression and communication.
- Teachers should identify ‘truffle moments’ within their teaching – opportunities for awe and wonder – so that pupils can experience the best a subject has to offer.

As educators, we are privileged to be making the decisions about what our pupils will learn. We must teach our pupils the best there is to offer and we must be very specific about what that is and what we want pupils to know, what we want them to be able to do and by what point. We must also be explicit in the experiences and opportunities we want all pupils to have.

6. Principles of Effective Teaching and Learning

In the short-term, lesson by lesson, we cannot observe learning taking place within a classroom, not truly. It is not possible to peer inside the heads of pupils to see the neurons making connections with new thoughts and ideas forming. Even the long-term perspective, learning over the course of a year, is still problematic as we revert to performance in tests as the ultimate measure. Tests are, at best, a rudimentary indicator of true learning.

Nevertheless, as educators we can still create the conditions to nurture learning and look for the signs that it is taking place. Real learning is most likely to take place where pupils are engaged in their learning, they are challenged and thinking hard and this happens in an environment where the teacher structures experiences that support collaborative learning. In summary, learning is most likely to take place where:

1. Learners are required to retrieve and demonstrate knowledge and skills
2. Learners are engaged (not just busy)
3. Learners are dealing with difficulty and working at their ‘challenge threshold’
4. Questioning is used effectively to make learners think hard
5. The teacher uses structures (activities, processes, models and routines) that support learning and embed practice.

6.1 Challenge and Support

Pupils learn when they are challenged because it demands deeper thinking to take place. Challenge may manifest itself in many ways; a well-designed activity, giving students responsibility for their own learning or simply a good question. However, challenge is not simply about making something harder. Pupils will find their challenge threshold, the point at which they are thinking and working hard, at a different point on a spectrum. Therefore, finding the appropriate level of challenge is as much about support, scaffolding, modelling and simplified explanation, as it is as making something more complex. Appendix A outlines the Challenge Curve. The diagram takes into account the ways a teacher might provide pupils with additional support or greater depth and challenge. Every child will progress at a different pace and find their challenge threshold at a different point. As teachers, it is our job to help them get there.

6.2 Engagement

We must first distinguish between students being engaged and being busy. There is no magic formula or routine to ensure pupils are highly engaged. Engagement is linked to motivation and this differs for everyone. Nevertheless, high levels of engagement are most likely to exist in classrooms characterized by positive student-teacher relationships, high challenge, low threat and positive behaviours for learning. Figure 4 outlines the Rules of Engagement. A model to remind us of the factors that lead to engaging lessons. See appendix B

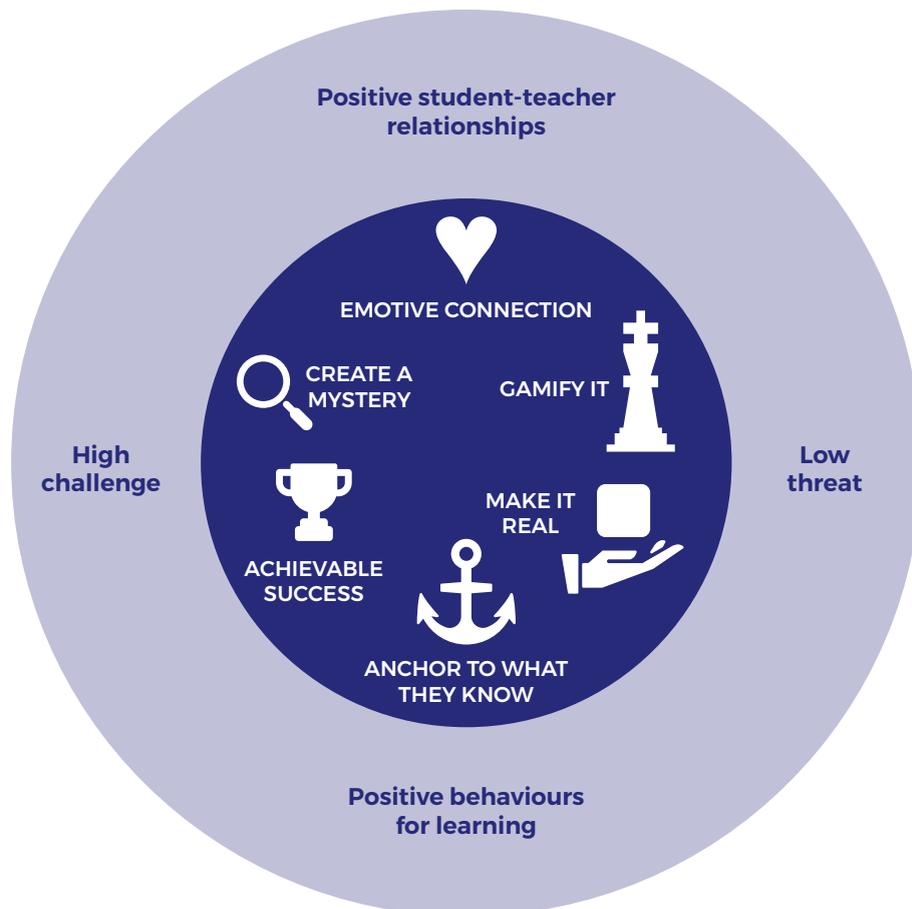


Figure 4: Rules of Engagement

6.3 Learning Structures

Learning structures include everything a teacher may utilise to support the learning process. This includes the routines we reinforce, the models we apply, the activities we set and the processes we use. As with engagement, there is no prescribed set of tools or approaches universally acknowledged as being the most effective. As educators, it is our role to be creative, innovative and reflective in everything we do. However, at a subject, key stage, department or school level we may agree structures that are accepted as good practice that we share to create consistency for our learners. Many examples of best practice are shared within this document. Subject leaders are responsible for identifying and sharing the best ways to teach their subjects.

6.4 Memory

“Memory is the mother of all wisdom.” – Aeschylus

If we want pupils to retain knowledge they must be able to commit what they learn in lessons into their long-term memory. Much as our understanding of memory in the field of education has come from the research of education psychologists such as Robert A. Bjork and Daniel T. Willingham. A general summary of what we know about memory follows.

What the evidence-based research says

- In theory, what we learn we never actually forget. The access of our long-term memories is subject to storage strength (how familiar we are with a piece of information) and retrieval strength (how often we have accessed the information recently)
- Long-term memory is vast, whereas short-term working memory is not. Our capacity to ‘juggle’ lots of information at any one time is very limited and working memory can easily be overloaded.
- Secure and embedded knowledge of a subject helps free up working memory for reasoning and problem-solving.
- Pupils forget most of a lesson within a day. However, having forgotten something we have learnt, we relearn it quicker each time.
- Learning is contextual and tied to environmental and emotional cues.
- The process of learning and moving information into long-term memory is strengthened by retrieval.
- The harder pupils find the retrieval of information the stronger the storage strength becomes – subsequent retrieval of this information then becomes easier.

Suggested approaches for the teaching to support memory

- Secure foundation knowledge should be acquired before pupils attempt to move on to using higher order skills such as reasoning and evaluation.
- Regularly test pupils using quick and simple low stakes recall tests to retrieve prior learning.
- Revisit content regularly through ‘spaced practice’ and apply it to different contexts.
- Use images and diagrams to support verbal explanations and processes. This is a form of dual coding which frees up working memory
- Sequence learning and break processes down into manageable chunks. Make expectations and criteria for success clear to pupils.
- When introducing new and abstract concepts it is better to explicitly teach (tell) pupils rather than introducing them through exploratory learning or problem-solving.
- Vary the conditions of retrieval, such as the environment and context so that learning does not become associated with only one cue.

6.5 Planning

“If we could first know where we are, and whither we are tending, we could better judge what to do, and how to do it.” – Abraham Lincoln

What the evidence-based research says

The following research illustrates the importance of effective lesson planning:

- A student’s prior achievement has a powerful impact on his or her achievement ($d = 0.67$). What this means is that what students bring to the classroom is a powerful predictor of how well they will achieve. In other words, the brighter a student is at the beginning of the year, the more he or she will achieve. Therefore, the role of the teacher is to disrupt this so that those who are behind can learn just as much as the brightest students who walk in the door. For this reason, any lesson planning must begin with teachers developing a deep understanding of what students *already know and can do*.

- In planning lessons, there are two parts to consider in thinking about the targeted learning – or where teachers want students to end up. The first is being clear about what is to be learned – the *learning intention* or objective. The second is having a way to know that the learning has been learned – the *success criteria*.
- Effective planning involves deciding on appropriately challenging goals and *then* structuring learning situations so students can reach those goals. Having clear learning goals is vital if we want to develop a good assessment and provide accurate feedback to students about how to be successful.
- Teachers must also address the curriculum – what knowledge and understanding must be taught? While there is too little evidence to suggest that the *order of topics* is critical, what is more important is that there is an *increasing level of challenge* that is tied to the choices of activities, lessons, and lesson outcomes. (Hattie, 2012).

Suggested approaches to planning

Planning is a process, not a product. Effective planning involves habits of thought where teachers consider a range of key questions around learning.

- All teachers and departments must have evidence of long-term planning in the form of schemes of work linked to the curriculum.
- Teachers should have evidence of short term lesson planning, but this does not have to be formal. For example, notes in a teacher’s planner or a simple planning template that encourages thinking around a set of key questions is sufficient.
- Planning should account for the needs of all learners and measures taken to support these needs.
- Planning should ensure learners systematically revisit key topics and concepts to ensure retention of learning (spaced practice) – pupils have not necessarily learnt something just because they have ‘done it’.
- Wherever possible, opportunities should be created for teachers to plan together.
- Fundamentally, lesson planning should address four questions, **in the following order**:
 - 1 What are the pupil’s starting points?
 - 2 Where do I need them to get to?
 - 3 How will I know when they are there?
 - 4 How can I best help them get there?²

Suggested best practice approaches

During the planning process it is useful for teachers to consider the following aspects of learning. This is not an exhaustive list, but it does address the most important aspects of lesson planning, including the four questions shown above. These elements of lesson planning are covered in the Astrea Lesson Planning Framework (Appendix D). This is an informal form that can be printed and used to ‘scribble’ or ‘doodle’ during the planning process – the form is not important, the thinking behind the questions is.

- What is the ‘big picture’ how does this lesson fit into everything that we are learning – will pupils see this?
- How do the objectives lead to the outcomes? – we are learning... so that....
- How will I support and challenge learners?
- How can I ensure learners are engaged? (see Rules of Engagement, Appendix B)
- What formative assessment techniques can I use to check understanding?
- What are the key questions I need to use? (see Question Tree, appendix F)
- What are the most efficient structures to support learning?
- How can I make a ‘flying start’ to the lesson?
- How will the lesson end with an opportunity to reflect and consolidate?

2 See ‘The Lean Framework, Lean Lesson Planning, Mcccrea (2015)

6.6 Questioning

“Questions are the only defensible form of teaching” – Socrates

What the evidence-based research says

Questioning effect size = $d = 0.4^3$

The most effective questions are high order ‘why?’ ‘how?’ and ‘which is best?’ questions that really make students think. They need to be given time to think too, and can do better if they work in pairs than work alone. (Hattie, 2009)

Questioning is effective when it allows pupils to engage with the learning process by actively composing responses. Research (Borich 1996; Muijs and Reynolds 2001; Morgan and Saxton 1994; Wragg and Brown 2001) suggests that lessons where questioning is effective are likely to have the following characteristics

- Questions are planned and closely linked to the objectives of the lesson.
- Closed questions are used to check factual understanding and recall.
- Open questions predominate.
- Sequences of questions are planned so that the cognitive level increases as the questions go on. This ensures that pupils are led to answer questions which demand increasingly higher-order thinking skills but are supported on the way by questions which require less sophisticated thinking skills.
- Pupils have opportunities to ask their own questions and seek their own answers. They are encouraged to provide feedback to each other.
- The classroom climate is one where pupils feel secure enough to take risks, be tentative and make mistakes.

Furthermore, pupil response is enhanced where:

- there is a classroom climate in which pupils feel safe and know they will not be criticised or ridiculed if they give a wrong answer;
- prompts are provided to give pupils confidence to try an answer;
- there is a ‘no-hands’ approach to answering, where you choose the respondent rather than have them volunteer;
- ‘wait time’ is provided before an answer is required. The research suggests that 3 seconds is about right for most questions, with the proviso that more complex questions may need a longer wait time. Research shows that the average wait time in classrooms is about 1 second (Rowe 1986; Borich 1996).

Suggested approaches to questioning

- Strategies for questioning should be part of the planning process. In particular, questions should be planned to encourage higher order thinking
- Teachers should use a variety of question types within lessons (see table on page 13)
- A ‘hands up’ approach to questioning should only be adopted where students are seeking to add to class discussions and not as a strategy to identify volunteers to answer questions.
- Appropriate ‘wait time’ of at least 3 seconds should be allowed before receiving a response to a question. Students should be given an appropriate amount of time to process more challenging questions.
- Collaborative structures to questioning should be adopted that encourage learners to discuss and share their ideas and opinions with peers.
- Questioning should be used effectively to uncover misconceptions, support and challenge students in their thinking.

3 See Hattie (2009) Visible Learning – key research from over 800 studies into educational interventions and their impact on attainment. Any effect size 0.4 or greater is considered to have a significant positive impact.

- Teachers should set a climate of safety where students feel secure and able to take risks, make mistakes and ask their own questions.

Suggested best practice approaches

The following table outlines the various types of questions and their purpose.

Type of question	Purpose	Examples...
Elicitation questions	These form the backbone of questioning for guided instruction because they draw on skills and concepts that have been previously taught. These foundational questions provide the teacher with a baseline from which to work. A student who is unable to respond to an elicitation question is likely to need more direct explanation and modeling. Elicitation questions can focus on finite knowledge ("What is the name of the protective case a caterpillar makes as it becomes a butterfly?"). Elicitation questions are also effective at identifying a student or classes starting point.	What? Where? When Who? Which?
Elaboration questions	Elaboration questions build on elicitation questions and require students to add depth, detail and clarity. They require students to explain and therefore demonstrate what they understand. The benefit of follow up questions is that they require students to demonstrate reasoning. In doing so, they are the most effective way teachers can uncover misconceptions. Therefore, elaboration questions 'feed forward' and provide effective formative feedback that a teacher can use to adapt their teaching to address these misconceptions.	Tell me more... Why do you say that? Can you explain it in a different way? Can you prove it? What do you mean by...?
Divergent questions	These questions require students to couple previously taught information with new knowledge. Divergent questions are important as they help student realise the connections between what they are learning. They also encourage recall to support the process of memorising information. Divergent questions are also effective developing relational understanding. (See SOLO Taxonomy).	What is this similar to? When have we come across this before? How does this apply to...?
Problem-solving / inventive questions	An inventive question requires students to use their knowledge to speculate or create. Again, the emphasis is on using information that students have been recently taught in order to create something new.	Any question set as a problem
Abstract questions	Abstract questions require students to apply their knowledge to an abstract or unusual context. An abstract question might be a 'thunk' or anything that makes students think hard. Abstract questions should be creative and fun.	What colour would a zebra be if it lost all of its stripes?

In order to encourage the escalation of questioning as a process, schools may adopt structures to encourage a systematic approach to questioning to aid classroom discussion. Pupils should be encouraged to use these structures to develop their understanding of the different question types and their skills using them.

Example A – Bloom’s Taxonomy

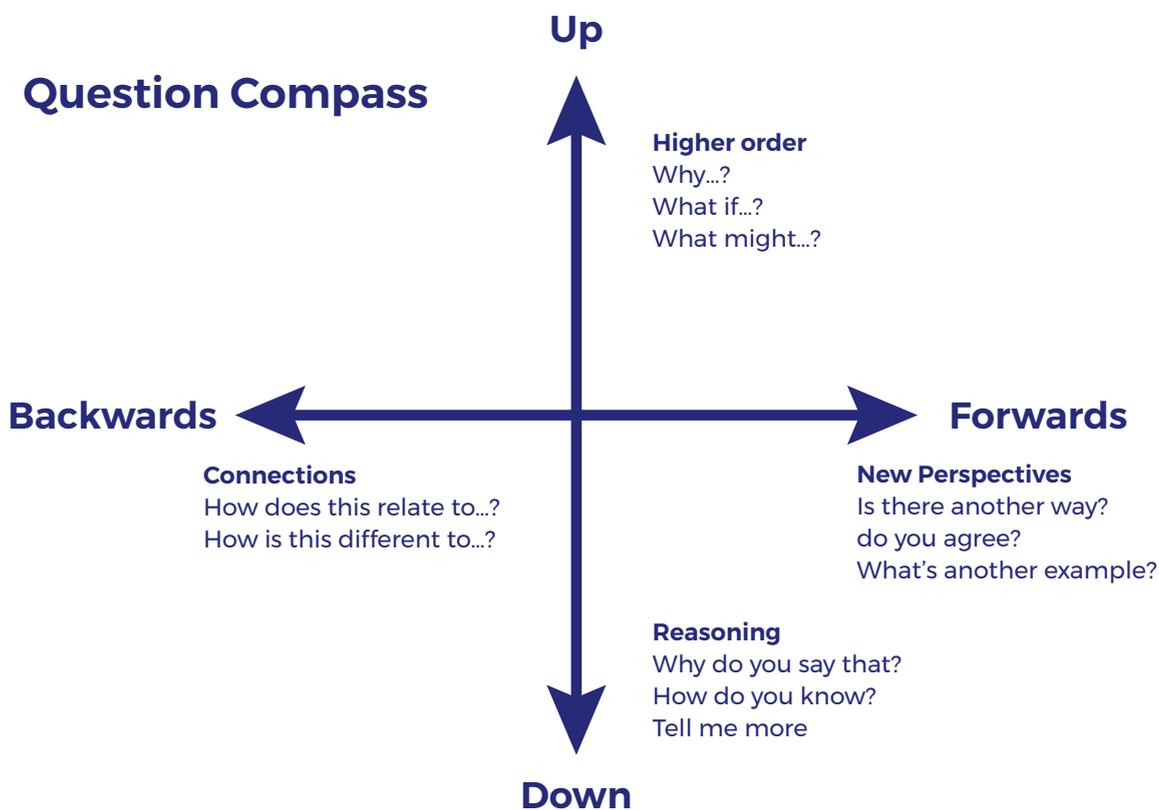
Blooms Taxonomy of Learning Domains still underpins much of what we understand about the progression of learning and assessment models. Using Blooms Taxonomy with the associated question stems is effective in planning the escalation of questioning and helping learners form their own questions around a topic or concept. In Critical Thinking Skills (Appendix E) a range of verbs and question stems are offered to structure and support learning at each of the six domains.

Example B – The Question Tree

The Question Tree is a simple model that applies the five types of question outlined on page 13. As with Blooms Taxonomy, The Question Tree (Appendix F) provides an escalation of questioning that checks understanding, uncovers misconceptions, applies learning and encourages higher order thinking. The Question Tree provides a structure to escalate these types of questions using the analogy of a tree where questioning will progress through root questions, trunk questions, branch questions, nest questions, and finally, cloud questions.

Example C – Question Compass

It often helps to consider the direction of a series of questions. The following compass can be used to consider how questions are being used to connect prior learning, assess understanding and uncover misconceptions, encourage higher order thinking and encourage pupils to share their thoughts and opinions.



Example D – Structures for whole class questioning

The best way to avoid many of the pitfalls associated with questioning is to adopt strategies that encourage whole class participation and collaboration. These strategies increase engagement, prevent ‘opt out’ and facilitate peers as instructional cues. Several effective approaches are shown in figure 5 below. Quality questioning in order to involve and assess the whole class is worth it.

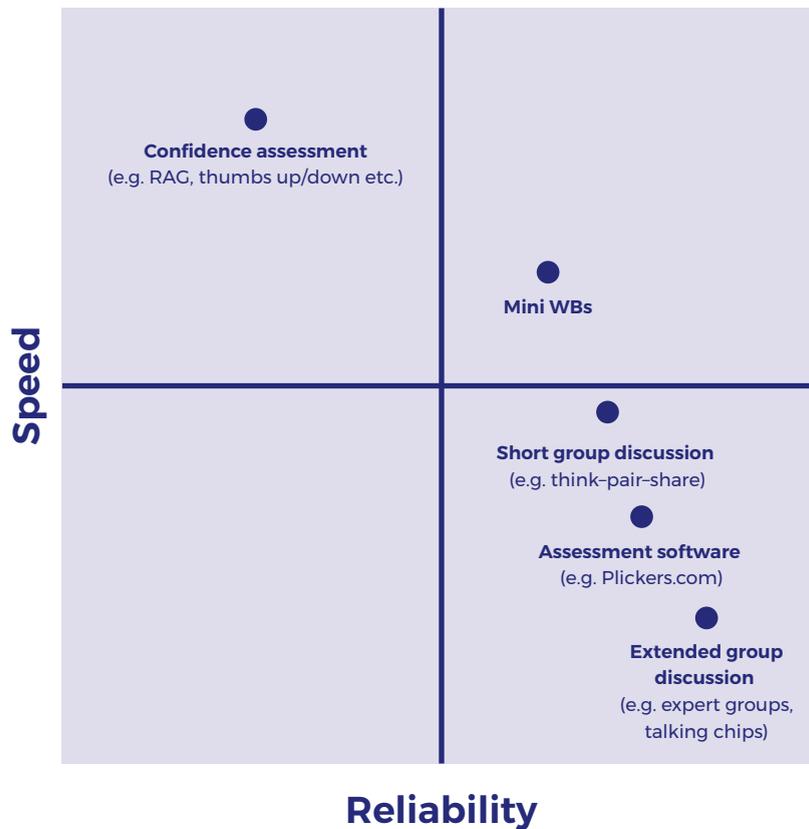


Figure 5: Effective Questioning

Example E – Tackling ‘I don’t know!’

Fostering a supportive environment with high challenge will often mean effectively dealing with the ‘I don’t know’ situation when questioning learners. This response is either a student asking for help or attempting to opt out of the lesson. All teachers should have effective strategies to deal with this situation. Offering learners one of the following (or allowing them to choose one) support mechanisms might be appropriate. The most appropriate strategy might depend on the nature of the question.

Facts – Provide the student with key information that they can use to form an answer.

Options – Give the learner two options, A or B, the learner then chooses one and explains why the other option is incorrect.

Answer – Give them the answer, but require the student to explain why the answer is correct. Note that this option might seem the easiest route to take, but explaining why can be very challenging.

6.7 Feedback

'We all need people who will give us feedback, that's how we improve' – Bill Gates

Feedback is among the most common features of successful teaching and learning. But much of the feedback that pupils get has little or no effect on their learning, and some kinds of feedback are counterproductive (Wiliam, 2011). Research identifies feedback as one of the most powerful influences on learning and achievement (Hattie, 2007), but this impact is only positive when it is given effectively.

What the evidence-based research says

Feedback effect size = $d = 0.75$

EEF months impact = +8 (high impact)⁴

Feedback is effective where:

- Teachers have a good understanding of where their pupils 'are' and where they are 'meant to be'. The more visible teachers make this for their pupils, the more pupils can help themselves in moving their learning forward.
- Pupils receive information or descriptive feedback about a task or process and how to do it more effectively. The most effective forms of feedback provide cues or reinforcement to learners.
- Feedback is integrated into lessons and takes place while the learning is in progress rather than retrospectively. (Clarke, 2008)
- Where only retrospective feedback is possible, it is essential that time is provided for the child to see it and respond to it
- Programmed instruction, praise, punishment and extrinsic rewards are the **least effective** feedback for enhancing achievement

Suggested approaches for feedback

- All feedback should be focused on the process or task and identify how learners can improve or 'close the gap'
- All learners should be expected to respond to feedback by making improvements to their work whether that be corrections, redrafting or applying the feedback to a subsequent piece of work.
- Opportunities for improvement should be built into lesson time
- Feedback should happen in the presence of the learner when possible i.e. when a teacher works one-to-one, with a group or reviews learning for an individual or group in front of the whole class.
- School feedback policies should be explicit, shared and applied consistently, using structures such as symbols, abbreviations and colours.
- Promote a cognitive rather than emotional reaction – in other words, feedback should cause thinking
- Be integrated into the teaching and learning cycle through quality questioning, peer-assessment and self-assessment opportunities where children are not afraid to respond incorrectly and error is welcomed by the teacher and the members of the class
- Written feedback should be focused and efficient if it is to add value and be a balanced aspect of a teacher's workload. In its broadest sense, feedback should be frequent, timely and acted upon.

⁴ The EEF (Education Endowment Fund) commissioned by the Sutton Trust invests in evidence-based projects to identify high impact interventions on educational outcomes. The Teacher Toolkit has research on over 36 studies. The impact of each study is expressed in terms of months' progress.

Suggested best practice approaches

Example A – Thinking Feedback

Apart from feedback being a cue for improvement it can also be an opportunity to stretch learners and deepen thinking through appropriate questions. A good practice approach to any feedback policy is to include an expectation that feedback should regularly include questions to deepen thinking and raise challenge. The expectation is that these questions, or ‘thinking feedback’, should be responded to in the same way a student might redraft or make corrections to their work.

Example B – Marking and feedback time savers

There are many ways to focus written feedback so that it is effective, focused and efficient. Wherever possible, students should engage in self and peer assessment. All written feedback should add value and provide students with actionable response. Appendix G outlines 10 strategies that are effective yet help cut down on the marking workload.

Example C – Class Feedback Forms

Effective feedback policies will use efficient criteria, symbols and colours to help students identify what they have done well, what they have not done so well and how they can improve. Whole class feedback forms can also reduce repetitive comment writing efficient target setting and sharing of good practice. One form can be produced per set of books and distributed to all pupils. This then provides an excellent teaching resource to support corrections and improvements to pupils work. Curriculum areas can design their own feedback form to match their curriculum (see example in Appendix G).

Example D – Yellow Improvement Box

Making improvement a clear expectation in the follow up to feedback is extremely important. One approach is to use a yellow box to indicate where and how students should improve their work. An easy and visual way to track improvement and progress. Example in Figure 6 provided by @teachertoolkit.

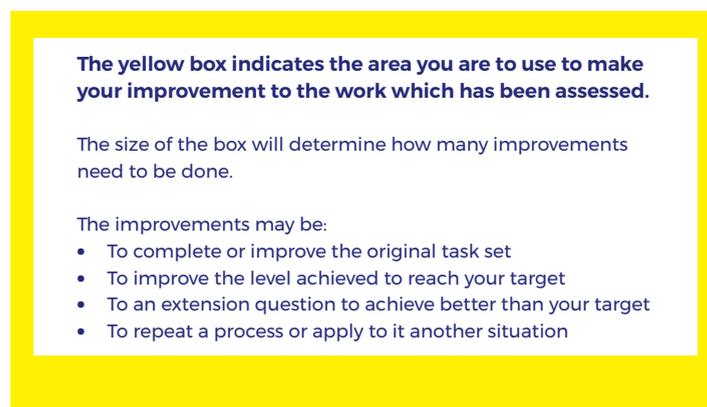


Figure 6: Yellow Improvement Box

6.8 Metacognition and Learning Power

'The ability to learn is very learnable' – Professor Guy Claxton

Metacognition refers to awareness of one's own knowledge—what one does and doesn't know—and one's ability to understand, control, and manipulate one's cognitive processes (Meichenbaum, 1985). Learning power refers to the skills, habits and dispositions that develop mental fitness and readiness for learning; the characteristics that are necessary for successful life-long learning. Central to learning power is the concept of the growth mindset. (see Dweck, 2006)

What the evidence-based research says

Metacognition effect size = $d = 0.69$

EEF months impact = +8 (high impact)

- It is through this “thinking about thinking,” this use of metacognitive strategies, that real learning occurs. As students become more skilled at using metacognitive strategies, they gain confidence and become more independent as learners.
- At the very least, metacognition can be seen as a supporting condition for critical thinking, to the extent that monitoring the quality of one's thoughts makes it more likely that one will engage in high-quality (critical) thinking. Lai, (2011)
- Children high in EC (effortful control) are more likely to behave in productive, pro-social ways; they are more socially competent and are generally rated as having higher quality interactions with others. Such pro – social children are more likely to engage in school to the extent that they feel socially comfortable. EC may lead to better peer interactions, higher engagement with schoolwork, and improved learning outcomes. Eisenberg (2010)
- Meta-cognition and self-regulation approaches have consistently high levels of impact, with pupils making an average of eight months' additional progress. The evidence indicates that teaching these strategies can be particularly effective for low achieving and older pupils. EEF (2016)

Suggested approaches to metacognition and learning power

- Teaching and learning structures should include metacognitive processes where pupils reflect on their own thinking and learning. In particular, strategies on how to plan, monitor and evaluate their learning
- Schools should agree their own set of characteristics (values/skills/habits/dispositions) that build learning power. These should complement the Astrea pupil dispositions – resilience, empathy, aspiration, collaboration and happiness.
- Learning Power characteristics should be visible throughout the school, celebrated, and used with all stakeholders as a language for learning.
- Wherever possible Learning power characteristics should be built into school systems. For example, rewards policies, assessment and reporting.

Suggested best practice approaches

Example A – Learning habits

It is important to have a system that reminds students of what effective learners do. These could be considered the ‘learning habits’. Claxton (2002) outlined eight such habits common to effective learners. These are an excellent starting point to help inform any school system around characteristics.

1. Organise and design your own learning
2. Think on your feet
3. Persist with difficulty
4. Manage your attention amidst competition
5. Question and check knowledge claims
6. Form effective teams for work and study
7. Diagnose and improve your own work
8. Seek and act on feedback

Example B – Empowered Learners

It is useful to have a clear model of effective learning that can be shared with students and referred back to in discussions around learning. This could simply be a acronym or a numbered list e.g. the 5 R’s or 7 C’s. Such a model could distinguish between characteristics, dispositions, values, skills and habits. It may also identify the common barriers that get in the way of learning. Such a model can then be used as part of a school’s behaviour policy. Appendix J outlines the *Empowered Learners Model* that encompasses these characteristics.

Example C – Thinking Dice

It is useful to have activities and questions that help prompt pupils to reflect on their learning. These are often effectively applied at the end of a lesson. Two examples of dice are demonstrated in Appendix E that can encourage reflection and evaluation of learning.

Example D – The Pit

An important element of ensuring children develop a growth mindset is to reinforce the importance of resilience and embracing difficulty. Pupils must understand that the learning process is not straightforward and at times they will have to struggle with concepts that they find challenging, indeed, struggling with concepts is a desired process that helps learners grow. A great way to illustrate the concept of difficulty as a valuable part of the learning journey is The Learning Pit developed by James Nottingham. Being ‘in the pit’ is a desired part of the learning process aligned to students finding their ‘challenge threshold’.

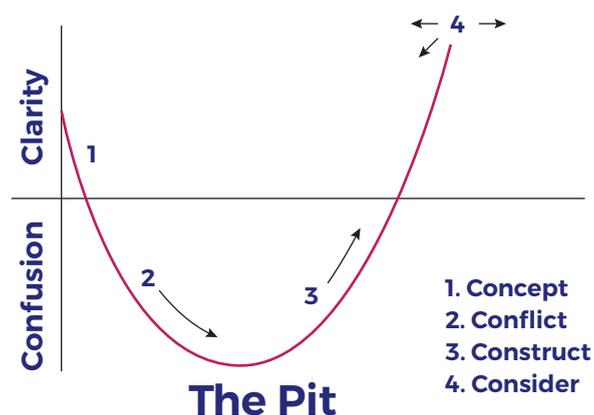


Figure 7: The Pit

Example E – Learning Junctions

The concept of the Growth Mindset (Dweck, 2006) should directly or indirectly run throughout everything we do in our schools. Pupils should realise that through effort they can improve their intelligence and make progress, no matter what their starting point is. Often this will include reminding students of the opportunities they have to demonstrate the characteristics of a growth mindset. One way to do this is through Learning Junctions – six situations students will find themselves in on a day-to-day basis at school. When students come across these junctions, they should be reminded of the path someone with a growth mindset would take. These six 'junctions' are described in the icons below and developed in Appendix K.



Figure 8: The Six Learning Junctions

6.9 Instruction and Explanation

'If you can't explain it you don't understand it well enough'. – Albert Einstein

Education involves helping a novice develop strong, readily accessible background knowledge. It is important that background knowledge be readily accessible, and this occurs when knowledge is well rehearsed and tied to other knowledge. The most effective teachers ensure that their students efficiently acquire, rehearse, and connect background knowledge by providing a good deal of instructional support. They provide this support by teaching new material in manageable amounts, modelling, guiding student practice, helping students when they made errors, and providing for sufficient practice and review. Rosenshine (2012).

Instruction and explanation is a key part of the structures teachers use during lessons. The best way to give instructions and explain concepts will vary across key stage and subject. Therefore, there is not a one-size-fits-all approach, yet this section outlines some of the principles that are at the heart of effective instruction.

What the evidence-based research says

Teacher Clarity effect size = $d = 0.75$

Rosenshine (2012) collated evidence-based research from a range of sources on principles of instruction. This included research on cognitive science, research on the practice of master teachers and research

on cognitive supports that help students learn. The research found that instruction is effective when teachers:

- Begin a lesson with a short review of previous learning: Daily review can strengthen previous learning and can lead to fluent recall.
- Present new material in small steps with student practice after each step: Only present small amounts of new material at any time, and then assist students as they practice this material.
- Ask a large number of questions and check the responses of all students: Questions help students practice new information and connect new material to their prior learning.
- Provide models: Providing students with models and worked examples can help them learn to solve problems faster.
- Guide student practice: Successful teachers spend more time guiding students' practice of new material.
- Check for student understanding: Checking for student understanding at each point can help students learn the material with fewer errors.
- Obtain a high success rate: It is important for students to achieve a high success rate during classroom instruction.
- Provide scaffolds for difficult tasks: The teacher provides students with temporary supports and scaffolds to assist them when they learn difficult tasks.
- Require and monitor independent practice: Students need extensive, successful, independent practice in order for skills and knowledge to become automatic.
- Engage students in weekly and monthly review: Students need to be involved in extensive practice in order to develop well-connected and automatic knowledge.

Suggested approaches to Instruction and Explanation

The above principles should be considered best practice and used to guide discussions around teaching and learning. Similarly, the following points expand on the Astrea expectations outlined in section 3, 4 and 5 of this policy.

- Prior learning should be revisited regularly using appropriate questioning techniques and forms of low-stake assessment. This should be done on a lesson-by-lesson basis and built into schemes of work through long-term planning (see 5.1 Planning)
- Questioning should connect the learning (see 5.2 Questioning)
- Teachers should use appropriate structures to support and challenge students. This will include, where appropriate, scaffolding and models to help explain and structure tasks.
- Classroom activities should engage students in regular independent practice that embeds knowledge and skills.
- Formative assessment techniques should be used to support teachers and students to review learning.
- Pupils should have access to specific success criteria in order to self-review progress and identify next steps in learning

Suggested best practice approaches

Example A – models for solving problems

Learners should be coached in how to persist with difficulty and find ways to overcome a problem themselves. There are a range of structures to encourage and remind students to apply different techniques before seeking support from the teacher. These include 3B4Me (Brain, Book, Buddy and Boss) and SNOT (Self, Neighbour, Other, Teacher). Figure 9 demonstrates Solve It is another step-by-step approach to overcome obstacles during a lesson.

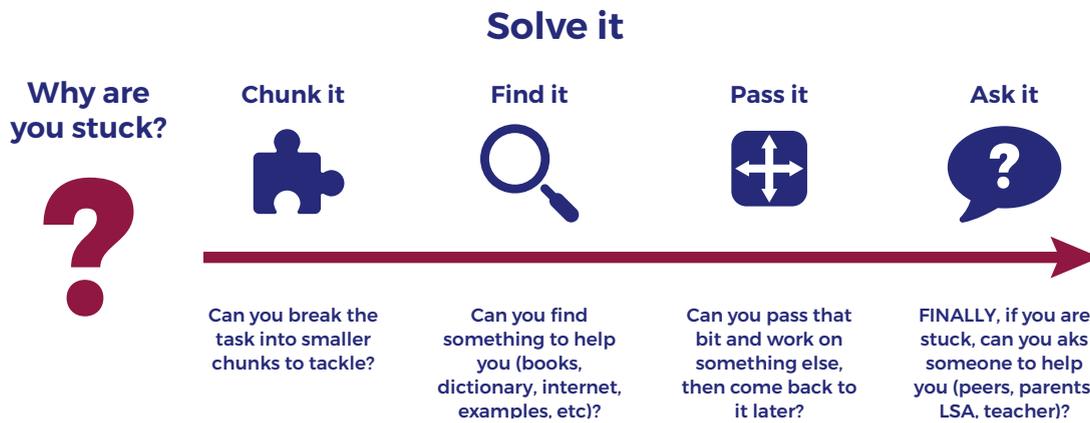


Figure 9: Solve It

Example B – Pupil Dashboards

A dashboard is a user-interface that works as a management information tool and is used to display information, often graphically, on a single page or screen. The dashboard therefore presents the user with everything they need to know to make important decisions. We can use this approach to share key exam information and success criteria with students during lessons. A dashboard may be an A3 laminated information sheet that pupils use as a place mat. An AfL dashboard puts key information at the fingertips making it accessible whenever they need it providing useful support and instruction. The dashboard contains important information that students can access during a lesson. The first step is to decide on the information you want to include. For example:

- o Key exam skills,
- o Model writing frames
- o Key vocabulary
- o Assessment criteria
- o Classroom rules
- o Reward schemes
- o The 'big picture' of learning intentions

Good examples

Chat Mat

<p>Sharing I think the answer is X because... One solution might be... In my opinion, Y is...</p> <p>Clarifying Could you say that another way? To be clear, are you saying that... Can you elaborate please? Can you give me an example please?</p> <p>Agreeing I agree with Y because... I like X's idea because... Our ideas are similar because... The evidence for Z is that... Despite disagreeing with Y, I agree with X that...</p> <p>Disagreeing I see it differently because... Another perspective might be... I agree with Y, but we also need to consider that...</p>	<p>Paraphrasing So you're saying that... Is it fair to say that you believe...</p> <p>Building On Would you like to add to my idea? Can you tell us what you are thinking? Y mentioned that... Yes-and furthermore... Adding to what Z said...</p> <p>Summarising Overall, what I'm trying to say is... To summarise, my point is...</p>
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Remember eye contact and positive reinforcement

Question Cue

Things to think about during class discussion

- Do I agree or disagree? why?
- What's the evidence? How do we know?
- A.S.N Is that true always, sometimes or never?
- Is there another way? another perspective?
- What is a good question to ask?
- Have I contributed enough this lesson?

What do I know...

What can I do...

What do I think / feel...

That I didn't/couldn't at the start of the lesson?

am I getting it?

A well-designed dashboard will often contain lots of information so it is important that it is designed appropriately using colour, images, diagrams and tables to make the information easy to process. The learning environment within a classroom should mirror this concept with effective 'working walls' that aid learning.

Example C – Assessment for Learning Playing Cards

This approach involves giving each student a set of cards featuring key skills or success criteria. This works well for subject specific exam skills and literacy skills and are most effective when used during a self-assessment or peer-assessment activity. Put your success criteria onto a set of cards and give each student a deck. You can give students a full deck all at once, or hand them out gradually as new skills are introduced. The cards can then be used in a number of ways:

1. Success criteria – Before attempting a piece of work, such as an exam question, ask students to work in pairs to pick out the cards with the exam skills that they are required to demonstrate in that particular task. This is a really effective planning technique that gives students a checklist to work against.
2. Monitoring progress / self-assessment – A second approach is to get students to select cards from their deck and turn them over when they believe they have demonstrated that skill in their work and place it at the top of their desk. Students are therefore self-assessing and informing the teacher when they have shown a particular skill or used a particular technique. The teacher can then circulate the class and knows exactly when to check student's work.
3. Evaluating an answer or piece of text – A third option is to hand out an example of a piece of work and ask students place the cards on top of the work that represent the skills shown within the work. This works better than underlining or using a highlighter because pairs and small groups can easily compare the set of cards they selected.
4. Peer-assessment – Students can use the cards to peer assess each other's work, placing their cards on a peer's work where they believe it to be a particularly good example.
5. Revision – The deck of cards makes for an effective revision resource and a 1-to-1 questioning prompt.

<p>Punctuation</p> <p>apostrophe</p> <p>“ ”</p> <p>Andrew's Haven't</p>	<p>Word</p> <p>adverb</p> <p>Answers how? when? where?</p> <p>gently, here, now, very</p>	<p>Text</p> <p>Tense</p> <p>past, present</p> <p>is, did, has gone, went</p>
<p>Punctuation</p> <p>comma</p> <p>,</p> <p>Items in a list</p> <p>apples, oranges, bananas</p>	<p>Punctuation and Sentence</p> <p>Exclamation</p> <p>!</p> <p>That's amazing!</p>	<p>Sentence</p> <p>Noun phrase</p> <p>Makes your sentences more interesting</p> <p>The <u>magnificent whale</u> is swimming in the <u>sparkling blue ocean</u></p>

Example of Year 2 Literacy Cards

Example D – Collaborative structures

There are many ways of organising collaborative group tasks. For example, setting clear success criteria, giving group members a specific role or providing a step-by-step approach to solve a problem. Whenever students work together in small groups they must see it as an opportunity to develop their communication, teamwork and leadership skills and test their ability to listen, be patient and compromise. Raising the profile of these skills, amongst others, is just as important as the problems and tasks we ask our students to solve. Students must also take part in activities that are effectively designed to encourage cooperation and collaboration. In classrooms where learners collaborate effectively, three characteristics can often be observed:

1. *Positive interdependence* – activities are designed so that students can only succeed when the group as a whole succeeds. Often this will be achieved when each student has a unique role and contribution to make that others rely on.
2. *Accountability* – Learners recognise that they have an identity as a group. They know they will be held accountable as part of that group and for their own contribution to that group.
3. *Community* – Students see themselves as a learner within a learning community that they contribute towards and benefit from. Learning in different groups with people from outside their direct friendship group is the norm and happens on a regular basis.

7. Professional Learning

7.1 Astrea as a Learning Organisation

To be effective in our role as educators we must first exhibit the characteristics of learners that we want children to develop. In this way Astrea Academy Trust supports all of its schools in becoming learning organisations. Most scholars see the learning organisation as a multi-level concept involving individual behaviour, team work, and organisation-wide practices and culture. A learning organisation is a place where the beliefs, values and norms of employees are brought to bear in support of sustained learning; where a “learning atmosphere”, “learning culture” or “learning climate” is nurtured; and where “learning to learn” is essential for everyone involved. OECD (2016).

These expectations are laid out in the Astrea Teacher Standards and are exemplified by the investment Astrea puts into its employees and its support for professional development and shared learning at all levels and particularly leadership development. For further information on professional development opportunities see the ***Astrea Continued Professional Development Brochure***.

7.2 The Importance of Subject Expertise

“To know what you know and what you do not know, that is true knowledge.” – Confucius

Effective classroom pedagogy is key to improving outcomes for children, but all practice should be underpinned by a teacher’s good subject knowledge and expertise. Subject expertise should encompass information, key concepts, the curriculum and assessment framework and the best practice approaches used to teach their subjects.

Where teachers hold good subject knowledge it allows them to be flexible in their approach and better meet the learning needs of their pupils. Similarly, pupils must also acquire and secure a sound and secure understanding of subject knowledge and key concepts on which to base metacognitive skills and develop their learning power. Proficient standards of literacy and numeracy are equally important and all teachers should support the development of literacy and numeracy in all that they do.

What the evidence-based research says

Research supports the case that the most effective schools prioritise the development of subject knowledge alongside classroom practice. *'Exceptional Schools are wholly distinctive in their commitment to a shared, school specific model of pedagogy, to professionalising and formalising support not just for CPD but also for professional learning, in developing a strong sense of personal responsibility for professional learning for colleagues at every level and in giving priority to in-depth subject knowledge.'*⁵

The more accomplished teachers set tasks that have a greater degree of challenge; they are more sensitive to context and they have a deeper understanding of the content being taught." Hattie (2011).

Suggested approaches for subject expertise

- Subject knowledge should hold equal weighting to approaches of teaching and learning in the professional development of teachers.
- Teachers should have excellent knowledge of the subjects and concepts they teach. Know the best way to teach their subject and understand the common misconceptions and difficulties pupils have learning their subject.
- Teachers should actively reflect on the development of subject knowledge through the appraisal process.
- The teaching of numeracy and literacy is the role of every teacher. High standards and shared structures should be agreed and consistently applied across a school.
- Schools should promote systems for sharing best practice approaches to the teaching of content and concepts.
- Schools and teachers must promote the value of knowledge alongside the development of skills and character.

7.3 Joint Pedagogy Development

Within Astrea teachers and associate professionals are given on-going opportunities to learn and develop. The purpose of this ongoing investment in personal development is driven by the desire to improve the outcomes for the schools we work in, but more importantly, the outcomes for children.

For learning to have an impact on outcomes for schools and the children within those schools it must be embedded and shared. To ensure this happens, professionals within Astrea should engage in Joint Pedagogy Development (JPD). JPD refers to the process of improving pupil outcomes by developing the knowledge and skills of teachers and the quality of teaching and learning. To achieve this, teachers across the Trust should engage in JPD using the Teachers Diagnostic as a common framework to review, identify and develop classroom practice through self-regulated inquiry. All teachers can engage with this model, no matter what stage they are at in their career. It is every teacher's responsibility to ensure that their own development of pedagogy does not plateau as their career progresses. Details of the JPD process can be found in the ***Astrea Guide to Joint Pedagogy Development***.

Figure 10 outlines the cycle of professional learning that all teachers should engage in as a key component of their personal development. Once an area of priority has been identified teachers will then work alongside colleagues to identify, investigate and implement change to improve classroom practice. All teachers should be given regular time, resources and support from their schools to engage in this process and to collaborate with fellow professionals. It is the role of school leaders to decide how this process will be managed within their school. There is no prescribed model for the time allocated to each stage as this will depend on the area of focus and the needs of the teachers and pupils involved.

5 CUREE Gaining and Sustaining Momentum: Accelerating progress in schools project http://www.curee.co.uk/files/shared/GSM_report_public_version.pdf



Figure 10: The JPD Process

However, teachers should agree an appropriate timescale as they enter each stage. The final report is an opportunity for professionals to capture and share their learning across the Trust, and in doing so, contribute to a professional development library of shared learning across all our schools.

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Record of coached conversation:

Learning conversations between the teacher and reviewer following the lesson will result from these kinds of questions:

- What did you want the class to learn in this session?
- Did the activities support students in meeting the objectives?
- Was this lesson linked to prior learning? How did pupils use prior knowledge/skills?
- What evidence was there that learning took place?
- Were all pupils challenged?
- In what part of the lesson did you see most engagement or challenge?
- What did you learn about the class/children that you did not know before?
- How will you apply what you have learnt?

Areas for development:

Areas of excellence:

Form B: Pupil Voice Review

Teacher:	Reviewer:
Date:	Pupil number:
Pupil profile:	

1. Have you enjoyed your learning in this class this year?
2. How do you know when you are learning well?
3. What happens when you find work difficult?
4. What is your favorite part of your school day?
5. How is your teacher or learning assistant able to help you with your learning?
6. Can you work quietly in your classroom without being disturbed by other pupils?
7. What learning skills have you developed this year?
8. What do you like best about homework? What sorts of homework do you like best?

Q1.

Q2.

Q3.

Q4.

Q5.

Q6.

Q7.

Q8.

Form C: Pupil Work Review		
Teacher:	Reviewer:	Number reviewed:
Date:	Class:	Representative sample: Yes/No
To be carried out as a joint-review with the teacher		
<p>Presentation</p> <p>Check organisation (titles, underlining, dates, neat handwriting) sensible use of worksheets, consistency of approach, crossing out not scribbled out, evidence of school/department policy applied?</p>		
<p>Teachers' marking/feedback and pupils' response to marking/feedback</p> <p>Is marking regular? Is the marking and feedback policy applied? Is feedback followed up in subsequent pieces of work? Do pupils respond to questions? Are corrections made? Is self-marking and peer-marking evident?</p>		
<p>The quantity of work done</p> <p>Is there enough work for the age of the pupils and does the quantity generally improve over time?</p>		
<p>Attainment/standards the pupils are at now - you will need class performance data</p> <p>Do the standards in the work relate well to the pupils' assessment and targets? - where appropriate link to National Curriculum AREs</p>		
<p>Progress and learning - you will need class performance data</p> <p>Is progress evident over a period of time (where AREs apply are pupils on track to achieve)? Do knowledge, skills and understanding develop over time?</p>		
<p>Differentiation</p> <p>Look at work completed on a specific date across the ability range from the sample taken. Is there evidence of differentiation? Is depth of learning being promoted? What evidence is there of support/scaffolding, extension and challenge?</p>		

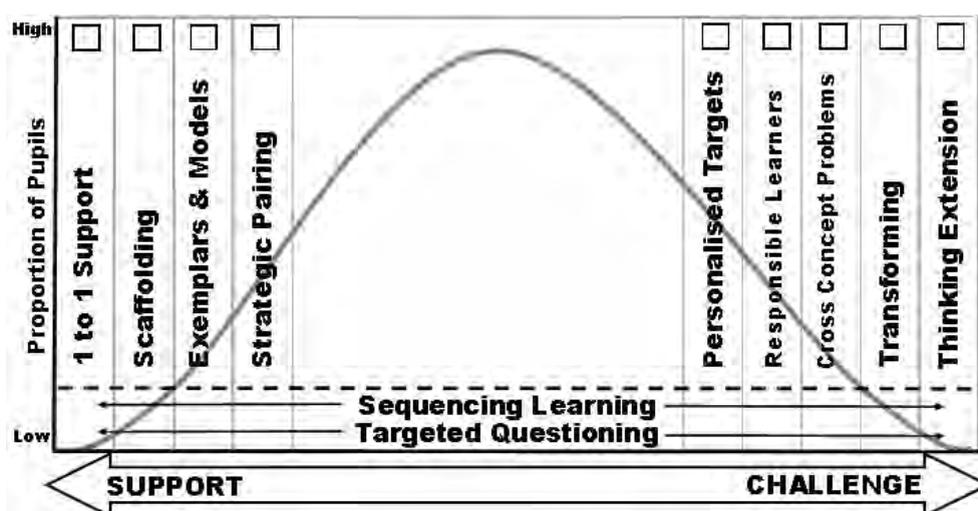
Form D: Class Performance Data

Copy the relevant class performance data into the table below and any other supporting information that might help clarify or contextualize the information

Schools should use an appropriate format to collect and present class and student data that will support discussions on progress, actions and any necessary interventions.

Appendix B – Challenge Curve

The challenge curve provides teachers with a basis to plan how they can support and challenge individuals and groups of pupils. The model acknowledges that an appropriate level of challenge in any lesson normally comes from well-planned and sequenced set of instructions and activities that break concepts down and deliver them in a logical progression. This will involve the escalation of difficulty and complexity through new concepts, scenarios or facts. For example, once pupils have acquired knowledge they may then apply and practice it. Furthermore, good order and sequencing should allow pupils to progress at their own pace without being held back. Similarly, the majority of what teachers do to differentiate learning does not come from different activities or resources, but through the interactions that take place between a teacher and each pupil. Planning learning in this way will meet the needs of most pupils most of the time. Nevertheless, specific approaches may be adopted to provide the necessary support and/or challenge that pupils require.



1 to 1 support – The most comprehensive support we can give pupils is through direct one-to-one support from a teacher or teaching assistant. Learning may be set up to ensure individuals or groups can have this provision for a lesson, part of a lesson or intervention outside of a lesson.

Scaffolding – Scaffolding can be provided through rubrics, templates, prompts or partially completed work.

Exemplars and models – Access to additional support, such as video tutorials, diagrams and working walls. Providing pupils with good and bad examples are both effective at giving additional support and showing pupils what success looks like.

Strategic pairing – involves any structure for collaborative learning that allow pupils to support one another. For example, Kagan’s approach to ability seating plans (face and shoulder partners).

Personalised targets – Pupils should understand the success criteria in a lesson. This may be generic, but additional targets may be included specific to the needs of individuals.

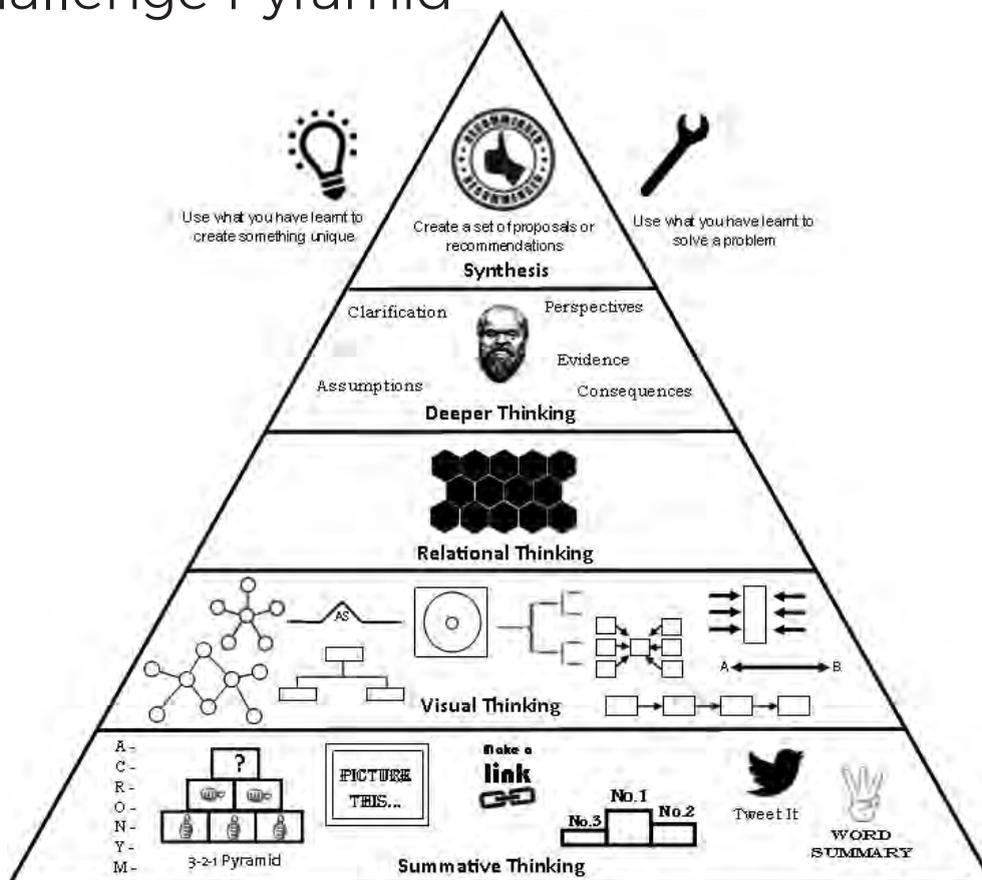
Responsible learners – Challenge is high in all lessons where pupils take responsibility for their own learning. This may involve providing pupils with strategies to solve their own problems, make choices, review their own learning and identify next steps.

Cross-concept problems – Pupils will normally learn concepts, knowledge and skills in isolation. Combining these with prior learning is an appropriate way to recover content, apply knowledge and add complexity to a lesson. Changing the context and the mastery approach is another option.

Transforming – transforming takes place pupils are able to take learning and present it in a different format. This might be through a visual representation of a concept or linking understanding of one concept with another.

Thinking Extension – A thinking extension can involve any activity whereby pupils are required to reflect, challenge and question their understanding. This may involve abstract questions, socratic questioning or the opportunity to synthesise – opportunities to use knowledge and understanding to be creative.

The Challenge Pyramid



The challenge pyramid contains a range of extension activities that will help pupils transform their understanding and encourage deeper thinking and application of knowledge.

At the bottom of the pyramid, are a range of approaches that can be used to summarise and review learning. For example, 'picture this' requires pupils to encapsulate what they have learnt in a picture whilst 'three-word summary' requires pupils to select the most important three words the summarise what they have understood.

Visual Thinking offers a range of visual organisers that can be used to convey a pupil's understanding of a concept. Each visual organiser offers a different way of thinking appropriate for different concepts and contexts. The process of constructing one of these diagrams is a valuable exercise as a starter or a plenary.

Relational thinking is an important process when pupils are making connections between the content they are currently learning in class with prior knowledge or other subject domains. Laminated hexagonal cards offer a great way for pupils to do this where discussions can be generated around the connections they make. These cards can be reused time after time.

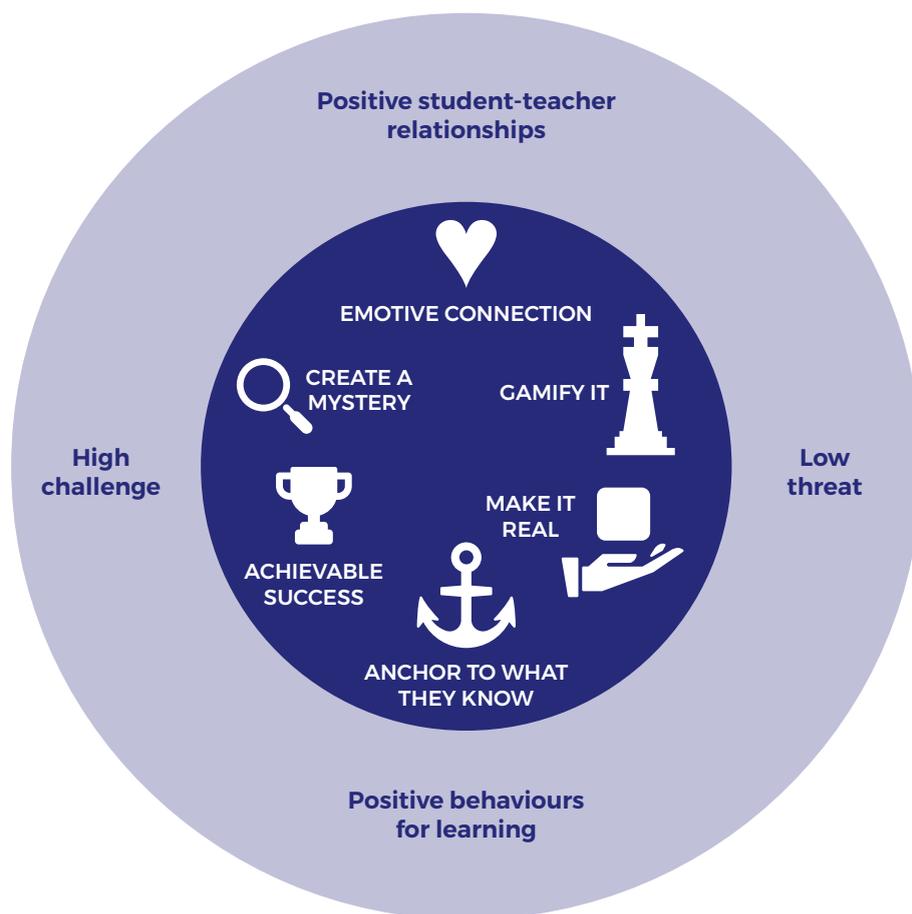
Deeper thinking will occur whenever pupils are given the opportunity to challenge their own understanding of a concept or solve problems. The best way to do this is through higher order questions that follow a Socratic approach to thinking. Abstract questions work similarly well to get pupils thinking. Furthermore, it is even better if pupils are able to come up with these questions themselves.

At the top of the pyramid is synthesis, the highest form of knowledge, as identified by Bloom's (modified) Taxonomy. At this level of extension, pupils will be given the opportunity to use their learning to create. This may be solving a complex problem, drawing up a set of recommendations or perhaps creating a piece of literature, a product or an artifact.

Appendix C – Rules of Engagement

The Rules of Engagement highlights the conditions that teachers should foster within their own classroom to encourage engagement in learning and some of the principles that underpin strategies that help students connect. Engagement can exist in classrooms where the teacher sets a climate for learning. This will include high expectations of behaviour, high challenge yet a low threat of failure and, above all, positive student-teacher relationships. At the heart of all good relationships exists trust and respect.

Pupils will engage in their learning when it is personal to them. This might simply be anchoring the learning to previously learning, creating an emotional response, such as empathy, anger or happiness through the subject content or helping student see how what they are learning relates to the world around them. The more explicit and tangible, the better. A hook into a lesson may also be achieved through some form of a problem or mystery that pupils can discover or solve. Turning learning into a game where students get the opportunity to compete in teams or against their own best scores can also work very well. Above all, it is important that students believe that they can succeed. Managing difficulty is important, but students must also experience success and believe it is in their reach.



Appendix D – Lesson Planning Framework

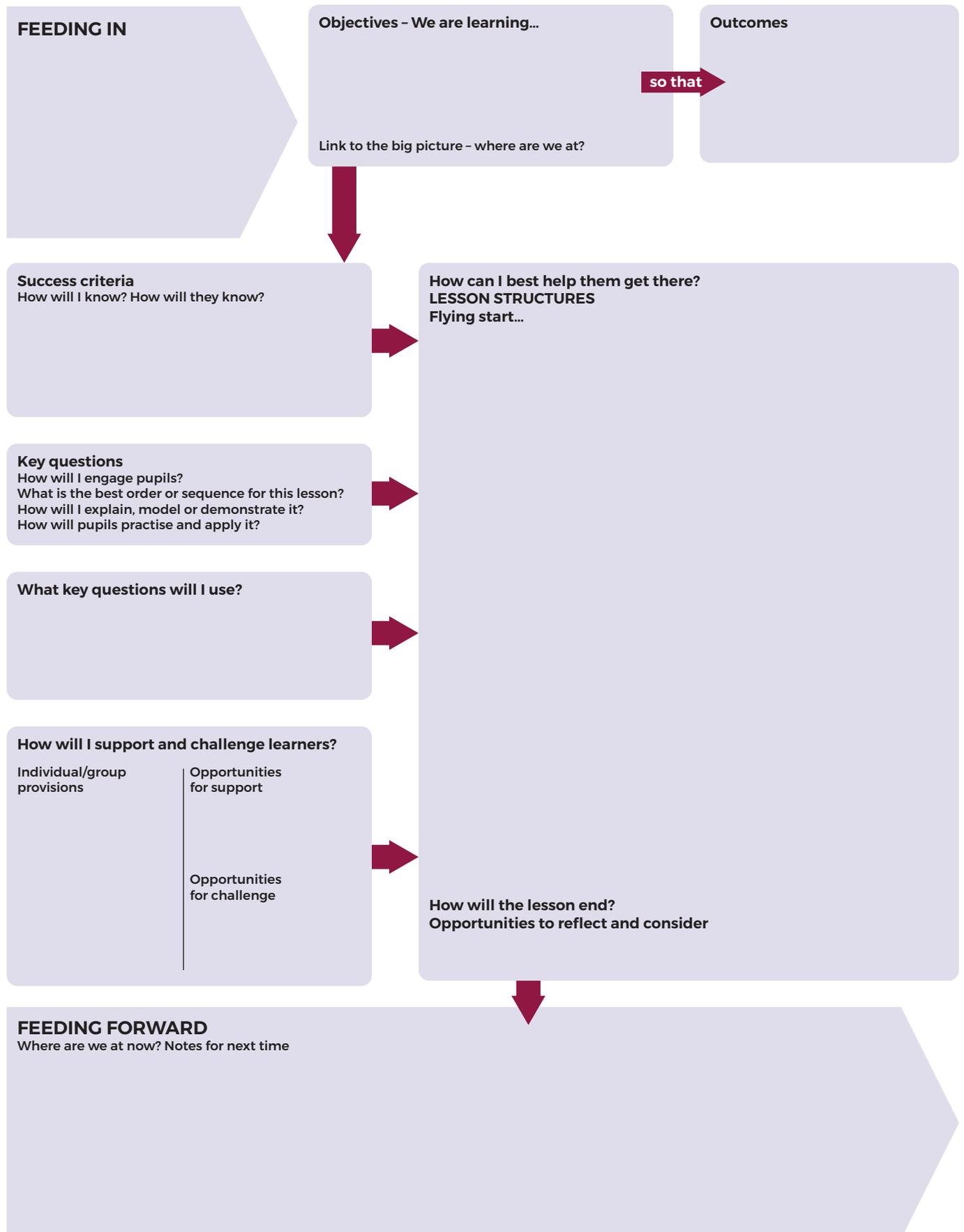
Subject:

Class:

Lesson:

What are the pupil's starting point?

Where do I need them to get to?



Appendix E – Critical Thinking Skills

CRITICAL THINKING SKILLS

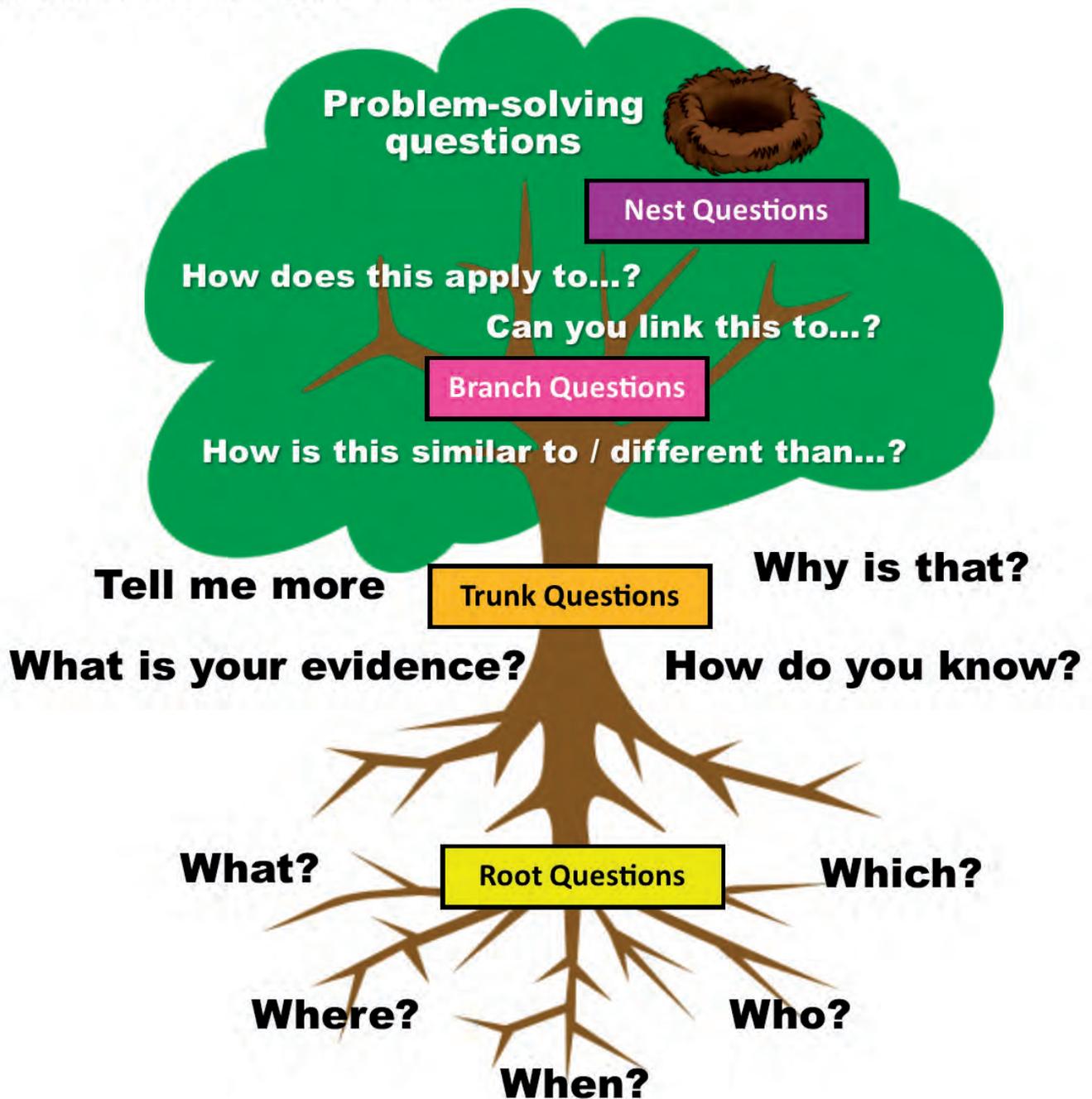
1 Knowledge Identification and recall of information	define fill in the blank list identify	label locate match memorize	name recall spell	state tell underline
	Who _____? What _____? Where _____? When _____?		How _____? Describe _____? What is _____?	
2 Comprehension Organization and selection of facts and ideas	convert describe explain	interpret paraphrase put in order	restate retell in your own words rewrite	summarize trace translate
	Re-tell _____ in your own words. What is the main idea of _____?		What differences exist between _____? Can you write a brief outline?	
3 Application Use of facts, rules, and principles	apply compute conclude construct	demonstrate determine draw find out	give an example illustrate make operate	show solve state a rule or principle use
	How is _____ an example of _____? How is _____ related to _____? Why is _____ significant?		Do you know of another instance where _____? Could this have happened in _____?	
4 Analysis Separating a whole into component parts	analyze categorize classify compare	contrast debate deduct determine the factors	diagram differentiate dissect distinguish	examine infer specify
	What are the parts or features of _____? Classify _____ according to _____. Outline/diagram/web/map _____		How does _____ compare/contrast with _____? What evidence can you present for _____?	
5 Synthesis Combining ideas to form a new whole	change combine compose construct create design	find an unusual way formulate generate invent originate plan	predict pretend produce rearrange reconstruct reorganize	revise suggest suppose visualize write
	What would you predict/infer from _____? What ideas can you add to _____? How would you create/design a new _____?		What solutions would you suggest for _____? What might happen if you combined _____ with _____?	
6 Evaluation Developing opinions, judgements, or decisions	appraise choose compare conclude	decide defend evaluate give your opinion	judge justify prioritize rank	rate select support value
	Do you agree that _____? Explain. What do you think about _____? What is most important?		Prioritize _____ according to _____? How would you decide about _____? What criteria would you use to assess _____?	

Appendix F – The Question Tree



Questions that make you think hard!

The Question Tree



Appendix G – Marking and feedback time savers

1. Feedback keys – to save time writing feedback on common mistakes or issues, use an abbreviated feedback key. This works very well when marking for literacy, but also for other issues and common types of feedback. The feedback key should be stuck into students' books. For example, DD = more detail and depth, Ap = Application to context. The key would then go on to explain these issues and what a student might do to improve.

2. Home peer marking – this can work for factual or short answers and multiple-choice questions. Get students to swap homework at the start of a lesson and then give out the answers. Students will enjoy marking each other's work. Alternatively, get students to swap homework before the lesson and post the answers on the school VLE for them to access and mark prior to your next lesson.

3. Student model answers – instead of spending a considerable amount of time explaining how students can improve, photocopy an excellent example from one student and return it with each piece of homework. This exemplar can then be used as reference to highlight best practice and to demonstrate particular skills. This saves time explaining 'what you were looking for' and at the same time gives status to the exemplary student. Works well when you can rotate the exemplar to different students each week.

4. Just grade – instead of providing feedback on homework or a test, simply provide a grade, but return the work with a grading rubric. Pairs or small groups then have to try to explain and justify the grade they received by highlighting key aspects of their work, which match the grading criteria. This is particularly useful at helping students identify the differences between one piece of work and another.

5. One to mark – Where there is repetition and consistency in the questions being marked (for example, several '3 markers') then mark and provide feedback on the first couple. Allow students to have a go at marking the last question, or couple of questions themselves, using the feedback you have provided on earlier questions as guidance.

6. Focused feedback – get students to highlight one particular skill or aspect of their work that they would like to receive detailed feedback on. For example, spelling and grammar, technical language or appropriate connectives. Perhaps a specific skill, like evaluation. This might work best with older and more able students, who understand their own strengths and areas for development. It also helps you provide specific feedback without having to cover everything.

7. Automated marking – most school VLEs now have a function to produce self-marking quizzes and tests. Similarly, there are other web-based tools such as Socrative (www.socrative.com) that can be adopted to conduct short answer or multiple-choice tests that instantly mark answers and collate the results. This will help save time on marking when assessing the knowledge-based aspects of the course.

8. Margin marking – comment not correct, especially when marking for literacy. Use abbreviations (see Tip 1) in the margin of a student's work next to the relevant paragraph or line. The student's responsibility is then to find and correct the mistake. 'SP' in the margin should direct that student to find the spelling mistake themselves, look it up in a dictionary and make the correction. Don't do it for them!

9. Comment keys – similar to feedback keys, but specific to a particular task and useful for extended writing. Students will often make similar mistakes and you will probably want to write the same comment multiple times. Instead, each time you identify an issue, type your comment into a separate document and number it. Then write the relevant number in the margin of the student's work. Do this for each issue that arises. You will find that the first couple of pieces take a while to mark, but your marking will speed up as you work your way through the pile and come across the same issues.

10. Self assessment and peer assessment – self-assessment and peer-assessment have featured in most of these ideas, but any scheme of work should make effective use of these two models alongside teacher assessment. To track progress it might also be useful for students to highlight any assessed work with TA, SA or PA to indicate how work has been marked. Time invested at the start of a year to train students on how to assess and mark their own and each others work and provide quality feedback, will always be time well spent.

Whole Class Feedback Forms

Work:		Date:
SPAG*	Common mistakes	
T1**		
T2		
T3		
This is a good example because...***		
This is a good example because...		
I have improved my work by... / next time I will...		

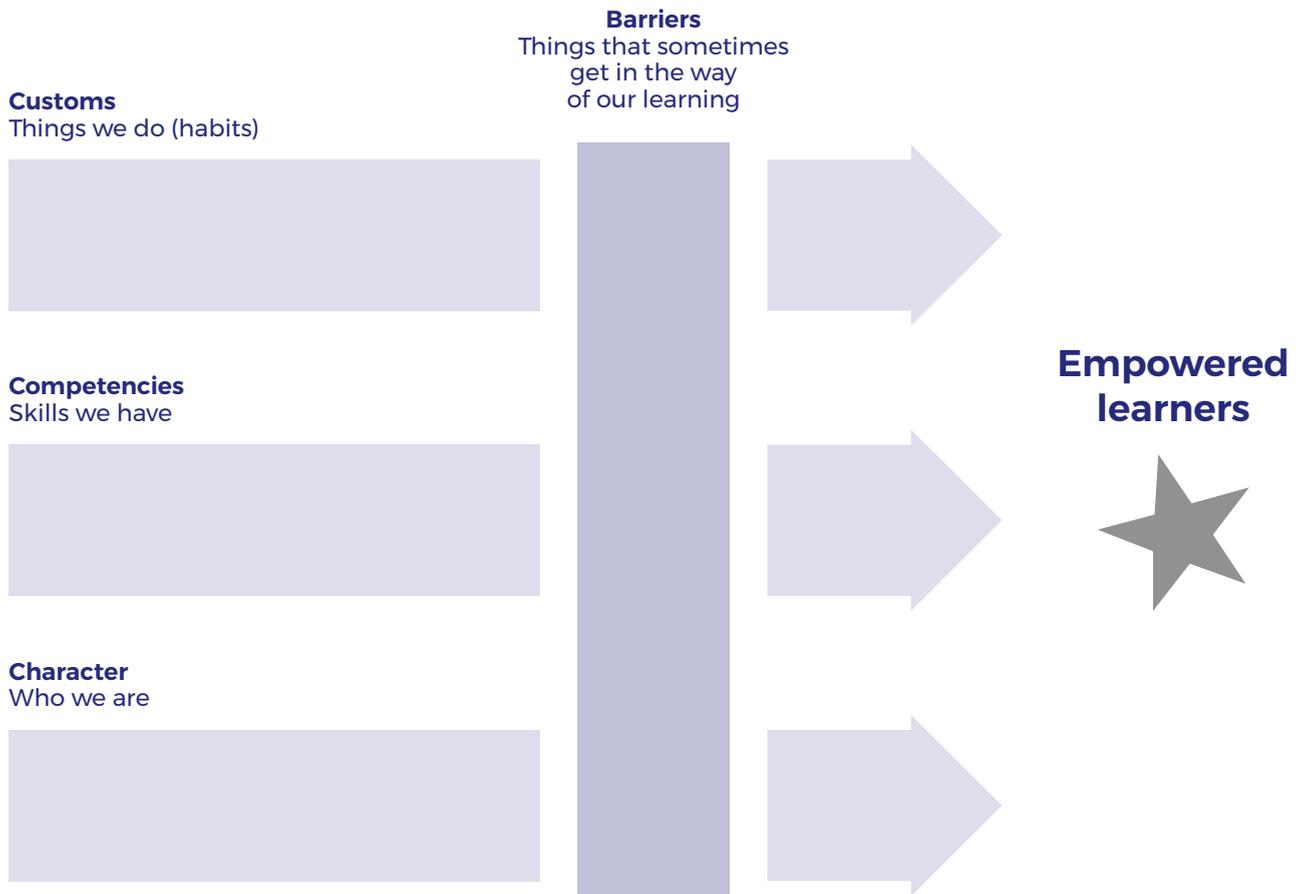
* SPAG and common mistakes can be recorded once. Pupils should then review their work to find and correct these mistakes.

** T (targets) multiple targets can be written onto the form and details provided. T1, T2 etc can then be written in the margin of pupils work corresponding to these targets.

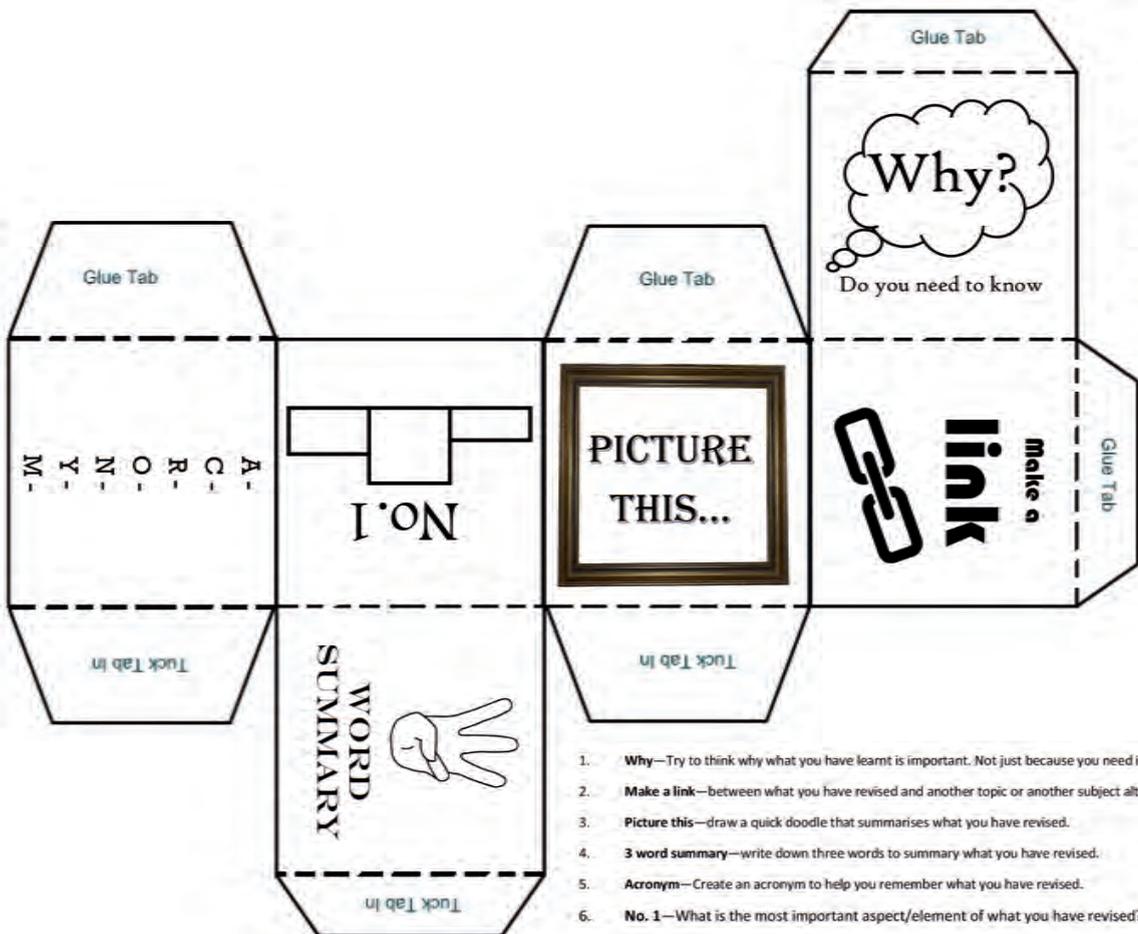
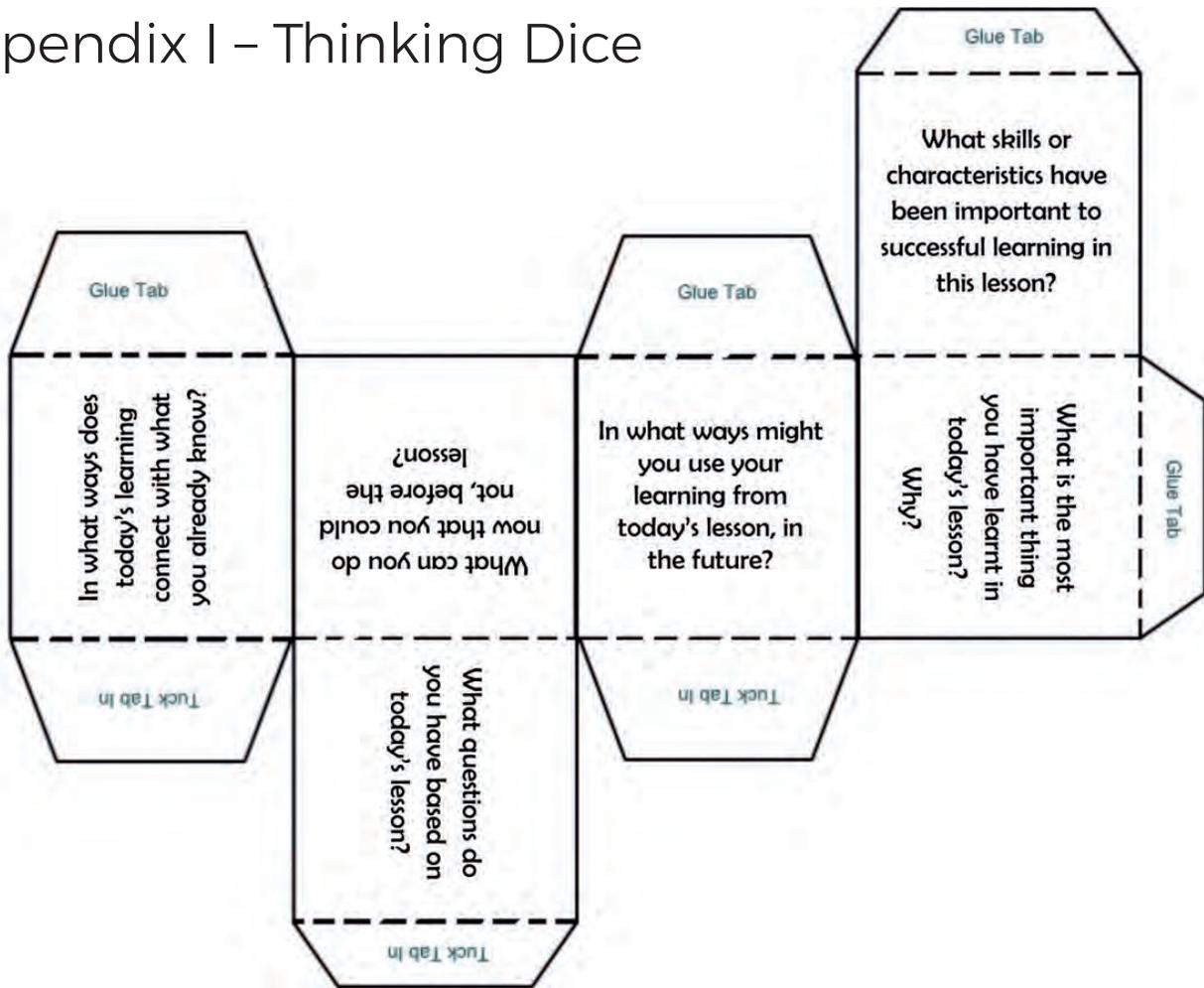
*** Good examples can be selected from pupils and including on the feedback form. These examples can be copied or scanned in using a visualiser. Explanation can then be given on the form or discussed as a class activity with pupils making their own notes. The form can also be used for pupils to record what they will do next time / how they will improve their work.

Appendix H – Empowered Learners

The Empowered Learners Model is a template that teachers can use to identify the factors that contribute towards successful learners. The model gives teachers and students a point of reference to remind and reinforce those characteristics that are necessary to build 'learning power'. These factors are summarized as the Three Cs: Customs, Competencies and Character. The model also helps teachers identify the barriers that get in the way of learning. This could include tiredness, poor listening or emotional distractions. By understanding those factors that have an impact on success in any situation teachers can help children manage their own cognitive processes and behaviours.



Appendix I – Thinking Dice



Deep Thinking Dice

1. **Why**—Try to think why what you have learnt is important. Not just because you need it for an exam!
2. **Make a link**—between what you have revised and another topic or another subject altogether.
3. **Picture this**—draw a quick doodle that summarises what you have revised.
4. **3 word summary**—write down three words to summary what you have revised.
5. **Acronym**—Create an acronym to help you remember what you have revised.
6. **No. 1**—What is the most important aspect/element of what you have revised?

Appendix K – The Learning Junctions

Getting Stuck

How many times a day do you hear the phrase “Miss, I’m stuck” or “Sir, I don’t get it” More often than not, these exclamations of student capitulation also come moments into a task or before it’s even possible for them to have read the instructions! ‘Getting stuck’ is the first learning junction, and maybe the most common to crop up on a day to day basis. The next time you hear one of these cries for help smile back at the student and with enthusiasm say “that’s excellent”. Enjoy the confused look at the students face before going on to say “that means you’ve got an opportunity to grow”. Overcoming obstacles is the key to learning something new and we should always encourage students to see obstacles and problems as an opportunity to stretch their brain. Encourage students to see ‘getting stuck’ as an opportunity rather than an indicator that they can’t do something.

The Setback

A setback is an instance where a student underperforms based on their potential or personal goals. Students may see this as a failure, this hurts and has the potential to damage their confidence. It is important that students recognise that they are not their grade. If a student receives a grade D when they were aiming for a C grade, but they can do something about it to ensure they get their C next time.

The Win

Success is a contentious issue and we should be careful how we deal with it. We all want to be successful; who doesn’t? We want to praise success, and quite rightly so. After all, as teacher we want to foster a culture where success is rewarded. A ‘win’ might be a situation where a student has successfully completed a task, or received a score or grade that they are satisfied with, perhaps this involves reaching their target grade. In these situations it is important to praise this success, however, it is also important to ask questions such as, did I do my best? What effort went into my work? am I challenging myself?, could I do better? Or, should my target be raised?

Choosing a Challenge

When given a choice, students and teachers, will choose the easy option. The task that we know we can complete and succeed at. However, this is not always the option that will help us develop, learn and grow. It is important that we encourage students to challenge themselves for the benefits it will bring, even though it might take longer with a higher chance of failure.

Receiving Feedback

With a fixed mindset unless feedback is unconditional praise it will be received as criticism. For this reason, students will often ignore feedback because it has the potential to damage their confidence. After all, if you know that you have not done very well on a test, you don’t need someone to tell you all about it. At this junction it is important that students realise the value of feedback. Feedback is guidance on improvement; we must always do what we can to help students see feedback as a positive opportunity to grow.

Working with Others

For some students, working with others can be very threatening as this is just another way in which they can be compared and their faults exposed. There are two messages we must convey to our students about working with others. The first is that they only need to outperform themselves. Everyone is on their own learning journey and they only need to focus on their own path. Secondly, students should take inspiration from one another. If someone does better than them then this is proof that it is possible and they should take every opportunity to learn from them.

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