

Building the habit of...

Resourcing Learning



The New Challenge

Ofsted now recognises the need for schools to:

- provide their own compelling data of a trajectory of improvement
- successfully promote and support children's 'self confidence, self awareness and understanding how to be a successful learner'.

This together with the current interest in character led education all point to the opportunity for schools to cultivate the habits and attitudes that underpin success and thereby build students' learning characters.

About Learning Habits and Character

Learning habits are the routine ways in which we think and act when faced with life's experiences and challenges. They are second nature to us. Some habits make us very productive and effective; others cause us to learn in constrained and limited ways. Habits are indeed part of our character.

We acquire habits through use: ways of behaving become habituated. If we have a well formed **Resourcing** habit, we will have a tendency to use it in all learning experiences. The more we experience the value of a particular habit, the more we will tend to use it throughout our lives.

Like it or not, teachers do help to form a learning character. The ways in which young people perform and behave are influenced by the way teachers orchestrate and guide learning. Deliberately fostering an effective learning character in students is a renewed common purpose for education, shared between students and teachers, parents and society more generally.

A well formed Resourcing Learning habit involves being ready, willing, and able to:

Learn from many different sources – other people, books, the internet, music, the environment, experience...

Make intelligent use of all kinds of things to aid learning

Seeking novel ways of solving problems by exploiting the potential of what is around them

Improve physical skills and absorb ideas, strategies and thinking patterns by observing the approach and detail of how others do things

Adapt and adopt the successful habits and values of others into their own learning repertoire

“Watch your thoughts for they become words, watch your words for they become actions, watch your actions, for they become habits, watch your habits for they become your character, watch your character for it becomes your destiny.”
—Ralph Waldo Emerson

Young people with the habit are likely to:

Be alert to supportive opportunities

Use all kinds of resources with discrimination

Make the best of a bad job

Create their own learning resources

Watch others carefully

Consciously seek to imitate successful strategies

Appear independent, self confident and self reliant

Pick up different ways of doing things

Quick Wins

Use display to record key learning

- » Set aside an area of display where students are asked to share any strategies or 'top tips' that they have found particularly helpful in their own learning. For those offering the 'top tip' it is a distilling activity, but the resulting gallery of 'top tips' invites students to adopt the successful strategies of others.

Expert interviews

- » Set up interviews with people who can do something really well. Develop a series of questions with students to uncover exactly what the 'expert' does. E.g. What sort of preparation is there? What does it feel like? What sort of thinking, habits of mind, values or beliefs are helpful? Create a checklist of key aspects to imitate. Extend with students in the role of real or imaginary expert, encouraging them to assess their own subconscious knowledge of how to succeed.

Ideas Factory

- » Invite students to become famous inventors who are going to come up with a new gadget to help other people. It must be useful and commercially viable. Use mind-maps to show the needs of their potential customers and gadgets that could be invented to meet the needs. What materials would they need to make it? Who do they know with the skills to help? Where might they find out relevant information? Success criteria for the task should focus on the way groups have thought about using resources rather than on the finished gadget.

Forming the habit

activities to develop... Resourcing Learning

Multiply your impact (and save yourself time).

Record yourself demonstrating key techniques or teaching points, teaching new content, giving detailed instructions etc.

Make this freely available in the classroom so that students can *independently* access your expertise as and when *they* feel the need. Extend it by getting the students themselves to create such recordings to add to the resource bank, perhaps focussing on how they were successful, which particular strategies they found helpful, and any hints or tips they might wish to pass on.

Use these resources to enable students to independently access guidance without the need to refer to you, or to support differentiation, or to help students who have missed a session to catch up, or to support a 'cover' lesson, or as a revision guide.

Helpful Habits – discuss the idea of helpful and unhelpful habits.

Explore this through role plays. Use imaginary characters to create more emotional distance. Discuss peer and family influence on forming habits. How many of our habits do we pick up from those around us? To what extent can we choose our habits?

Set up a Helpful Habit board for tips from students to others about habits which might help them to achieve their long or short term goals.

In pairs, identify habits that could easily be changed (ie always eating cornflakes for breakfast), and discuss how this came to be a habit. Decide to change one habit for a set period of time. Discuss what happened. How did the new 'habit' feel the first time? How did it feel after 21 times? How could you use this experience to imitate other people's helpful habits?

Scrapheap Challenge

- » Collect a pile of unrelated objects, or ask students to bring in one object each and mix them in random groupings – eg a copper tube, piece of cloth, felt pen, blu-tack. Challenge students to make as many things as they can from the objects, using all of them but nothing else. Discuss examples of particularly imaginative/effective use of materials and whether these ideas can be used in another context.

Emotional Climate to build a Resourcing Learning character

Good copying is valued

- » Adopting the successful habits and values of others is encouraged.
- » Plagiarism is not !

Successful learning resources are a topic of interest and conversation

- » Display celebrates successful strategies that can be copied

Resources are freely accessible

- » Students are encouraged to decide on the right tools for the job at hand, to find them, and to use them.

Independence is nurtured

- » Students are enabled to make choices about their learning, and to reflect on how successful those choices have been in accomplishing the task

Confident uncertainty is the prevailing culture

- » Students confidently use a range of resources of their own choosing to attempt to solve problems

Teachers as character builders

Learning habits form part of our character and develop through use and practice (deliberate or otherwise!). But desirable habits will survive and flourish better if students are aware of them, realise their value, and strive to improve them.

Cultivating habits involves:

- Providing rich and varied **occasions** for **exercising** learning habits
- **Infusing** learning habits into lessons to enhance content understanding
- Recognising and **celebrating** the use and **growth** of learning habits
- **Enabling** students to identify how and when to use learning habits
- Expecting students to take ownership of and **responsibility** for their learning habits
- **Exploring** the development of learning habits with students.

Teachers are influential character builders and need to be mindful of how they help students form, replace, re-form and strengthen their learning habits.

Are your teaching habits helping students' learning habits? Are you building learning characters who will succeed in life?

Take it steady! Think about how and when you might:

Stop/avoid:

- Telling/giving students exactly what they need
- Telling students that it's bad to copy
- Spoon-feeding

Experiment with:

- Offering students the chance to reflect on how an expert might do this to provide an opportunity for mental rehearsal
- Looking for different ways to solve the same problem
- Pairing students with differing learning habit strengths as learning buddies to broaden horizons

Start/do more of:

- Using 'learning heroes'
- Rewarding successful imitation
- Making resources freely available
- Placing responsibility with the students to make appropriate choices

Start slowly:

- Withdrawing the scaffold so that students do more for themselves
- Acting as coach rather than instructor
- Using older students as learning role models for younger ones

Self-reliance is prized

- » Expect students to do things for themselves, and rise to the challenge
- » Open-ended activities are often used

Opportunism is evident

- » Students make the best of difficult situations by making imaginative use of resources and other people

Talk to nudge Resourcing Learning

Teacher talk - as a learning coach

(To ensure students do the thinking for themselves.)

Where else might we go to find out?

What could we use to help us with this?

Who might help you?

If you could find people to help with this, who would you ask?

What else could we use to improve it further?

What led you to choose to use that?

Look very carefully at someone you think is doing really well and think about how you can do it like that

Who have you learnt something from today?

What/Who do you think would be a good model for this ?

What was it that did next that really made the difference?

What did ____ believe that helped him to succeed?

Picture doing this. Ask them some questions in your head about how they did it, before you try it yourself.

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

Who does this really well ?

What would . . . do/try/think next ?

What are they doing that I'm not ?

What else might help ?

Is there anything else around that might be useful?

What could I use this for ?

When else have I come across a problem like this ?

Strengthening the habit

Student self-review

In order to strengthen learning habits, it is important for students and their teachers to reflect on the specific attributes that contribute to a well-formed habit.

Ipsative and formative approaches to reviewing learning habits place students at the centre of the process of developing their learning habits and strengthening their learning character.

Here is one way of keeping the Resourcing Learning habit alive and growing.

Bronze	Silver	Gold
I am learning to imitate adults	I can recognise a positive role model	I can be a positive role model for others
I can copy others to develop my coordination	I can imitate others to develop my physical skills	I use and adapt my physical skills to work independently with others
I can copy good behaviour	I am able to recognise positive behaviour	I can recognise and demonstrate positive behaviour
I watch what my friends are doing and how they are doing it	I look out for the successful ways my friends learn	I copy the successful ways my friends learn
I know who to ask for help	I know that different people will help me with different tasks	I know who will help me to learn in the most effective way
I use only the things my teacher gives me	I am beginning to use different sources, such as the internet, to help with my learning	I can use the internet effectively to help my learning
I prefer to use resources that I am familiar with	I keep an eye out for other things that might help me to learn	I can create my own learning resources when necessary

In this school every pupil has a bound copy of all of the learning habit progression maps. They;

- are regularly referred to in lessons
- deepen the language of learning
- support pupil self-assessment,
- guide pupil mentoring/coaching,
- monitor progression
- set targets for improvement.

The school now wonders how it ever managed without the insight afforded by progression maps of this kind!

What does getting better look like?

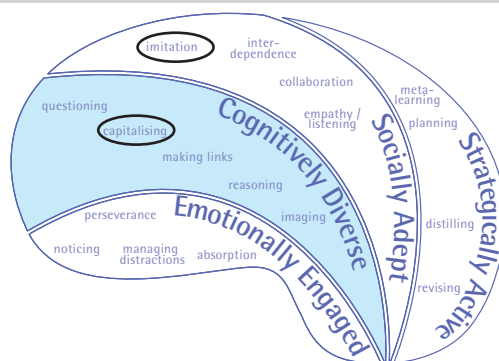
One primary school has devised progression maps like the one illustrated here for Resourcing Learning. Skills in the bronze list can, they believe, be achieved by KS1 pupils. The silver list was designed for lower KS2, and gold list for upper KS2. Obviously there will be exceptions – some pupils will be well ahead of this, while others will remain doggedly behind!

How might such progression lists be extended for KS3 and KS4?

Resourcing Learning

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Me-Learning

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We acquire habits through use: ways of behaving become habituated. If we have a well formed **Me-Learning** habit, we will have a tendency to use it in all learning experiences. The more we experience the value of a particular habit, the more we will tend to use it throughout our lives.

Like it or not, teachers do help to form a learning character. The ways in which young people perform and behave are influenced by the way teachers orchestrate and guide learning. Deliberately fostering an effective learning character in students is a renewed common purpose for education, shared between students and teachers, parents and society more generally.

A well formed Me-Learning habit involves being ready, willing, and able to:

Use a well-formed vocabulary to talk about the process of learning and how learning works.

Understand how they learn, playing to their strengths and improving areas of weakness.

Learn from learning itself, mulling things over, and learning from experiences in order to avoid mistakes in the future.

Reflect on and draw out useful lessons from experiences and identify key features that might be useful elsewhere.

Actively seek to transfer new learning into other settings; think about where else they might apply the learning.

“If history always repeats itself, and the unexpected always happens, how incapable must Man be of learning from experience?”

—George Bernard Shaw

Young people with the habit are likely to:

Have an accurate view of themselves as learners

Understand how they can improve as a learner

Be confident, interdependent and self-aware

Have a love of learning

Want to understand where they went wrong

Willing to try different ways of doing things

Retain a sense of the big picture

Be thoughtful

Ask questions that get to the heart of the matter

Forming the habit

activities to develop... Me-Learning

Quick Wins

Create opportunities for reflection

- » Pay equal attention to *what* has been learned and *how* it has been learned in plenaries and review points. Encourage students to pick out the key information in what others say. Summarise. Build in moments for reflection whenever possible

Establish Reflecting as a classroom routine - Going for Three:

- » Begin each lesson with 'Tell me Three ... things we learned last lesson; ways we learned last lesson; things we still need to find out; things you hope to achieve today'.
- » End each lesson with 'Tell me Three ... things we learned today; learning skills we used today; things we need to do next lesson; ways you could become a more effective learner' etc.
- » Ensure that students tell *you* three. Do not lapse into doing it *for* them !

Distil detail

- » Ask students to make notes on postcards or post-its – large enough for the key points, but too small for unnecessary detail.
- » Encourage students to discuss what *must* be on the postcard, and what can be safely considered 'detail'.

Headlines: a routine for capturing Essence.

This routine draws on the idea of newspaper-type headlines as a vehicle for summing up and capturing the essence of an event, idea, concept, topic, etc. The routine asks one core question:

If you were to write a headline for this topic or issue right now that captured the most important aspect that should be remembered, what would that headline be?

Consider following it up with the challenge of writing the first paragraph only of the newspaper article, the one that lays out all of the key information relating to the headline.

Conversions:

If information is currently framed in any of the following, challenge students to change it into another format of their choosing: text; mind map; flow diagram; storyboard; graph; venn diagram; ranked bullet points/list; video; teacher explanation; revision notes etc.

Consider limiting the number of words that can be used – forcing students to limit words and/or employ images instead encourages them to distil what is really important and salient.

Converting from one medium to another requires students to identify the key features. It can only be converted if it is understood, so this technique promotes deep learning. It helps students to create revision notes for themselves, and in their preferred learning style.

We learn best when ...

The teacher begins by talking about what they know about themselves as a learner. No need to go into too much detail, or it may limit students' ideas – just enough to get them going. Try things like 'I learn best when I think ahead', or 'I learn best when I put in lots of effort' etc.

Pupils work with a partner. One talks about when they learn best, while the other produces a spider diagram capturing the main points. Then they swap places so that each generates their partner's spider diagram.

Use the spider diagrams as a basis for exploring similarities (and differences), and to produce a class spider diagram showing 'how we learn best'. Make it into a display that can be referred to by yourself and by pupils.

Emotional Climate to build a Me-Learning character

Assessment for Learning

- » Is alive and evident in all classrooms
- » Students review both learning content and process in every lesson

Learning is co-constructed

- » Some planning and delivery is done by students for students, with limited teacher support

Display

- » Celebrates learning in progress and emphasises the learning processes used

Review points are student led

- » Students have opportunities to distil what they have learned and how they have learned it for themselves

Talk about how students are learning

- » Draws attention to the successful ways in which students are learning

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Are your teaching habits helping students' learning habits? Are you building learning characters who will succeed in life?

Take it steady! Think about how and when you might:

Stop/avoid:

- Doing plenaries yourself
- Telling students what they did and how they did it
- Telling students what you taught

Experiment with:

- Planning and constructing the learning **with** the students
- Allowing students to become experts and teach alongside you
- Encouraging students to keep their own learning log
- Having students constructing help cards for other students

Start/do more of:

- Placing responsibility with the students to summarise **what** and **how** it has been learned
- Allowing students to distil the learning for themselves
- Giving 'small-number' type questions – 'Tell me the three main reasons for . . .', 'Which two events did most to shape . . .' etc.

Start slowly:

- Recording key learning moments and achievements
- Using students as 'learning detectives'
- Using online self-assessment tools, to help students to identify their own key areas for learning development

Reflection and review points are ongoing

- » Not all 'plenaries' come at the end of the lesson – review and recap points are built in regularly and as necessary.

Students take responsibility

- » For themselves, for their own learning, and for the learning of their peers.

Talk to nudge Me-Learning

Teacher talk - as a learning coach

(To ensure students do the thinking for themselves.)

What are the three most important things you have found out?

Think back to when you . . .
What did you learn from that?

Think back to when you . . .
How did you tackle it then ?

Can you describe how you learned that ?

Build in a moment to review what you have done and how you have done it

What went well? What could be improved? What lessons can we learn from this?

Where else could you use this skill, knowledge, idea?

Useful words- essence, bottling, boiling down, bare bones, panning for gold.

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

How am I going to do this ?

What has worked in the past ?

The main thing here is . . .

What was useful about that experience?

I've done that before - where else could I use it?

I made a mistake with that last time. How can I avoid that ?

How does this fit with the big picture ?

What *must* I do ?

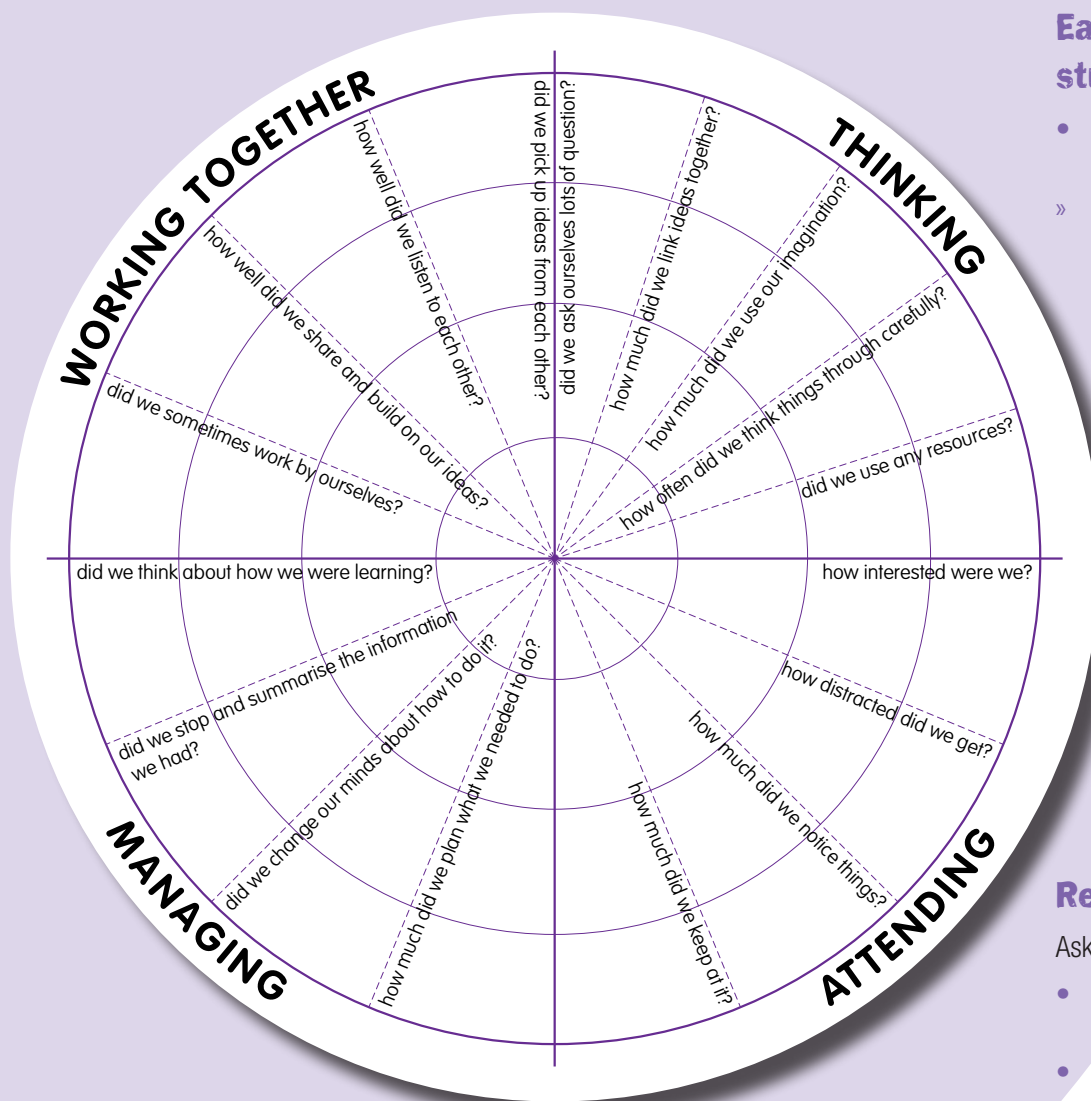
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Learning Power Rating Wheel

Early reflection tool for students

- Use in lessons or as a home-learning task.
- » colour in how frequently each behaviour was used (see 1-4 grading)

Later reflection tool for students

- Use as above but ask 'how well' rather than 'how frequently' the behaviour was used

This would need to be preceded by discussions about what 'well' actually means. This lies at the heart of progression – what skilfulness actually looks like.

Reflection tool for teachers

Ask yourself

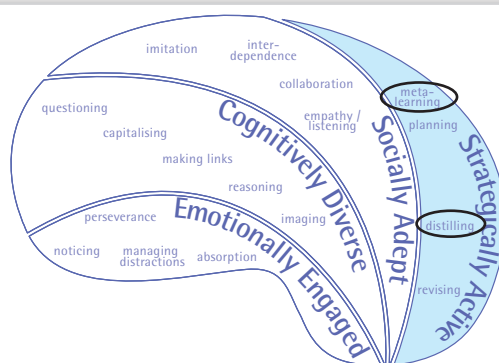
- which behaviours am I triggering in lessons?
- Which behaviours are getting regular attention?
- Which behaviours need greater attention?

Can you afford not to find out?

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Making Links



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A well formed **Making Links** habit involves being **ready, willing, and able to**:

Find pleasure and satisfaction in seeing how things appear to fit together, looking for similarities, differences, the unusual and absurd.

Connect new ideas to what they know and feel already. Look for analogies that will give them a handle on something new.

Seek novel and inventive ways of connecting apparently unconnected ideas, events or techniques.

Match and categorise ideas, techniques and concepts to ones that are already understood, seeking underlying similarities.

Extrapolate from that which is already understood to yield insight into new learning.

Link ideas across different academic disciplines and in varying contexts

“**Moment by moment throughout our lifetime, our brains hum with the work of making meaning: weaving together many thousands of threads of information into all manner of thoughts, feelings, memories and ideas.**”
– Daniel Tammet.

Young people with the habit are likely to:

Enjoy seeing how things might fit together

Look for patterns and sequences

Use analogies, similes and metaphors

Classify objects according to similarities and differences

Sort items or ideas in order to discover meaning

Link cause and effect

See the 'big picture'

Notice detail

Seek coherence

Be open minded

Forming the habit

activities to develop... Making Links

Quick Wins

Similarity and Difference[®]

- » Find two images with both similarities and differences. Invite students to work in pairs to identify at least 5 of each, and then work as a four to decide the 3 most important similarities and differences. Timings could be around 1 minute for the pair work, and 2 minutes for the work in fours.
- » This will also support the skills of noticing, collaborating, and distilling.

Odd One Out[®]

- » Identify four 'things' related to your own subject area – this could be 4 images, 4 words, 4 techniques, or anything else that links to your own subject and/or what students are currently learning about. Invite them to identify the odd one out, and to explain why they think this.
- » When you can, construct lists where it is possible to justify that each of the items are, in fact, the odd one out.

Mind Maps[®]

- » Use mind maps to encourage students to link and explain how information and ideas seem to be associated.
- » Use mind mapping at the beginning, middle and end of a unit of study to show how links and understanding change as knowledge grows.
- » Use at the end of a module of learning as a synthesising tool.
- » Use a 'thought shower mind map' at the outset of a lesson to connect with prior learning and activate link making.

Visible Thinking Routine

Connect, Extend, Challenge

This routine helps students make connections between new ideas and prior knowledge. It also encourages them to take stock of ongoing questions, puzzles and difficulties as they reflect on what they are learning.

- Connect:** How are the ideas and information presented connected to what you already know?
- Extend:** What new ideas did you get that extended or pushed your thinking in new directions?
- Challenge:** What is still challenging you or confusing for you to get your mind round? What questions, wondering or puzzles do you now have?

The natural place to use this routine is after students have learned something new. For example: after exploring a work of art, a theory, a method, a piece of evidence. Try it as a reflection during a lesson, after a longer project, or when completing a unit of study.

The routine works just as well with the whole class, small groups or individually.

Match Them Up[®]

The 'Thinking Through' series edited by David Leat has individual books for Geography, History, RE, MFL, English, Maths, Science and PSHE which all contain subject specific examples.

The underlying principle is to offer students a set of cards that need to be matched up or linked in some way. It might be:

- a set of pairs of cards like 'It has been raining' and 'The river is flowing fast' where the student is challenged to decide whether there **Must** be a connection between the two events, **Could be** a connection, or **No possible** connection
- a problem to select a substance (metal, clay, wax, salt, ice, ...) and a change (freezes, dissolves, melts, burns, ...) and decide if the change is **Reversible** or **Irreversible**
- a set of cards that students are required to match into pairs - it could be 5 graphs and 5 equations; 5 characters and 5 attitudes; 5 words and 5 definitions etc.

Mystery Games

Divide a set of clue cards equally between a group of students. The challenge is to solve the mystery or work out the answer by sharing the information orally.

Emotional Climate to build a link-forming learning character.

Celebrate link-making

- » Patterns are sought, links are noticed and explained
- » Analogies and metaphors are in evidence

Plenaries and review points attend to transfer

- » Students are encouraged to think how new learning might be used in other subjects or areas of their lives.

Subject overlap is well understood

- » Teachers and students understand and value the use of transferable skills
- » The curriculum is mapped to identify such overlap
- » Cross-curricular opportunities are planned into the curriculum

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Take it steady! Think about how and when you might:

Stop/avoid:

- Telling students how things are linked together
- Attending to detail at the expense of the bigger picture
- Sacrificing depth in the pursuit of breadth or, worse, coverage!

Experiment with:

- Blue-sky thinking – focus initially on the big picture, and fill the detail in later
- Encouraging the use of metaphors and analogies

Start/do more of:

- Encouraging students to talk about and explain the connections they notice
- Providing opportunities to sense underlying patterns
- Using a range of similarity/difference activities
- Using mindmaps to encourage students to identify and show how ideas/features interrelate

Start slowly:

- Inviting students to speculate on the intended learning outcomes of lessons
- Exploring how techniques and ideas in one subject can be used elsewhere in the curriculum
- Modelling and commenting on the ways in which people link things together to make sense of something

Balance big picture and fine detail

- » Understanding comes from either
 - first understanding the big picture, or
 - first understanding the fine detail
- » Both styles are catered for in lessons

Linking to life

- » Model or explain how current learning links to everyday life.

Talk to nudge Making Links

Teacher talk - as a learning coach

(To ensure students do the thinking for themselves.)

How could it fit ?

What does...tell you about...?

Can you see any connections?

Can you detect a pattern here?

What do you know already that might help?

What does this remind you of?

Can you see a link between what we did in... and what you do...?

How might knowing... help you to do...?

Ask yourself 'What is this like that I know about already?'

Does the analogy... help us to get a handle on this?

Now that you know... has it changed how you think about...?

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

How does it fit with what I know already?

This is like...

What do these things have in common?

How is this different from...?

Are there any patterns?

'x' is like 'y' because...

That reminds me of...

Where have I met something like this before?

Is this a part of that?

Strengthening the habit

Putting it all together. How teacher and student action and talk build learning behaviours.

Predominant teacher behaviour	Teacher / student action	Teacher / student talk	Learning behaviour growth
Encouraging self-coaching	Students progress to the highest levels through repeated practice and modelling, in order to deepen the habit in themselves, and to help and support others to acquire and develop similar skills and habits.	Students say/think: Is there a relationship ? How does it fit ?; This is like; What do these things have in common ?; How are they different ?; Are there any patterns ?; 'X' is like 'Y' because; That reminds me of	Make intuitive links between the known and the unknown; create analogies to convey understanding; seek opportunities to transfer new learning into other settings.
Commentating	Students devise opportunities for themselves to: collect and organise information; make links between pieces of information and identify cause and effect; seek and identify patterns; evaluate evidence and explain conclusions; create analogies, metaphors and similes; re-evaluate their existing understanding.	Students are supported and nudged by teacher talk about the value of making links. They use language like: How could this fit ?; What does X tell you about Y ? Can you see any pattern or connections? What do you know already that could help? What does this remind you of ? How might knowing X help you to do Y?	Use analogies to explain or make sense of abstract ideas; make links to understand complex webs and patterns; use new learning to re-evaluate prior learning.
Coaching	Teachers provide opportunities for students to: describe how events / ideas / techniques are inter-related. Students use analogies and metaphors; sort, classify and categorise things; link cause and effect; seek coherence; 'see' the big picture	Teachers use language like: how does this fit with what you already know ?; how might you use this in another subject ? How might you use this in your life outside of school ? What is this like ? How could we sort these things ? Why do you think that happened ?	Connect new learning to prior learning; make links in order to seek deeper meaning; make links between different subjects / disciplines
Supporting	Teachers provide opportunities for students to: use mind maps; experience analogies, metaphors and similes; look for connections; use venn diagrams; do compare and contrast activities; explain why and how they are making links; look for patterns	Teachers use language like: What does X tell you about Y ? Can you see any connections? Can you see a pattern here? What does this remind you of? Have you ever done anything like this before? Can you think of something you already know that would help you with this?	Look for similarities and differences; notice patterns; use analogies
Directing	Teachers provide opportunities for students to: be attentive to detail; undertake pattern building activities, re-building information that has been fragmented; do jigsaws; look for similarities and differences; experience odd one out type activities; classify or sort objects; think back to a time when they did something similar.	Teachers use language like: What do you notice ? Can you spot a pattern ? Which is the odd one out ? When did you last do something like this ? How is ... like ... ? How is it different ?	Notice the main details; link observations to what they already know.

How the role of the teacher changes as learning behaviours grow and firm up.

How action changes to promote further progression

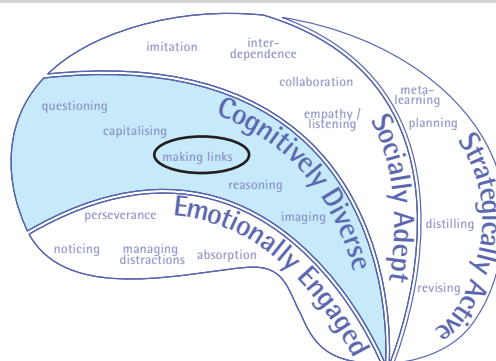
How talk changes to nurture progression

A simple map of the development of 'making links'

Making Links

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Building the habit of...

Persevering



The New Challenge

Ofsted now recognises the need for schools to:

- provide their own compelling data of a trajectory of improvement
- successfully promote and support children's 'self confidence, self awareness and understanding how to be a successful learner'.

This together with the current interest in character led education all point to the opportunity for schools to cultivate the habits and attitudes that underpin success and thereby build students' learning characters.

About Learning Habits and Character

Learning habits are the routine ways in which we think and act when faced with life's experiences and challenges. They are second nature to us. Some habits make us very productive and effective; others cause us to learn in constrained and limited ways. Habits are indeed part of our character.

We acquire habits through use: ways of behaving become habituated. If we have a well formed **Persevering** habit, we will have a tendency to use it in all learning experiences. The more we experience the value of a particular habit, the more we will tend to use it throughout our lives.

Like it or not, teachers do help to form a learning character. The ways in which young people perform and behave are influenced by the way teachers orchestrate and guide learning. Deliberately fostering an effective learning character in students is a renewed common purpose for education, shared between students and teachers, parents and society more generally.

A well formed **Persevering** habit involves being **ready, willing, and able** to.

Keep going in the face of difficulties, channelling the energy of frustration productively, marshalling positive emotions to succeed.

Enjoy working at the edge of our comfort zone, understanding that learning is often a slow and uncertain process that requires grit, risk-taking and different ways of working.

Recognise that being stuck is the point at which new learning begins; seeing stuckness as a site of interest, not shame.

Relish working towards ever more challenging goals without fear of 'failure'.

Give it one more go; try different methods; come back to it later; seek support and advice to achieve a breakthrough.

“**Success is no accident. It is hard work, perseverance, learning, studying, sacrifice, and most of all a love of what you are doing.**”
- Edison Arantes do Nascimento Pele

Young people with the habit are likely to:

Try different ways of tackling a task

See 'not knowing' as an interesting place to be

Display grit

Take risks

Cope maturely with frustration

Relish challenging goals

Develop strategies to overcome being stuck

Believe they can improve with effort

Try hard, maintain optimism

Manage own learning climate

Stick at difficult tasks

Forming the habit

activities to develop... **Persevering**

Quick Wins

Build Persistence

- » Orchestrate tasks that only a few students will be able to complete successfully. Use this as a vehicle to discuss the negative and positive emotions around persisting. Help students to identify when they are able to persevere successfully and how it feels when they do.
- » Reward and comment on their effort, rather than attainment.

Seek Challenge

- » Plan your lessons around the higher attainers to ensure that the level of challenge is raised.
- » Make sure that extension tasks genuinely extend, and are not just 'more of the same'

What do I do when I'm stuck?

- » Work with students to create useful questions to ask themselves and strategies to adopt when stuck.
- » Be sure that 'ask teacher' comes some way down the list.
- » Create 'stuck poster' displays as reminders.
- » Adopt a 'C3B4Me' strategy – do three things before asking the teacher.
- » Use red/amber/green cards for students to indicate that they are stuck/so-so/fine.
- » Treat being stuck as an interesting place to be.

Where could I start?

Use Origami to help students explore keeping going with a challenge.

The Origami task should be demanding and lead to frustration and the tendency to give up and stop trying.

Show the completed origami shape. Tell students that "Everyone can make one of these if they persevere." Hand out the origami instructions and paper. Watch how students tackle the task.

The important aspect of the exercise is the debrief. Through discussion, explore:

- "How did you feel when you were making the shape?"
- "Who wanted to give up, but didn't?"
- "What made you keep going? E.g. could see the goal, someone helped?"
- "Did you find yourself saying 'I'm no good at ...'?"
- "What did it feel like to see some people doing it quickly?"
- "Who completed the shape? What did this feel like?"
- "What made you give up?"

Explore further with the group — what makes us give up, what helps us keep going?

Lifting the level of challenge

Audit your Schemes of Work, and in particular consider the intended learning outcomes.

- » Ask: Do the intended learning outcomes challenge students to exercise higher level thinking skills, or are they mostly rooted in knowledge acquisition?
- » Use Blooms Taxonomy of the Cognitive Domain to help shape learning objectives:
 - » Outcomes related to **knowledge acquisition**, use verbs like: define, write, state, list, recall, label. (i.e. List the main elements of...)
 - » Outcomes related to **comprehension**, use verbs like: explain, identify, select, illustrate, classify, represent. (i.e. Identify the key purposes of...)
 - » Outcomes related to **application**, use verbs like: predict; construct, find, use, show, perform. (i.e. Select activities from a given set... (for a defined purpose)
 - » Outcomes related to **analysis or synthesis**, use verbs like: analyse, relate, justify, conclude, compare, differentiate. (i.e. Compare and contrast the key ideas behind...)
 - » Outcomes related to **evaluation**, use verbs like: judge, assess, support, choose, evaluate, defend, criticise. (i.e. Assess the importance of...)
- » Check for balance across the range. Could you use more of the higher-level ones as a means of deepening understanding and lifting the level of challenge ?

Emotional Climate to encourage Persevering

Valuing effort

- » Students are praised and rewarded for effort
- » Praise is given for managing distractions and remaining focused

Goal orientation

- » Students are encouraged to create their own clear end-goals.

A perseverant learning character

- » Students are supported and encouraged as they step into risky, challenging areas
- » All students have access to challenging material at an appropriate level

Building in 'wait time'

- » 'No hands up' tactics are used
- » Reflection time is built into lessons

Teachers as character builders

Learning habits form part of our character and develop through use and practice (deliberate or otherwise!). But desirable habits will survive and flourish better if students are aware of them, realise their value, and strive to improve them.

Cultivating habits involves:

- Providing rich and varied **occasions** for **exercising** learning habits
- **Infusing** learning habits into lessons to enhance content understanding
- Recognising and **celebrating** the use and **growth** of learning habits
- **Enabling** students to identify how and when to use learning habits
- Expecting students to take ownership of and **responsibility** for their learning habits
- **Exploring** the development of learning habits with students.

Teachers are influential character builders and need to be mindful of how they help students form, replace, re-form and strengthen their learning habits.

Are your teaching habits helping students' learning habits? Are you building learning characters who will succeed in life?

Take it steady! Think about how and when you might:

Stop/avoid:

- Making things too easy
- Always answering their questions
- Encouraging 'learned helplessness' by doing it for them
- Intervening too early

Experiment with:

- Designing problem solving activities to enable content understanding without 'telling' students.
- Intriguing students with something that is open to several interpretations

Start/do more of:

- Talking about how tricky learning can be, even for you
- Helping students answer their own questions
- Responding more speculatively to student questions
- Assuming that students welcome challenge
- Praise effort, stickability, control of negative emotions

Start slowly:

- Withdrawing some of the scaffolding
- Injecting more challenge
- Ensuring that extension work is genuinely extending, and not just more of the same
- Devise more open-ended activities
- Allowing students to fail in safety

Growing Perseverance

- » Ready solutions and answers are not automatically provided.
- » Students are encouraged to stick with challenges and try other ways of tackling things.
- » Opportunities to get stuck and find a way forward are in evidence
- » Stuck prompts are displayed
- » Strategies to control negative emotions are discussed.

Talk to nudge Persevering

Teacher talk - as a learning coach

(To ensure students do the thinking for themselves.)

Slow down. Stay positive

What happened when you got stuck before? What did you do to work it out?

If you aren't sure how to do this – What would help you?

It's when you get stuck that you really start to learn

Everyone finds learning tricky at times

Take a break from this for while and come back to it later

How did it feel to persist with xxxx

Great! You have come through the confused feeling. What helped you?

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

It's worth me putting the effort in

I will do it

I made a mistake here – I wonder why that is?

That's an interesting mistake

I need to avoid that distraction

If it is hard, I am learning

I can do this if I change tack

When the going gets tough . . .

Let's give it a go and see what happens

That's a goal worth going for

I can't do it - yet

Strengthening the habit

Student self-review

In order to strengthen learning habits, it is important for students and their teachers to reflect on the specific attributes that contribute to a well-formed habit.

Ipsative and formative approaches to reviewing learning habits place students at the centre of the process of developing their learning habits and strengthening their learning character.

Here is one way of keeping the persevering habit alive and growing.

Perseverance Grid

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Characterised by	Unphased by being stuck knowing they have the strategies to overcome it.	I'm looking out for new strategies to help me to ...	Manages own learning environment independently according to a positive-learning value system.	Sees challenges as opportunities to develop skills and knowledge.
Organised	Takes risks underpinned by relevant strategies. Analyses failures and mistakes positively to better understand.	I'm organised now to ensure everything gets done.	Overcomes and manages any external discouragement, negativity, peer pressure.	Systematically plans and organises learning.
Value	Is curious about mistakes. Uses written and verbal feedback.	I can keep going because I really care about/interested in this goal. Has a growth mindset.	Has worked out 'environmental strategies' to help them through the hard slog/practice.	Uses to clarify and challenge.
Respond	Initiates and gets unstuck positively.	Schools are beginning to explore how they might use the persevering grid to yield insights into:		
Receive	Uses success and reward.	How might you use the grid? Schools are beginning to explore how they might use the persevering grid to yield insights into: <ul style="list-style-type: none"> understanding the subtleties of perseverance; providing/generating a school-wide language for discussing perseverance; supporting task design to ensure that activities require and exercise higher order perseverant behaviours; auditing curriculum provision; informing all aspects of Assessment, Recording and Reporting; supporting student self-assessment supporting and informing the mentoring process, and to set student-level development targets; informing what you look for during learning walks and when monitoring your students' growth as learners; evaluating the effectiveness of your interventions. 		
Missing	No confidence.			
Dealing	Dealing with challenge.			
		Uses distractions positively. Knows what to avoid.	Aware of what distracts them and tries to control it.	Resists the inclination to stick with easy, can-do activities.
		Prone to be distracted. Put off by lack of resources. Sensitive to negativity.	Gives up easily. Craves constant support. Put off by 'too much to do'.	Little sense of ends or goals or working towards something purposefully.
		Managing distractions	Dealing with challenge	Goal orientation

What's Persevering made up of?

What makes up this multifaceted concept and how do the components grow over time? The big components of perseverance might include how we:

- deal with being stuck
- develop emotional toughness
- manage our learning environment
- deal with challenge
- are driven by goals.

This grid aims to map these big components of perseverance and unpack how they might grow. Students become increasingly skilful and wedded to the ideas as they move through the phases.

able given goals.

Have a sense of what they want something to look like. Visualises end results.

Find out more about the growth of Perseverance

Scan this QR Code with your phone or tablet, or use the web address below in a web browser.

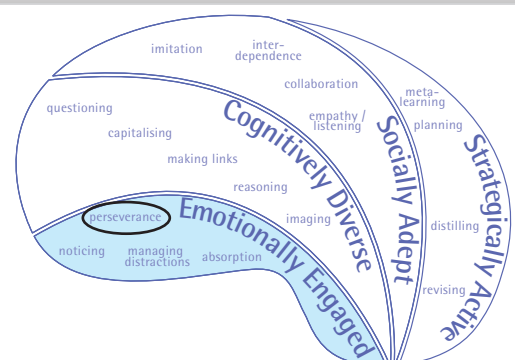
www.buildinglearningpower.com/?p=921



Persevering

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Reasoning



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A well formed **Reasoning** habit involves being **ready, willing, and able** to:

Resist jumping to conclusions, seeking justifiable evidence to shape sound, well-honed arguments.

Generate hypotheses, scrutinise their assumptions, make predictions, seek evidence and counter evidence, look for false steps and carefully draw conclusions.

Remain suspicious, doubting and self-doubting in order to avoid unwarranted certainty.

Use appropriate tools to assist reasoning and help solve problems. These may include: compare and contrast, pro and cons, cause and effect and playing devil's advocate.

Convey their logical thinking clearly, through dialogue, symbols, analogies, prose and pictures.

Use logical thinking to establish the value or otherwise of an idea, concept or proposal.

“**Mathematics is, in its way, the poetry of logical ideas.**”
– Albert Einstein

Young people with the habit are likely to:

Ask 'Why'

Enjoy problem solving

Look for evidence-based answers

Think before they act

Be persuaded by clear, evidence-based, arguments

Want reasons and proof

Question their intuition

Work methodically

Look for flaws in arguments

Think of pros and cons

Quick Wins

Brain Teasers

- » Use brainteasers to stimulate logical, deductive reasoning. For example:
 - » Marie, Claude, and Jean are in a competition. Here are their results:
 - » The youngest person received the least points.
 - » Claude got half of the points of the eldest.
 - » Jean received as many points as both others combined.
 - » Who is the eldest?
- » In the debrief, focus in particular on how the problem was solved, rather than on the correct solution. See www.sharpbrains.com/teasers

Code Breaking

- » Present students with coded messages and require them to work them out using their deductive skills.
- » Start with simple substitution codes where, for example, each letter is replaced by the one after it in the alphabet. (*i.e. b replaces a, c replaces b etc. etc.*) Increase difficulty by using more complex ciphers.

Odd One Out

- » Identifying similarities and differences is one of the most powerful learning skills since it requires students to notice detail, distil information, make links, and use their reasoning skills in order to spot the odd one out.

Strategy games

- » Use games that require strategy and logical thinking. From noughts and crosses to chess, from hangman to backgammon, such games help to develop and refine reasoning skills. Many appear in the form of maths investigations and problems: Frogs; Tower of Hanoi; Nim; Connect 4; etc.

Forming the habit

activities to develop... Reasoning

Visible thinking routine

What's happening here?

What makes you say that?

This is one of many visible thinking routines to be found on the visible thinking website www.pz.harvard.edu/vt/

The first question in this routine is flexible: it is useful when looking at objects such as works of art or historical artifacts, but it can also be used to explore a poem, make scientific observations and hypotheses, or investigate more conceptual ideas (*i.e.*, democracy).

The routine invites students to describe what they notice, see or know and asks them to build explanations. It promotes evidence-based reasoning and when the students share their interpretations it encourages them to understand alternatives and multiple perspectives.

Sequencing

Cut up a cartoon, or series of pictures of a production process, or a flow diagram, or a mathematical proof, or a story line, or a musical score, or a poem, or a sequence of events, and so on. Ask students to reassemble the pieces in what they think is a viable order and explain their reasons for this. Model and listen for the language of reasoning to strengthen the process.

Lift the level of challenge by omitting one or two of the pieces, or by including a red herring or two, or by interleaving two sequences that need to be separated before the sequencing can be completed.

Ranking

Give students (possibly in pairs) pieces of information or ideas or pictures or statements as a set of separate items, usually on cards. The subject could be: possible causes of global warming; the sayings of Christ; discoveries of the last 20 years; the music of Gershwin; causes of WW1; poems of Sylvia Plath; healthy lifestyle indicators; famous people etc.

The criterion for ranking the cards is given or negotiated with students. It could be to rank the cards in order of importance, appeal, relevance, how controversial, any other appropriate criterion.

The task is to debate the relative merits, to place them in rank order according to the chosen criterion, and to be able to explain and justify the ranking based on evidence rather than opinion.

Emotional Climate to build a Reasoning learning character

Soundbites are not enough

- » Explore strong chains of argument
- » Awareness and avoidance of mere debating tricks

Knowing when reasoning is important, and when not

- » Distinguish between creative and editing modes when writing (for example)
- » Swap to and fro between reasoning and intuition / creativity

Reasoning 'both ways'

- » Forwards through sound argument
- » Backwards by looking at assumptions used to support a line of argument

Safety to reason speculatively

- » Opportunities to hypothesise and predict are frequent
- » Questions about 'what should happen' are evident

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Take it steady! Think about how and when you might:

Stop/avoid:

- Telling students what will happen – let them work it out for themselves
- Doing the reasoning for them
- Planning everything yourself!

Experiment with:

- Introducing or using thinking tools that support disciplined, methodical thought
- The TASC model (Thinking Actively in a Social Context) to support a methodical approach to problem solving
- Using Brain Teasers to encourage logical, methodical thinking
- Playing Devil's advocate

Start/do more of:

- Creating more opportunities for students to plan their own learning & define their own outcomes
- Encouraging students to justify what they say
- Requiring students to show their workings as a visual demonstration of their logical train of thought

Start slowly:

- Inviting students to speculate and to justify what might happen next
- Using activities that exercise higher-order thinking skills of analysing, synthesising, justifying, and evaluating
- Creating situations where students need to work out a conclusion from partial facts or clues.

Reasoning is fun

» Puzzles, games, paradoxes are part of everyday activity

Rigour matters

- » Precise and accurate language
- » Accurate steps in building arguments

Display reflects 'work in progress'

- » Display shows the logical processes that sit behind the completed work

Talk to nudge Reasoning

Teacher talk - as a learning coach

(To ensure students do the thinking for themselves.)

What assumptions are you making?

What makes you think it doesn't work?

Can you think it through in clear steps from start to finish?

How many reasons can we find for that?

Let's take it a step at a time... What might be the next step?

Can you spot the false step there?

What evidence can you find to support your case/argument?

Can this... work without that...?

What's the counter evidence?

How have you reached that conclusion?

Which thinking tool would help us solve this?

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

Can I detect a flaw here, what's missing?

How could I tell if this is true?

Is this because...?

What if...

What evidence is there?

Have I considered all factors?

Why does that argument feel wrong?

Have I tested the implications

Is that really so?

Is this convincing?

How can I prove this?

Strengthening the habit

Student self-review

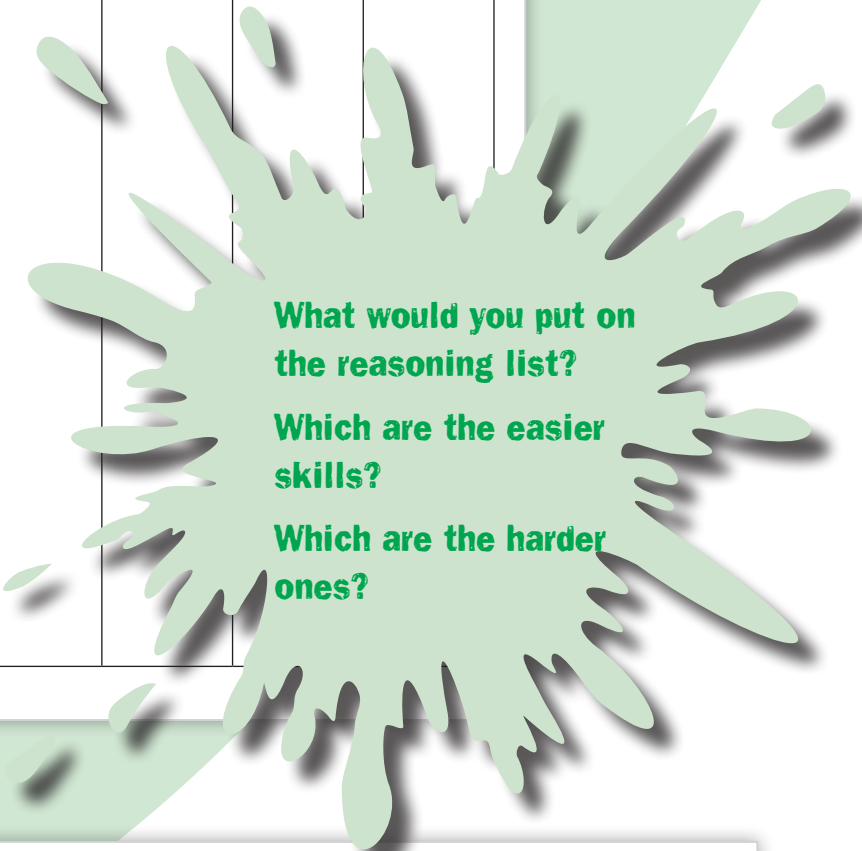
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Ideas for self evaluation of reasoning

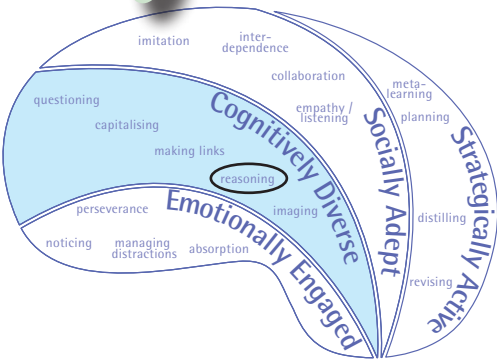
When I was solving the problem I:	A lot	Sometimes	A bit	Not yet
<ul style="list-style-type: none">• Guessed what the solution might be• Jumped to conclusions• Thought about the problem before starting• Tried to work out what the problem was really about before starting• Compared and contrasted things against each other• Looked for patterns• Linked cause and effect• Presented my solution in clear steps• Created possible hypotheses based on evidence• Looked for evidence and counter evidence• Asked lots of questions about the evidence• Looked for red herrings and flaws in arguments• Used 'If this, then that' type arguments• Related the problem to others that I know or have worked on.• Worked out the arguments for and against a course of action• Tried to understand the parts in order to understand the big picture.• Tried to see the big picture in order to understand the parts• Made sure I hadn't missed something important.				



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A well formed **Revising** habit involves being **ready, willing, and able** to.

Self-monitor how things are going, keeping an eye on the goal, making sure things are on track and making improvements along the way.

Expect the unexpected, having a readiness to re-shape, re-order, re-form plans to take account of new circumstances.

Remain alive to new, unforeseen opportunities and ideas, seizing these in order to move in different directions (and so remain creative).

Look at what they are doing with a critical eye, seeking and welcoming constructive criticism from others to improve and correct their work, seeing themselves as a growing learner.

Strive to be the best they can be; attain their own high standards and those required by others.

“It is not the strongest of the species that survive, nor the most intelligent, but the ones most adaptable to change.”
– Unknown, but often attributed, incorrectly, to Charles Darwin

Young people with the habit are likely to:

Invite and act on constructive criticism

Be flexible

View change as an opportunity

Think on their feet

Keep an eye on how things are going

Ditch ideas that are not working

Be open to feedback

Want to be the best they can be

Keep an open mind

Expect the unexpected

Forming the habit

activities to develop... **Revising**

Quick Wins

Editor's Desk

- » Create an area of the classroom which is dedicated to and celebrates the skills of reviewing and improving. Set aside a table in the classroom, and equip it as if it were an office – writing equipment, computer, office chair etc. This is called the 'Editor's Desk', which is set aside for a student to use when they are in editing, drafting, redrafting, correcting or improving mode.

Display redrafting

- » Collect and display work at different stages of development. Use arrows and notes to highlight the changes and their impact.
- » Renew and refer to these frequently to encourage students to review and amend their work.
- » Show that you do not expect perfection at the first attempt!

Think, Pair, Share

- » Offer students a problem or question which is more substantial than simple recall.
- » Allow individual think time to engage with the question.
- » Students turn to their 'Learning Partner' and share ideas, discuss, clarify, challenge etc.
- » The pair share with another pair, and subsequently with the whole class to arrive at a range of possible answers.
- » At each point students are exposed to the views of others which encourages them to revise and refine their initial thinking.

Visible thinking routine...

I used to think, Now I think

This routine helps students to reflect on how and why their thinking/understanding is changing:

- Remind students of the topic you have been working on.
- Ask them to respond to each of the sentence stems: I used to think..., Now, I think...

Alternatively ask students to write down their views at the beginning of a topic. Invite them to revisit & update their answer during and at the end in light of what has been learned.

Or, at the beginning of a lesson ask students to write down what they understand by a particular term that will be explored in the coming lesson (e.g. Phrase (English); Proof (Maths); Power (Science) etc). At the end of the lesson ask them to write down what they now understand by the term.

Students as coaches

- » Use the familiar 'Skill: Will' matrix to help students develop ways of reflecting on their own performance. Using the matrix (see below) students judge their levels of accomplishment and motivation in any area of the curriculum or indeed life beyond school.

		High Skill	
Low Will	Inspire:	Things I'm good at but not really interested in.	Delegate: Things I'm skilled in and motivated to do more.
	Direct:	Things that really challenge me and I don't enjoy.	Guide: Things I'm keen on but need to improve my skills.
		Low Skill	

- » Students can support or coach each other to complete the grid objectively and then identify for themselves small steps to create the desired movement.
- » Each of the quadrants requires a different coaching approach.
 - » Direct - set short-term goals, structure learning tasks and monitor progress closely.
 - » Inspire - re-kindle interest, set short term actions and accentuate positives.
 - » Guide - envision the future when skill levels are raised, secure appropriate learning opportunities and provide reflective feedback.
 - » Delegate - encourage experimentation and further challenges to maintain interest.

Emotional Climate to build an adaptable learning character

Display learning in progress

- » Classroom displays show a good balance of completed work and annotated 'work in progress'

Coaching feedback

- » Is honest and constructive
- » Focuses on what is needed to improve
- » Supports students to coach themselves

Flexibility is prized

- » Changing tack in the light of personal reflection and incoming feedback is part of the learning culture.
- » Adaptability is seen as a strategy for achieving excellence.

Teachers as character builders

Learning habits form part of our character and develop through use and practice (deliberate or otherwise!). But desirable habits will survive and flourish better if students are aware of them, realise their value, and strive to improve them.

Cultivating habits involves:

- Providing rich and varied **occasions** for **exercising** learning habits
- **Infusing** learning habits into lessons to enhance content understanding
- Recognising and **celebrating** the use and **growth** of learning habits
- **Enabling** students to identify how and when to use learning habits
- Expecting students to take ownership of and **responsibility** for their learning habits
- **Exploring** the development of learning habits with students.

Teachers are influential character builders and need to be mindful of how they help students form, replace, re-form and strengthen their learning habits.

Are your teaching habits helping students' learning habits? Are you building learning characters who will succeed in life?

Take it steady! Think about how and when you might:

Stop/avoid:

- Sticking rigidly to lesson plans
- Only putting review points at the end of lessons
- Expecting everything to be 'right first time'.

Experiment with:

- Lifting the level of challenge so that students get stuck more frequently. Encourage them to revise their line of approach
- Encouraging students to coach each other
- Planning review times within a lesson to enable students to stop, take stock, and monitor progress to date

Start/do more of:

Providing more opportunities for students to draft and re-draft their work

- Increasing verbal and written constructive feedback
- Making 'corrections' fun, and purposeful
- Praising adaptable, flexible behaviours that lead to significant re-thinks and improved outcomes.

Start slowly:

- Talking about how initial plans / ideas almost always need refining
- Showing your own first draft of something, and the finished product
- Organising displays that show students' work in progress

Challenge robotic thinking

- » Students are encouraged to view things from other standpoints
- » Different and alternative ways of doing things are explored

Plan and review

- » There are established routines for planning and revising which are used when students are problem solving.

Talk to nudge Revising

Teacher talk - as a learning coach

(To ensure students do the thinking for themselves.)

Good learners are flexible – they watch how they are doing and change things as they go

Are there other ways you might do it?

What can you learn from this mistake?

Is that the most efficient way of doing it?

Ask yourself: Am I happy with what I have achieved?

Think about your success criteria as you go along. Check that you are still on track to meet them

Ask yourself from time to time: Is this going ok?

Learning does not always go to plan. It's OK to amend your plan and approach it differently.

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

Is this the best it can be?
Could I do it differently?

Is this going ok?

How else . . .

How could I improve this?

Am I satisfied with this?

Ok – that failed. What could I do instead?

I think I've done enough tinkering with this now.

I've had a better idea so I'll start again

This is an interesting turn of events

Strengthening the habit

Student self-review

In order to strengthen learning habits, it is important for students and their teachers to reflect on the specific attributes that contribute to a well-formed habit.

Ipsative and formative approaches to reviewing learning habits place students at the centre of the process of developing their learning habits and strengthening their learning character.

Here is one way of keeping the revising habit alive and growing.

Learning conversations

The key to developing learning habits is to give students the time and support they need to reflect on themselves as learners and to plan how they might improve. For some teachers, initiating and sustaining a learning conversation with a student (and their parents) comes easily, but for many it is useful to have a set of coaching notes to help to focus the conversation. When those coaching notes are differentiated according to how frequently the student perceives they use the learning skill, the learning conversations become much more robust and can lead to targets and strategies for development.

Coaching notes generated from student's answer

Online questionnaire for students. (Blaze)

Building Learning Power: Reflectiveness

Learner Name: **John Smith**
 Date of birth: **1 March 1998**
 Gender: **Male**
 Cohort name: **test 2**
 Date of quiz: **27 January 2014**
Planning: 6.4 **Revising:** 8.4
Distilling: 7.6 **Meta-learning:** 6.0



TEACHER COACHING: Using the feedback profiles

The quiz feedback offers a solid base from which to develop learning power conversations with learners.

Here we offer some suggestions and hope that you will use these as a trigger for your own ideas.



John is using his REVISING learning muscle often.

Tell me about something you have changed or improved recently.

- What do you think it means to be a flexible learner?
- What makes you stop every now and then and think about how your learning is going?
- What questions do you ask yourself?
- Do you ever scrap what you are doing and start again?
- What does this make you feel like?
- Why do you think revising, like this, is important?
- How could you help someone who doesn't like revising what they do or how they do it?

Learner Feedback: You are a confident, flexible learner: you watch to see how your learning is going and you change your plans if you have a better idea. You like things to be as good as you can make them so you take time to check things over and improve them if necessary.

- Why do you think revising like this is important?
- Does revising slow you down, and does that matter?
- How could you help someone else to be more confident about revising?

John is using his PLANNING learning muscle some of the time.

What shall we try to achieve by having this conversation? Let's make a plan!

- What sort of things should we think about before we start? E.g. goals, time, obstacles etc.
- Let's see if our plan works.
- Why might it be important to think about these things before starting something?
- When do you do this sort of thing when you're learning?
- I've noticed that you...
- What would help you to think more about things before you start?

Learner Feedback: You sometimes think about how you're going to go about something before you start, but you don't do this automatically yet. You sometimes need to be reminded to organise your learning a bit more, or think about what you're trying to achieve before you start.

- What sort of things do you think about before you start on something?
- How has this 'thinking before doing' been helpful recently?
- Why do you think planning something might be important?

Report generated on 27 January 2014 by Demo Account of TLO Ltd

Page 1 of 2

Using the feedback

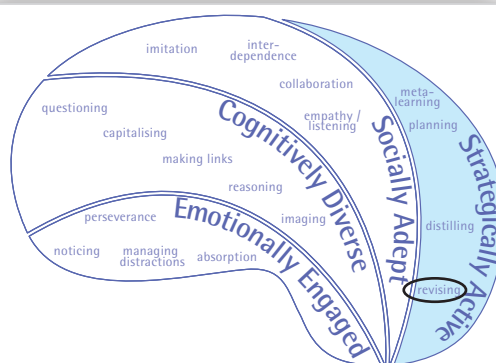
Some schools are:

- experimenting with using student mentors to lead these learning conversations
- including the feedback as part of the process of reporting to parents
- using the feedback to agree learning targets with students and parents at the annual target setting day
- using BLAZE BLP to help parents to understand Building Learning Power

Revising

These At-A-Glance cards are based on the practical framework of learning capacities and habits known as Building Learning Power. The framework provides a clear picture of what it takes to be a good learner. The purpose of the approach is to grow students' Learning Character and Habits. In so doing Building Learning Power develops the appetite and ability to learn in different ways, and shifts the responsibility for learning to learn from teacher to student.

Find out more: www.buildinglearningpower.com



Building the habit of...

Noticing



The New Challenge

Ofsted now recognises the need for schools to:

- provide their own compelling data of a trajectory of improvement
- successfully promote and support children's 'self confidence, self awareness and understanding how to be a successful learner'.

This together with the current interest in character led education all point to the opportunity for schools to cultivate the habits and attitudes that underpin success and thereby build students' learning characters.

About Learning Habits and Character

Learning habits are the routine ways in which we think and act when faced with life's experiences and challenges. They are second nature to us. Some habits make us very productive and effective; others cause us to learn in constrained and limited ways. Habits are indeed part of our character.

We acquire habits through use: ways of behaving become habituated. If we have a well formed **Noticing** habit, we will have a tendency to use it in all learning experiences. The more we experience the value of a particular habit, the more we will tend to use it throughout our lives.

Like it or not, teachers do help to form a learning character. The ways in which young people perform and behave are influenced by the way teachers orchestrate and guide learning. Deliberately fostering an effective learning character in students is a renewed common purpose for education, shared between students and teachers, parents and society more generally.

A well formed **Noticing** habit involves being **ready, willing, and able** to:

Be attentive to details and subtleties in seeking to understand things

Seek underlying patterns patiently, understanding that connections may take time to emerge.

Actively use all the senses to gather information to build understanding of the world around.

Gain a clear sense of the 'what' of something before considering the 'why' and 'how'.

Recognise that learning is often complex and difficult and takes time and effort to accomplish.

Young people with the habit are likely to:

Be alert and observant

Be willing to take time, be patient

Notice the unusual

Be attentive to details and subtleties

Recognise how others feel

Watch other people carefully

Look for similarities and differences in things

Contemplate quietly

See the woods and the trees

Avoid jumping to conclusions

Be patient etc

“The difference between something good and something great is attention to detail.”

- Charles R Swindoll

Forming the habit

activities to develop... **Noticing**

Quick Wins

Starters to encourage a noticing frame of mind.

Join the dots

Offer students a random set of dots (or picture of the night sky). Invite them to seek items such as:

- A letter of the alphabet
- An animal
- A regular shape
- A face
- Or something linked to the content of the forthcoming lesson

Discuss Noticing Others

- » Set up a display area where students share strategies or 'top tips' that they have found particularly helpful in their own learning. For those offering the 'top tip' this is a **distilling** activity; the resulting gallery of 'top tips' invites students to notice (and adopt) the successful strategies of others.
- » Invite some students to be Learning Detectives. Task them with seeking and capturing examples of effective learning on camera / video. Build the outcomes into a display that helps all students to become more aware of the effective habits of others.

Revealing pictures

Reveal images on the IWB bit by bit.

Ask 'What do you think...

- this might be?'
- is happening here?'
- will fit in this bit?'
- comes next?'
- seems unusual?' and so on.

Students work in pairs or triads. After each bit is revealed, students note what they think and whether/how their ideas have changed as a result.

Visible Thinking Routine

See, Think, Wonder:

- Invite students to make an observation about an object (artwork, image, artifact) or topic. Follow up with what they think might be going on. Encourage backing up their interpretation with reasons.
- Ask students to think about what this makes them wonder about the object or topic.
- The routine works best when a student responds by using the three stems together at the same time, i.e., "I see..., I think..., I wonder...". If not you need to scaffold each response with a follow up question for the next stem.

This routine encourages careful observations and thoughtful interpretations. It helps stimulate curiosity and sets the stage for inquiry. Use it at the beginning of a new unit to motivate student interest. Try it with an object that connects to a topic during the unit of study. Use the routine with an interesting object near the end of a unit to encourage students to further apply their new knowledge and ideas.

Viewing Frame:

Use sets of interesting pictures and cards with a viewing window cut into them. Students place the viewing card over the picture in seeking a range of different features. E.g. something red, made of xx, something denoting happiness, something which suggests what might happen next. Move from concrete to abstract features.

- » Or use a poem. Use the viewer to find the stanza that is most descriptive, that makes them happy, that uses the best simile...
- » Or use a geometrical image, use the viewer to find corresponding angles, perpendicular lines, a reflex angle...
- » Or on an image of the water cycle, use the viewer to find where water vapour is rising, where water is moving downwards, where it would be best to site a farm, a village, a wind turbine...

Similarities and Differences

Use pairs of objects, images, sounds or concepts etc. Invite students to identify as many similarities and differences as they can. Challenge them to find at least 10 of each and to find one that nobody else has noticed. Encourage students to represent these similarities and differences on a venn diagram (similarities in the overlap, differences outside), or in other ways they feel appropriate.

Emotional Climate to build an attentive **Noticing** learning character

Value attentiveness

- » Acknowledge and reward students' patient efforts to identify specific detail.
- » Praise and encourage attention to detail and accuracy.
- » Value accuracy over swiftness

Seek patterns

- » Design learning activities that call for searching for patterns and identifying significant detail.
- » Use the school and its surroundings as a rich environment for the exploration of patterns and detail.

Teachers as character builders

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Teachers are influential character builders and need to be mindful of how they help students form, replace, re-form and strengthen their learning habits.

Are your teaching habits helping students' learning habits? Are you building learning characters who will succeed in life?

Take it steady! Think about how and when you might.

Stop/avoid:

- Rushing
- Chasing subject coverage at the expense of real understanding
- Glossing over intricacies
- Telling students what to notice
- Thinking that seeing and noticing are the same thing

Experiment with:

- Noticing using all the senses
- Using Noticing as a springboard into Questioning, Making Links, Imagining and Reasoning.

Start/do more of:

- Encouraging talk about detail
- Rewarding detail in student responses/written work
- Praising precision and accuracy
- Using images as a springboard to attentive noticing
- Building in wait time before taking student answers
- Allowing time for contemplation.

Start slowly:

- Deliberately obscuring detail and allowing students to uncover it
- Saying 'So ?'
- Building common noticing routines across all subjects
- Remaining quiet to encourage students to develop their answers in greater depth

Use all the senses

- » Use of all the senses encourages and heightens noticing skills

Slow down, take time

- » 'Wait time' before listening to student responses enables students to slow and deepen their thinking and appreciate detail.
- » Use of pauses through lessons encourages students to notice how their understanding is progressing.

Talk to nudge Noticing

Teacher talk - as a learning coach

(To ensure students do the thinking for themselves.)

What do you notice about the way... is doing that?

Just watch/listen for a while. What's happening? Wait a little longer. What has changed?

Be patient for a bit longer

Do you notice any patterns here?

Great! Your patience is rewarded. You noticed some (unusual) patterns/ really useful details there.

Do you notice any differences between xxx and yyy?

Is there more to be discovered here?

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

Is there more to this than I'm seeing now?

I hadn't noticed that before.

Oh! It's becoming clearer now.

I think there must be a pattern here somewhere.

What seems to be going on here?

I noticed [something different/unusual] on my way to school today.

If I wait a little longer this will become clearer.

That was worth waiting for.

Have I missed anything?

What's really going on?

How does this fit with the big picture?

Have I got in deeply enough?

Strengthening the habit

Student self-review

In order to strengthen learning habits, it is important for students and their teachers to reflect on the specific attributes that contribute to a well-formed habit.

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Here is one way of keeping the noticing habit alive and growing.

Learning Mats:

are A3 or A4 laminated sheets that show various aspects of a learning habit. They are kept on desks or used as part of wall display.


Students refer to them during lessons, using them as prompts about the finer aspects of a learning habit.

Using Learning Mats

Learning Mats can be in 'teacher speak' or 'student speak', and can be used:

- To raise awareness of habit
- To spread the school's common language for learning
- As an aide-memoire for students and teachers
- As a self-assessment support for students
- As an audit tool to support teacher planning.


Poor Noticing




Stuck? Noticing Problem Solver!




I'm stuck because...	Get unstuck by...
Not sure what I'm looking for	Try looking for: similarities, differences, curious things. Do you notice any patterns?
Not focusing my attention	Try finding details that nobody else has yet noticed
Not sure how I need to notice	Try using all of your senses, in addition to 'good looking'
Don't know why I need to notice	Try creating your own explanations and asking questions based on what you have noticed


Good Noticing





How well did I spot things?



I'm thinking 'this is interesting'

I thought about what to look for

I used all my senses

What I noticed raised interesting questions for me

I really kept my mind on it

I managed to avoid being distracted

I described to myself what I had observed

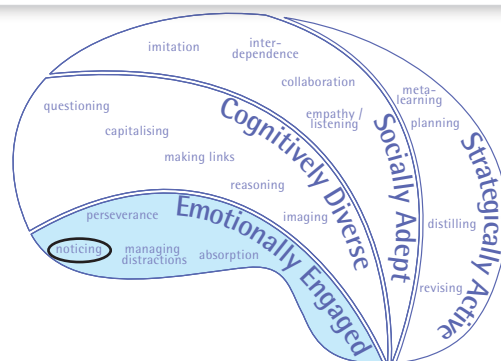
I asked myself 'have I missed anything?'

I...

Noticing

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building the habit of...

Collaborating



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Like it or not, teachers do help to form a learning character. The ways in which young people perform and behave are influenced by the way teachers orchestrate and guide learning. Deliberately fostering an effective learning character in students is a renewed common purpose for education, shared between students and teachers, parents and society more generally.

A well formed **Collaborating** habit involves being **ready, willing, and able** to:

Work effectively with others towards common goals, acting flexibly in response to circumstances.

Seek to understand what others are saying; sharing, challenging, supporting and building on ideas.

Hold and express opinions coherently, compromising and adapting when appropriate.

Adopt different roles and responsibilities in pursuit of agreed goals and the well-being of the team.

Act pro-actively and responsibly; exercise initiative, see opportunities, and persevere in the face of difficulties.

“Talent wins games, but teamwork and intelligence win championships.”
– Michael Jordan

Young people with the habit are likely to:

Set worthwhile and realistic team goals

Enjoy working with others

Be self-aware

Put the needs of the group above their own

Listen actively

Ask open-ended questions

Borrow and imitate ways of doing things

Be inclusive

Be generous and open-minded

Monitor and evaluate team progress

Manage conflict and controversy effectively

Quick Wins

- » Use displays to identify and support effective group-work habits.
- » Set open challenges in preference to prescribed activities.

Pairs and groupwork

- » Start lessons with kinaesthetic, visual or aural challenges and ask students in pairs to consider 'What are we noticing?', 'What questions are we asking ourselves?'
- » Invite pairs to engage with tasks before starting a whole class activity.
- » Use peer reflection and assessment.
- » Let pairs teach themselves how to juggle, spin plates, use a diabolo, etc. (see www.businessballs.com).

Whole-class time

Develop student discussion leaders

Adopt a fresh approach to classroom discussion through *leaderless discussion*:

- » Arrange the seating so that all students can see each other.
- » Raise a topic for discussion and ask students to pose a driving question, supplemented by 'What makes me ask this?'
- » Start with one willing student's question.
- » Invite others to respond and observe the following conventions:
 - Restate and supplement the question
 - Express a point of view with justifications
 - Invite responses
 - Those who wish to respond put up their hands and are nominated by the previous speaker.
- » The process continues without teacher intervention.

This is a useful 'grow your own' collaboration exercise.

Forming the habit

activities to develop Collaborating

Role-play a planning meeting

- Present proposals for converting a local pub into a Tesco convenience store.
- Students, in pairs, develop role positions to represent: residents, local shopkeepers, town councillors, young people, senior citizens, Tesco representatives, etc.
- Link the roles to the collaborative habits (overleaf).
- Conduct a public meeting in role, chaired by one of the class. Engage in role yourself.
- After 30-minute meeting, students in groups of four distil the main arguments
- Complete paired evaluation.

Research and presentation teams

- Show a provocative video clip on a topic, e.g. GM foods.
- Students distil what they know, questions they need to have answered, using Post-it notes.
- Gallery these points for whole-class discussion.
- Divide the class into groups of four to research the arguments for and against.
- Introduce groups to the roles they will need to fulfil. Require group planning and role distribution. Make resources available, suggest varied presentation methods and set time limits.
- After groups have engaged for 15 minutes, say, encourage them to glean from other groups. Encourage revisions and modifications.
- Finally have each group present, and be assessed for outcomes and process.

See overleaf for some related assessment ideas.

Marble Run

- Provide a box of straws, old newspapers, sellotape, a ball of string, scissors... and a marble
- Task: design a marble run that will keep a marble moving **without touching the surface** for as long as possible.
- Create groups of three for the activity and allow 15 minutes for completion.
- At the end of the activity provide a reflection sheet to evaluate how teams collaborated, and discuss the ingredients of successful collaboration:
 - How successful was the outcome? How did the team get started? Did leadership emerge? How could the team's work be improved?

Emotional Climate to build a Collaborative learning character

Interpersonal relationships

- » High levels of inclusion, acceptance, affection, support, and trust build group cohesion.

Goal setting

- » Goals motivate group behaviour — they are set so as to be desirable, achievable, rewarding,

Self-evaluation

- » Peer evaluation of individual work is part of everyday classroom activity.
- » Group activities routinely include evaluation and reflection stages.

Decision making

- » Groupwork activities provide opportunities to experience different methods of decision-making.

Teachers as character builders

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Are your teaching habits helping students' learning habits? Are you building learning characters who will succeed in life?

Take it steady! Think about how and when you might:

Stop/avoid:

- Organising students into groups yourself
- Being obsessed with subject content
- Being the central learning resource
- Worrying about controlling information and ideas.

Experiment with:

- Modulating the pace of group-work
- Changing groups in mid-stream
- Competition and cooperation between groups
- Saying 'Where will you go from here?'

Start/do more of:

- Being aware of when and how **you** work in groups
- Noticing how long you are the focus for learning
- Exploring with students the difference between collaboration and cooperation
- Planning for group-work in lessons
- Developing — with students — a teamwork code of practice.

Start slowly:

- Making paired reflection a habit
- Moving students around
- Setting open-ended group-work challenges
- Observing how students are learning
- Taking time to construct productive groups
- Training groupwork skills.

Roles and responsibilities

- » Whole-group involvement in setting goals and deciding action.
- » Flexible roles and responsibilities are encouraged.

Controversy and conflict

- » Controversy and conflict are seen as a positive key to students' involvement, the quality of decisions and the continuance of the group in good working condition.

Talk to nudge Collaborating

Teacher talk - as a learning coach

(To ensure students do the thinking for themselves.)

Choose different groups today so that you work with different people.

Who is going to be responsible for how the team gets on?

Remember, you'll need to do more than just co-operate.

Who's keeping an eye on your deadline?

Time to check you are on the right lines.

Are you making the most of everybody's talents?

Anyone not happy with how things are going?

What's the best decision making method here?

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

Can I take different roles this time?

I think it would be really helpful to hear your ideas, ...

I think I agree with what ... suggests, but how do the rest of you feel? Are we missing something?

What would I do differently if I were leading the group?

Are we still trying to work out how to get on, or are we performing as a team?

We need to look at each other more.

It's OK to disagree, but we could handle it better than this.

Strengthening the habit

Student self-review

In order to strengthen learning habits, it is important for students and their teachers to reflect on the specific attributes that contribute to a well-formed habit.

Ipsative and formative approaches to reviewing learning habits place students at the centre of the process of developing their learning habits and strengthening their learning character.

Essential team roles

Coordinator	says	'OK, what are we aiming to do, and who's going to do what?'
Idea shaper	says	'If we try it this way, and start by ...'
Gatherer	says	'Where do we get material? Who can we ask?'
Checker/monitor	says	'Are we on the right lines?'
Completer/finisher	says	'We still need to do ...'
Quality controller	says	'How could we improve this bit?'

Public prompts to support team roles

There are numerous ideas for team roles. Here's one to get you started.

Jeff's Personal Statement

'Our team got there in the end. We all gathered ideas and information once Sid had given us some creative ideas to shape our thinking. Sian coordinated us really well. It was my job to see that we stayed on task and focused. We just about finished on time thanks to Sylvie chasing loose ends and tying them up. I'm not sure we paid enough attention to improving the quality of our work as we went along, though.'

(Links to 'Research and presentation teams' activity.)

Reviewing learning habits in the team

Team Bluebird _____ October 09

	1	2	3	4
We noticed small details and patterns				
We kept going, tried things out, learnt from mistakes				
We coped with distractions				
We got "lost" in what we were doing				
We asked questions of each other				
We made links between things				
We used a range of resources				
We thought things through logically				
We imagined how things might be				
We agreed our goals and made plans before we did things				
We stopped and took stock every so often				
We changed our plan if we had a better idea				
We thought about how we learned				
We worked well with each other				
We learnt from how other people in the group did things				
We listened carefully to each other				
We put ourselves in other people's shoes				

Our targets for improvement:

(Links to 'Marble Run' activity; and many others!)

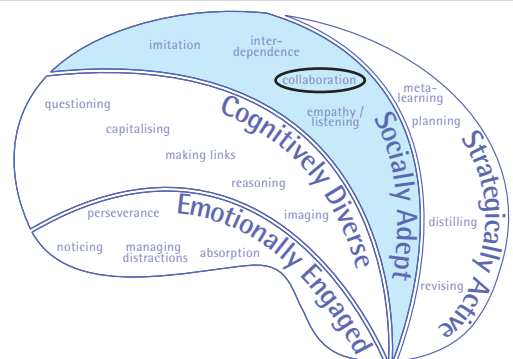
Observing team input	Jan	Jawaid	Jill	Jackie
Taking a position				
Making a relevant comment based on others' responses				
Supporting a position with evidence				
Presenting factual information				
Drawing other people into the discussion				
Helping to move the discussion forward				
Recognising contradictions in other people's arguments				
Making an analogy				
Asking clarifying questions				

This example evaluation sheet is based on assessment criteria quoted by Ron Ritchhart in *Intellectual Character* (San Francisco, CA: Jossey-Bass, 2002):

Collaborating

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Imagining



The New Challenge

Ofsted now recognises the need for schools to:

- provide their own compelling data of a trajectory of improvement
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This together with the current interest in character led education all point to the opportunity for schools to cultivate the habits and attitudes that underpin success and thereby build students' learning characters.

About Learning Habits and Character

Learning habits are the routine ways in which we think and act when faced with life's experiences and challenges. They are second nature to us. Some habits make us very productive and effective; others cause us to learn in constrained and limited ways. Habits are indeed part of our character.

We acquire habits through use: ways of behaving become habituated. If we have a well formed **Imagining** habit, we will have a tendency to use it in all learning experiences. The more we experience the value of a particular habit, the more we will tend to use it throughout our lives.

Like it or not, teachers do help to form a learning character. The ways in which young people perform and behave are influenced by the way teachers orchestrate and guide learning. Deliberately fostering an effective learning character in students is a renewed common purpose for education, shared between students and teachers, parents and society more generally.

A well formed **Imagining** habit involves being **ready, willing, and able** to:

Invoke still and moving pictures of the world as it might be in the future (or might have been in the past).

Use the mind as a theatre in which to play out ideas and possible actions experimentally.

Think creatively and openly in a range of circumstances to meet a variety of different needs; make the most of the unpromising and unlikely.

Use a rich variety of visual, aural and sensory experiences to trigger creative and lateral thinking.

Explore possibilities speculatively, saying 'What might ...', 'What could ...' and 'What if ...?' rather than being constrained by what is.

Retain a childlike playfulness when confronted with challenges and difficulties.

Capture experiences and note down ideas — in a variety of forms — as they occur on a variety of occasions.

Be aware of intended outcomes whilst adopting a flexible approach to realising goals.

Rehearse actions in the mind before performing them in reality.

“**Logic will get you from A to B. Imagination will take you everywhere.**”
– Albert Einstein

Young people with the habit are likely to:

Be attentive to details and notice subtleties

Get lost in a 'could be' world

Stay curious

Enjoy and value day-dreaming

Ask 'What if ...?'

Make unusual links between things

Adapt and change constructively

Take risks

Enjoy uncertainty

Say 'How could we do this differently?'

Contribute fresh ideas in group work

Quick Wins

Stimulating the imagination

- » Use music to create atmosphere and stimulate imaginative thinking.
- » Provide varied, unexpected and ever-changing visual experiences — on whiteboards, classroom walls, in ideas banks, through web-links, etc.
- » Read vivid prose and poetry that captures details, moods and atmospheres.

Capturing ideas

- » Encourage students to brainstorm or mind-map and keep notebooks or Post-its of interesting ideas to feed their creativity. Do this collectively and individually.
- » Elect one student 'Plant of the Day', whose job it is to suggest unlikely ideas.

Exercising the lateral mind

- » Use de Bono's possibility thinking activities (see *Po: Beyond Yes and No*).
- » Play connections games using twin packs of cards or wall matrices to list and link random objects.
- » Play '101 uses of ...' at the start of lessons.

'What if ...' challenges

- » Provoke students to think 'What if... we ran out of oil in 25 years... we lived in a two-dimensional world... we all lived for exactly 70 years... tennis balls were heavier... we had two moons...'
- » Encourage students to build collaborative spider diagrams that explore the possible ramifications of such eventualities.
- » Extend the imagining in creative presentations using a variety of media.

Forming the habit

activities to promote **Imagining**

Open the mind's eye

- » Ask students to visualise, for example, a snowy mountain peak until the image fades — discuss how long this could be sustained
- » Now visualise hovering over the mountain and exploring the terrain by helicopter — the experience will have lasted longer
- » Now provide students with a guided visualisation of the mountain that triggers their imaginative faculties — discuss the features of this experience
- » Enable students to identify the ways of triggering their own imaginations when provided with stimuli. Invite them into a city at night, or the alimentary canal, ...

Play the prediction game

- » Show video clips of e.g. Beckham and Wilkinson preparing to kick a ball, as well as other sports and entertainment people rehearsing ahead of action.
- » Discuss what they are doing to 'play the movie' in their heads before they do the deed.
- » Explore occasions when this could be useful in students' own lives.
- » Identify the triggers and habits required when anticipating the right action.

Telling stories

- » Provide a written stem statement... A man walks into a room with a suitcase in his hand... invite one student to carry it on: each student continues from where the previous one left off
- » Create a scenario... There are no windows, water drips into a bucket, two people are seated back to back... improvise the dialogue between the people
- » Play a song with a strong narrative content... She's Leaving Home... interview the imagined protagonists
- » Explore a painting with strong emotional (Guernica), or narrative (The Will Recovered), or, abstract (Miro and Kandinsky) content and recreate the story within.

Emotional Climate to build an Imaginative learning character

Stretching comfort zones

- » Students are used to playing outside their comfort zones, so that they develop the habit of taking risks and experimenting.
- » Learning experiences often include elements of surprise and unpredictability.

Celebrating unusual ideas

- » Be inclusive of all suggestions, and celebrate quirky ideas.
- » Unlikely and unusual suggestions are welcome.

Engagement through all the senses

- » The environment offers a rich and varied sensory experience.
- » Different kinds of music elicit different moods for imaginative tasks.

Teachers as character builders

Learning habits form part of our character and develop through use and practice (deliberate or otherwise!). But desirable habits will survive and flourish better if students are aware of them, realise their value and strive to improve them.

Cultivating habits involves:

- Providing rich and varied **occasions** for **exercising** learning habits
- **Infusing** learning habits into lessons to enhance content understanding
- Recognising and **celebrating** the use and **growth** of learning habits
- **Enabling** students to identify how and when to use learning habits
- Expecting students to take ownership of and **responsibility** for their learning habits
- **Exploring** the development of learning habits with students.

Teachers are influential character builders and need to be mindful of how they help students form, replace, re-form and strengthen their learning habits.

Are your teaching habits helping students' learning habits? Are you building learning characters who will succeed in life?

Take it steady! Think about how and when you might:

Stop/avoid:

- Being driven by subject content
- Asking all the questions
- Saying 'That's right'
- Avoiding the uncomfortable
- Providing solutions too readily when students are stuck.

Experiment with:

- Using different media in the classroom
- Making links and thinking in metaphors
- Being a little less prepared
- Saying 'What if ... ?'

Start/do more of:

- Valuing imagining as part of your subject area
- Inviting students to really experiment and speculate
- Exercising lateral thinking habits
- Encouraging thinking out loud
- Using 'could be' language rather than 'is' language.

Start slowly:

- Cultivating your own imagination
- Playing creative thinking games
- Catching students unawares
- Looking out for possibilities
- Offering opportunities for students to explore a wider picture.

Creative insight

- » Considering a problem from different angles can help to reformulate it so that new approaches to solutions emerge.

Fallibility is OK

- » Be seen yourself to take risks, experiment, and get things wrong.
- » Model playful fallibility.

Talk to nudge Imagining

Teacher talking as a learning coach

(To ensure students do the thinking for themselves.)

What would happen if ...

What distracts you from getting in touch with your imagination?

Make sure you hear what's going on beneath the surface.

Note things down that interest you.

What makes you laugh, and why is it funny?

Find what are good ways to help you to focus your imagination.

Are you really noticing what's happening ...?

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

My ideas scrapbook has things that will trigger ideas for ...

... gets me into an imaginative frame of mind.

I could talk this through with ... to get some ideas flowing.

I wonder how ..

I did this by visualising ...

Banksy helps me see the world differently. Who else does?

Am I exploring things that interest me as much as I could?

What's the most interesting thing I've discovered recently?

Strengthening the habit

Student self-review

In order to strengthen learning habits, it is important for students and their teachers to reflect on the specific attributes that contribute to a well-formed habit.

Ipsative and formative approaches to reviewing learning habits place students at the centre of the process of developing their learning habits and strengthening their learning character.

Here is one way of keeping the Imagining habit alive and growing.

Imagination top to toe

Autonomous

Generates rich and stimulating ideas
Knows how to trigger imagination autonomously
Capitalises on a wide range of internal and external resources
Thinks speculatively with an open mind
Has an infectious and playful sense of humour
Rehearses actions internally before performance

self-generating

spontaneous

innovative

playful

discerning

original

Increasingly independent

- Able to imitate distinctive ideas
- Builds a bank of resources on which to draw to trigger imagination
- Makes constructive connections between experiences
- Is aware of intended outcomes before beginning a creative task
- Produces original if somewhat predictable outcomes

independent

open

constructive

imitative

resourceful

With support and stimulation

- Is prepared to respond to stimulation from others
- Can see connections between diverse experiences
- Begins to see how things might turn out
- Can recognise the value of imagining
- Imitates features of other people's work with some discretion

predictable

serious

willing

responsive

cautious

dependent

Self-review statements

Justin

I'm good at coming up with new ideas and I enjoy using my imagination to think creatively. I like using music and the visual arts to get my creative juices flowing. I like trying things out and doing things that are a bit left-field. People say I've got a wicked sense of humour I just think I'm a bit quirky. My best piece of work recently was an experiment for testing heat loss on mountains.

My target for improvement is to make more use of a notebook to hold onto ideas instead of risking losing them.

Jeanne

I'm really discovering that I've got an imagination. I'm getting excited by just what there is out there to stimulate me. I use the internet to follow my interests and hunches. My work in all my subjects is becoming more original and less like a version of my teachers' ideas. My best piece of work recently was a maths puzzle that I designed to help younger children understand Fibonacci numbers.

My target for improvement is to challenge other people more when I think their ideas are clichéd.

Jo

I need to be helped to get my imagination going but once I get started I'm quite surprised by some of the things I come up with. I enjoy seeing the links between things and how things fit together. I wouldn't call myself a naturally imaginative person but I'm beginning to realise we all need to use our imaginations at school and at home, and in our social lives. People see me as reserved but I do offer ideas more in groups. My best piece of work recently was when I wrote a Mirror-style article about *Macbeth*.

My target for improvement is to start trying to capture ideas that get my imagination working.

Try these three levels for describing students' imagining capacity.

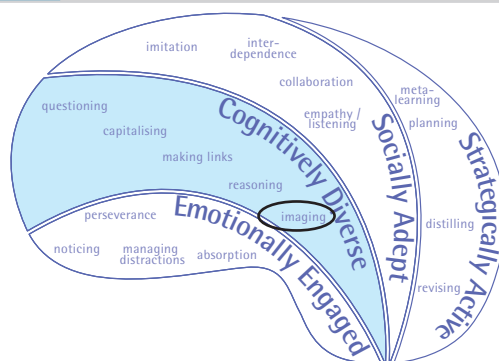
Students' essential characteristics at each level of progress.

Three students' personal statements, related to the three levels of progress.

Imagining

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Listening



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We acquire habits through use: ways of behaving become habituated. If we have a well formed **Listening** habit, we will have a tendency to use it in all learning experiences. The more we experience the value of a particular habit, the more we will tend to use it throughout our lives.

Like it or not, teachers do help to form a learning character. The ways in which young people perform and behave are influenced by the way teachers orchestrate and guide learning. Deliberately fostering an effective learning character in students is a renewed common purpose for education, shared between students and teachers, parents and society more generally.

A well formed **Listening** habit involves being **ready, willing, and able** to:

Be genuinely interested in other people and what they are saying – engaging with them with curiosity and respect.

Focus on the current moment, being attentive and responsive to visual cues and atmosphere, noticing subtle details and nuances in what is being said.

Manage distractions constructively; be comfortable with silence and attend actively to what is being said.

Draw inferences by hearing between the lines of what is being said, making links with other experiences and contexts.

Know when to make well-judged interventions to elucidate, probe or challenge.

Keep an open mind, being slow to make judgements and trying to understand different viewpoints and interpret the messages.

“**Most people do not listen with the intent to understand. Most listen with the intent to reply.**”

– Stephen Covey

Young people with the habit are likely to:

Pay close attention to people they speak with

Think before they respond

Be patient

Summarise and paraphrase

Ask a range of questions

Maintain eye contact

Draw conclusions carefully

Respect others

Be empathetic

Put effort into listening

Work effectively in teams

Quick Wins

Silent filmshow

Play a two-minute scene from a film, without the visuals.

- » Listen for cues in sound effects, voices, soundtrack.
- » Predict what is happening.
- » Show the film and attend to the way in which sounds contributed to meaning.

Directions and instructions:

» The Casualty challenge —

- » Visit www.bbc.co.uk/skillswise/words/listening/
- » **A sense of direction: Try:**
- » You are facing east, you make an about-face, and then you turn left. Which direction is now on your left?

Or:

- » Castle Street is parallel to St John's Street.
- » The Avenue is perpendicular to Purley Road.
- » Purley Road is parallel to St. John's Street.
- » Is The Avenue parallel or perpendicular to Castle Street?

Use centring activities at the beginning of lessons to focus minds before the learning begins. Play music and ask students to focus on the associations that it conjures about places, people, moods and atmospheres.

Export/import

Take students out of — and bring people into — the classroom, to provide occasions for listening to what other people have to say.

Something wrong here

Read a sentence or statement without expression, then read it again, once, with changes; no further repetition. Students have to spot the changes.

Forming the habit

activities to cultivate Listening

Listening for inference and understanding

- » Explore sentences spoken with different stress, tone, pace and emphasis, to yield different meanings; for example: 'I don't know why you didn't go.' 'How can I answer that?'
- » Play tapes of, for example:
 - One end of a telephone conversation
Who's on the other end... What's being said... How do you know?
 - A dialogue
What's just happened... What happens next... How do you know?
 - Recognisable people
Who are they... What's the evidence... How do you know?
 - Unknown individuals talking
What do you know... Who could they be... How do you know?

Listening with empathy and engagement

Show video of people talking about sensitive issues. For example, based on people talking about cystic fibrosis on YouTube at: "Current TV presents 'Dying Young'"

Invite students to note down all they know as separate points on Post-its — pool these collectively on the Learning Wall. Share knowledge together.

- Now ask students — in pairs — to note down the questions that they would ask about Cystic fibrosis if they had been told that their unborn child was likely to have the disease.
- Show a supplementary video for students to answer some of their questions. Provide arresting information about the genetic causes and the longevity of the disease.
- Engage in a debate over the rights of the unborn child. Learning to listen to other people's points of view.

Listening to ask the right questions

Place students back to back in pairs with one student facing an image on the interactive whiteboard; or give one student an image on a card that the other can't see. The image could be a complex diagram, an abstract shape, or a graph.

- Give the unsighted people a piece of paper and pencil and ask them to pose questions to discover what the other can see so that they can recreate it.
- The sighted person has to give clear and helpful instructions in response to what s/he is asked — without seeing what it is being produced.
- Once the pair believe they have finished, compare the result with the original. What do they think they are looking at?

Emotional Climate to nurture an attentive listening character

Valuing all contributions

- » All contributions are heard and valued in a culture of mutual respect.
- » Difficult topics are not avoided.

Active listening

- » Students use a variety of listening routines developed to suit different circumstances.

Staff as active listeners

- » Staff attend to what students are really saying, seeking to understand them before drawing conclusions.

Supporting empathy

- » Learning tasks regularly encourage students to see things through others' eyes and to value different viewpoints.

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Are your teaching habits helping students' learning habits? Are you building learning characters who will succeed in life?

Take it steady! Think about how and when you might.

Stop/avoid:

- Making lessons aural deserts
- Interrupting learning
- Thinking good listeners are silent
- Insisting 'Will you listen ...'
- Assuming that to hear means to listen
- Presenting ideas at length
- Believing that instruction secures understanding.

Experiment with:

- Listening in different ways
- Using listening frameworks
- Peer-assessing students' listening skills
- Enabling students to set their own listening targets.

Start/do more of:

- Being aware of what you can hear yourself
- Showing a real interest in what students are saying
- Modelling active listening techniques
- Providing varied aural experiences.

Start slowly:

- Training yourself to listen better
- Asking students to define the habits of a good listener
- Planning for listening in lessons
- Developing listening habits and skills
- Making greater use of groupwork in lessons.

Talk to nudge Listening

Teacher talking as a learning coach

(To ensure students do the thinking for themselves.)

What does the tone of voice tell you about the person?

Where have you heard this before?

Close your eyes and let the sounds wash over you.

Listen to the sounds around you.

How does what he's saying make you feel?

Can you hear what she's really saying?

Summarise the key points of what you've just heard.

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

I'm not paying enough attention.

Why do I listen to different kinds of music?

Do I believe what she's saying?

How do their points of view differ?

Have I got anything useful to add to this?

'That's a good idea... that's interesting...'

'I don't quite get what you mean by that.'

Comfortable silence

- » Students are given time to think; silence is recognised as a valuable resource.

Openness and honesty

- » Students feel free to talk about how they think and feel.
- » Innocent comments are not taken as personal affronts.

Strengthening the habit

Student self-review

In order to strengthen learning habits, it is important for students and their teachers to reflect on the specific attributes that contribute to a well-formed habit.

Ipsative and formative approaches to reviewing learning habits place students at the centre of the process of developing their learning habits and strengthening their learning character.

Different styles of listening

There are a number of interesting frameworks for characterising ways of listening, which you could explore with students. Here are outlines of two examples.

Personal Listening Profile:

- **Appreciative:** enjoying what is being said and how it is being said in a relaxed way
- **Empathic:** responding to the feelings expressed with sympathy and understanding
- **Discerning:** focusing on information, making notes and avoiding distractions
- **Comprehensive:** relating what is said to what they know already, asking questions, preparing arguments
- **Evaluative:** critiquing what is being said and building counter-arguments

Listening Styles Inventory:

- **People-oriented:** Concern for others' feelings and emotions paramount. Looks for common areas of interest and tries to respond empathetically.
- **Action-oriented:** Preference for concise, error-free information. Can be particularly impatient and easily frustrated when listening to a disorganised presentation.
- **Content-oriented:** Preference for receiving complex and challenging information. Tend to evaluate facts and details carefully before forming judgments and opinions.
- **Time-oriented:** Preference for brief or hurried interactions with others. Tend to let others know how much time they had to listen or meet.

For either example, you could try selecting one preferred listening style as the focus for the whole lesson, or different styles for different parts of the lesson, and explore.

Ideas for self-evaluation of listening

When I'm listening to other people I:	Often	Sometimes	Rarely	Never
• Keep my mind focused.				
• Ignore other things that are on my mind.				
• Keep my personal opinions under control.				
• Make mental notes of the key points.				
• Follow an argument clearly.				
• Keep an open and independent mind.				
• Ask questions to clarify things.				
• Pick up on feelings, moods and atmospheres.				
• Encourage other people to speak their mind.				
• Maintain good eye contact.				
• See solutions and offer advice.				
• Summarise the main points accurately.				
• Feel uncomfortable with silence.				
• Recall details and inferences later.				
• Get caught up with what I want to say next.				
• Come across as impatient.				
• Talk too much.				
• Talk over other people and interrupt.				
• Finish other people's sentences for them.				
• Get bored and lose concentration.				

Jamil's Personal Profile:

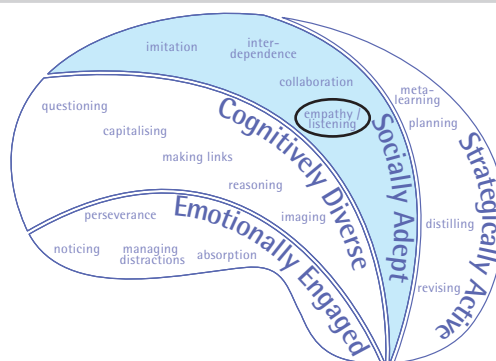
I think I could improve my listening habits. I find it hard to keep focused for long when I'm listening in class – I often tune out and glaze over which often gets me into trouble. I'm good at picking up feelings in what people say – and in the music that I like – but I find it harder to follow arguments. I tend to see things from other people's point of view but find it hard to express my own opinions.

My target: start making notes of the key points of what people are saying and get in the habit of putting what they say into my own words.

Listening

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A well formed **Planning** habit involves being **ready, willing, and able to:**

Have a sense of the longer term — considering options and possible consequences before taking action.

Know that it pays to start with the end in mind; identify end goals or objectives before considering possible action.

Make use of a wide variety of skills and tools to gather ideas and information, or sequence activity in order to decide what needs to be done.

Consider timescales and possible obstacles in drawing up a realistic plan.

Think laterally as well as logically so that the task in hand benefits equally from creative and rational thought.

Be open-minded and flexible about how things might happen so that opportunities can be seized and fresh directions taken.

Stop and take stock of progress in the light of experience, adapt the planned course of action or even abandon it if it turns out to be inappropriate.

Evaluate the process and outcomes of an endeavour in order to learn from the experience and adapt behaviour in the future.

“**Stop setting goals. Goals are pure fantasy unless you have a plan to achieve them.**”
– Stephen Covey

Young people with the habit are likely to:

Keep the end in mind

Use time efficiently

Ask questions and anticipate obstacles

Consider the value of possible outcomes

Prioritise their actions

Rise to the challenge when things change

Persevere when things get tough

Keep an open mind

Scan for possibilities

Re-form, re-shape and re-order

Take time to get things right

Quick Wins

Thinking routines to build into lessons

'What do we know?'

What do we need to know?'

- » Expose students to intriguing aural, visual, or, written material.
- » Invite them to distil what they know on Post-it notes – gallery these on the learning wall.
- » In pairs, ask students to respond to 'What questions are you asking yourselves about this?' – build spider diagrams.
- » Take a plenary around 'What do we know... what do we need to know?'
- » Set students the task of discovering for themselves.

'What will it look like when it's finished?'

- » Set a task — physical, dramatic, written, practical, spoken, visual — that has clear parameters but which is open-ended.
- » Make WWILLWIF the regular precursor to any action.
- » Ask students to determine WWILLWIF for themselves in conjunction with others.
- » Help them to visualise this in an appropriate form.

'I used to think... Now I think ...'

- » Present some information in a variety of forms – ask students to respond to 'What are you noticing?'
- » Glean opinions from others in an open and inclusive way.
- » Invite students to adapt their views in the light of others' views.
- » Get students to distil their change of mind through 'I used to think... Now I think ...'

Forming the habit

Planning

activities to further

Knowing what to do when you don't know what to do

- This works well for pairs or small groups; it can also be used with individuals.
- Introduce to students: 'We often find ourselves in situations where we have only partial information but still need to adopt a plan based on what we know.'
- Say that you are going to give them 25 frames from (e.g.) a Tintin strip cartoon, starting mid-way through the story. They will get the frames in batches of five, picked at random from the 25, AND five random frames have been removed, so they will only get 80% of the story.
- The task: Make sense of the narrative; work out what happened before, what happens next.
- But first: 'How will you set about working with this information?' Ask them to devise a plan.
- Release the first five frames.
- After four minutes, nudge them to ask themselves: What do we know? What questions are we asking ourselves? What do we need to do next?
- Release the next five frames and so on, repeating the questions at each stage
- Plenary discussion to review what they've discovered about planning for uncertainty.

Senior citizens' Xmas party

- Set students the challenge of organising a Christmas Party for the elderly – what are the features that they will need to take into consideration?
- Suggest they divide the tasks into critical areas – Timing... Invitations... Refreshments... Entertainment... Publicity... Health and Safety... Transport... — do not provide the scaffolding
- Distil the results as a timeline with allocated responsibilities.

Structuring an extended project

- Give students a pack of cards that describe the 10 or so sections in an extended project based on the Driving Question: Where's the safest place to live? Ask them to sequence the material to make clearest sense. Ask them to give each section a generic heading.
- Challenge students to prepare the outline structure for a response to other Driving Questions, for example, 'Is Planet Earth injury prone?' 'Where did the dinosaurs go?' 'Why don't people stay at home?' 'Should we choose to end a human life?' 'Is the idea of God more trouble than it's worth?'
- Agree with the class the generic headings for an extended piece of work – display it as an aide-memoire in the future.

Emotional Climate to build a forward thinking learning character

Starting with the end in mind

- » Lessons start with routines for students revisiting prior experience to identify future and immediate needs.

Speculation for accumulation

- » Regular opportunities to consider 'What should we do... What could we do... What might we do?'

Post-it and scrap it

- » Post-it notes and wall plans support working flexibly and creatively. Move them around, throw them away, start again, tick things off, highlight the 'Must do' and the 'Don't forget'.

When the chips are down

- » Tasks with tight deadlines show students what they can achieve when they have to act quickly and decisively.

Two minds are better than one

- » Students think things through together in pairs before beginning a piece of work.

Teachers as character builders

Learning habits form part of our character and develop through use and practice (deliberate or otherwise!). But desirable habits will survive and flourish better if students are aware of them, realise their value and strive to improve them.

Cultivating habits involves:

- Providing rich and varied **occasions** for **exercising** learning habits
- **Infusing** learning habits into lessons to enhance content understanding
- Recognising and **celebrating** the use and **growth** of learning habits
- **Enabling** students to identify how and when to use learning habits
- Expecting students to take ownership of and **responsibility** for their learning habits
- **Exploring** the development of learning habits with students.

Teachers are influential character builders and need to be mindful of how they help students form, replace, re-form and strengthen their learning habits.

Are your teaching habits helping students' learning habits? Are you building learning characters who will succeed in life?

Take it steady! Think about how and when you might:

Stop/avoid:

- Saying 'In the exam...'
- Over-preparing material
- Making it too easy for students
- Being the centre of attention
- Providing closed templates and prescribed routes that over-scaffold learning
- Limiting the opportunities for collaborative work.

Experiment with:

- Changing direction in lessons
- Letting students agree their longer-term learning objectives
- Setting team challenges.

Start/do more of:

- Letting students work it out
- Providing students with the tools to generate their own plans
- Exploring students' thought processes
- Making the most of peer assessment
- Asking students to set their own targets.

Start slowly:

- Planning lessons with students
- Showing your own Work in Progress
- Providing contrary data
- Leaving things incomplete
- Allowing longer for drafting or trialling
- Modelling and commenting on the ways in which people plan, prepare, adapt and change.

Turn the heat up or down

- » Tone and atmosphere change to meet different needs: the Learning Kitchen one day, the Learning Library another.

When things look like falling apart ...

- » Model confidence, flexibility and a 'can do' approach in the face of mistakes or unexpected events.

Being stuck is the starting-point for learning

- » 'Stuck challenges' stimulate students to expand their capacity to know 'What to do when you don't know what to do.'

Talk to nudge Planning

Teacher talking as a learning coach

(To ensure students do the thinking for themselves.)

What are you aiming to achieve?

What will your end product look like?

How will you judge the success of what you have done?

Decide who's going to do what and when.

Get things in the right order – what is urgent and what is important?

Look at what you have done so far – do you need to make any changes?

Are you on track to meet your deadline?

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

What am I really trying to do here?

What am I trying to achieve?

How long will this take?

How long have I got?

What might get in the way?

How can I allow for that, or avoid it?

What do I know and what do I need to find out?

What resources will I need?

Where can I get them?

What planning tools will be useful to me at this point?

How can I make best use of other people?

At what stages will I take stock and decide if I need to change?

Strengthening the habit

Student self-review

In order to strengthen learning habits, it is important for students and their teachers to reflect on the specific attributes that contribute to a well-formed habit.

Ipsative and formative approaches to reviewing learning habits place students at the centre of the process of developing their learning habits and strengthening their learning character.

Here is one way of keeping the Planning habit alive and growing.

How strong a habit?

The following self-reflection tool helps students review their Planning habits and skills, the better to have a one-to-one discussion and help them target for improvement.

Self-assessment by *Leon*

Score yourself on a four-point scale where 4 = strongly agree and 1 = strongly disagree.

- I like to just get started and see how things turn out
- I find it useful to work to a plan that has been given to me
- I often find the prospect of starting something off-putting and I tend to delay things
- Once I've got started, I like to press on until I've finished
- I have come up with some really good plans in the past
- I use Post-it notes, underlining, highlighting and lists to sort out my ideas
- I like to get things done as quickly as possible
- I am in the habit of checking back as I go along
- I prefer to have everything organised around me before I begin a piece of work
- When I get stuck, I often give myself space to walk away before continuing
- I know how to make the most of flow diagrams, spider charts and mind maps
- I find it boring to follow a plan that I have been given
- I am a bit of a perfectionist and I'm never really satisfied with what I have done
- I am at my best when I am working with other people
- I rarely read something again once it's finished
- Once I've decided on a course of action, I don't like to change things
- I use cut-and-paste editing on the word-processor to move ideas around
- Most of my plans don't work out in practice
- I am more likely to say 'That will do' than 'Is there a better way?'

Disagree		Agree	
1	2	3	4
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Planning

These At-A-Glance cards are based on the practical framework of learning capacities and habits known as Building Learning Power. The framework provides a clear picture of what it takes to be a good learner. The purpose of the approach is to grow students' Learning Character and Habits. In so doing Building Learning Power develops the appetite and ability to learn in different ways, and shifts the responsibility for learning to learn from teacher to student.

Find out more: www.buildinglearningpower.com



building the habit of...

Questioning



The New Challenge

Ofsted now recognises the need for schools to:

- provide their own compelling data of a trajectory of improvement
- successfully promote and support children's 'self confidence, self awareness and understanding how to be a successful learner'.

This together with the current interest in character led education all point to the opportunity for schools to cultivate the habits and attitudes that underpin success and thereby 'build students' learning characters.

About Learning Habits and Character

Learning habits are the routine ways in which we think and act when faced with life's experiences and challenges. They are second nature to us. Some habits make us very productive and effective; others cause us to learn in constrained and limited ways. Habits are indeed part of our character.

We acquire habits through use: ways of behaving become habituated. If we have a well formed **Questioning** habit, we will have a tendency to use it in all learning experiences. The more we experience the value of a particular habit, the more we will tend to use it throughout our lives.

Like it or not, teachers do help to form a learning character. The ways in which young people perform and behave are influenced by the way teachers orchestrate and guide learning. Deliberately fostering an effective learning character in students is a renewed common purpose for education, shared between students and teachers, parents and society more generally.

A well formed **Questioning** habit involves being **ready, willing, and able** to:

Be curious about all experiences, refusing to take things at face value.

Ask questions in the head as well as out loud.

Dig beneath the surface, asking why something is happening as it is: How can this be? What causes events to fall out as they are? When have things happened like this before?

Be comfortable with uncertainty and ambiguity; enjoy different points of view and contrary evidence.

Play with ideas and possibilities.

Be systematic and adopt a logical approach — exploring a line of thought purposefully; posing questions that follow a rational path towards an emerging goal.

Be socially aware in asking questions of others, exhibiting genuine interest in other people.

Challenge others' points of view, and maintain or change one's own opinions appropriately.

“**Knowledge is having the right answer. Intelligence is asking the right question.**”
– unknown/anonymous

Young people with the habit are likely to:

Seek first to understand

Ask questions of themselves first

Keep an open mind

Use a range of questions to suit circumstances

Know when to stay silent

Know what questions to ask, when, and how

Say 'Do I agree with this?'

Stay curious

Relish getting to the bottom of things

Listen to understand what others are saying

Challenge for clarity and understanding

Emotionally Engaged • Cognitively Diverse • Socially Adept • Strategically Active

Quick Wins

Questions on display

Create question walls in the classroom to illustrate and prompt questioning. Display, for example:

- » Student-posted questions about current topics that need resolution.
- » 'The Question of The Day'
- » Different types and purposes of questions.
- » Questioning routines that the class have defined.
- » A lexicon of questions for use when exploring and enquiring.
- » A list of questions for use to get started, or unstuck.
- » Annotated student work and pictures to provoke questioning.

Question cards

Make cards on specific topics to scaffold and stimulate questioning, for example to:

- » Generate student ideas and engagement
- » Support autonomous involvement
- » Enable collaboration
- » Encourage connected thinking.

Questioning routines

Develop questioning routines with students:

- » 'What do I know about this already?'
'What do I need to know?'
'What questions could I ask, to find out?'
- » Make regular opportunities for students to generate their own questions.
- » Build in moments when students are required to say 'What am I asking myself about this?'
- » Promote peer assessment so that students pose questions of each other.

Forming the habit

activities to provoke Questioning

Build a three-level questioning habit

'ReQuest' is a structured process for deepening questions. For example, start with the painting *The Arnolfini Wedding* by Jan van Eyck:

- » **On-the-line questions:** ask questions about the picture for which the answers can be seen just by looking closely at the picture: 'How many candles are there?' 'What kind of room is it?' 'What is on the wall behind the people?'
- » **Between-the-lines questions:** questions whose answers can be inferred by looking at the picture: E.g. 'What is the relationship between the two people?' 'How long ago was the picture painted?' 'What time of day is it?'
- » **Beyond-the-line questions:** questions whose answers need to be elicited by making interpretive links from the picture: E.g. 'What did the artist think of his subjects?' 'Is the number of candles significant?' 'How does perspective work in the painting?'

De Bono's *Six Thinking Hats*

Exploring an issue in a variety of ways

- » Distribute, for example, a piece of direct marketing material for students to critique.
- » Invite the students to wear the six thinking hats:
 - White Hat — Facts and information: What do I know... what's happening?
 - Yellow Hat — Positive judgment: What are the positive features and why?
 - Black Hat — Critical judgment: What are the negative features and why?
 - Green Hat — Alternatives and learning: What is possible?
 - Red Hat — Feelings and emotions: How do I feel about this?
 - Blue Hat — The big picture: What hat should we use now?
- » Make sure that students take enough time wearing one hat before moving on to another.

Coach your students in thinking in this way when faced with unfamiliar material.

'Six Hats' in Wikipedia gives an excellent introduction to using the hats; or buy the book!

Emotional Climate to build a curious learning character

Celebrating questioning

- » Good questions are valued, as well as good answers.
- » Staff, and other students, draw attention to good questions by individual students.

Safety to disagree

- » Disagreement is seen as an interesting situation from which to learn, not as a personal rejection.

Enquiry-mindedness on display

- » You share your own enthusiasms and enquiries, modelling curiosity and questioning.
- » Displays of work include interesting 'work in progress' — lines of enquiry, fruitful (or discarded) questioning sequences, and so on.

Teachers as character builders

Learning habits form part of our character and develop through use and practice (deliberate or otherwise!). But desirable habits will survive and flourish better if students are aware of them, realise their value and strive to improve them.

Cultivating habits involves:

- Providing rich and varied **occasions** for **exercising** learning habits
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Teachers are influential character builders and need to be mindful of how they help students form, replace, re-form and strengthen their learning habits.

Are your teaching habits helping students' learning habits? Are you building learning characters who will succeed in life?

Take it steady! Think about how and when you might:

Stop/avoid:

- Over-preparing lessons
- Being predictable
- Needing, or appearing, to know all the answers
- Talking too much
- Providing answers when students are stuck
- Posing closed questions, with just one 'right' answer.

Experiment with:

- Being as ignorant as the students
- Asking why without using the 'Why' word
- Wild tasks and enquiry-based learning with unpredictable outcomes
- Students leading the learning.

Start/do more of:

- Modelling your own curiosity
- Saying '... could be ...'
- Asking 'What do we know about questions?'
- Offering opportunities to speculate and ruminate.

Start slowly:

- Creating more opportunities for questioning
- Inviting students to identify the objectives for lessons
- Building lessons round an intriguing 'driving question'
- Asking students: 'What questions are you asking yourself?'
- Using questioning frameworks.

Time to think things through

- » Open-ended challenges
- » Learning involves open-ended 'wild' tasks and enquiry-based challenges.

Learning through driving questions

- » Lessons are designed and built on intriguing questions.
- » Lessons are adventures into the unknown

Talk to nudge Questioning

Teacher talking as a learning coach

(To ensure students do the thinking for themselves.)

That's an interesting / insightful question.

I don't really know myself yet.

I wonder what / who we could ask to find out?

What questions did we ask last time?

Is this a good enough answer? Might there be more to it?

Are there any other possibilities?

Are you sure that statement / answer / comment is sound?

What else might you want to know?

Student self-talk

(As the skill becomes a habit, and as the habit shapes part of the learning character, look out for students who say (or think) the following)

I'm not sure I believe that.
What else could explain it?

How can I find out? Who can I ask?

How does ... connect with what I already know?

I must find out what other people think ...

On the one hand ..., but on the other ...

Do I really know what's going on here?

I don't understand it at the moment, but I'm working on it.

Is this point of view really reliable?

I'll need to chew this over a bit more.

Be strong, say what I think even if other people seem to know the answer.

Slow down; don't just ask the first thing that comes into my head.

Don't give in when other people sound like they know things.

Strengthening the habit

Student self-review

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Ipsative and formative approaches to reviewing learning habits place students at the centre of the process of developing their learning habits and strengthening their learning character.

Self-assessment by <i>Jake</i>		Do I use these in school, and where?		
For the three broad kinds of questioning:		Y	N	Where?
Data-gathering Questions				
» Count: How many times has this occurred?		✓		maths, science
» Describe: What is happening here?		✓		English, history
» Match: When have I met this before?		✓		maths
» Name: What do I call one of these?		✓		DT, science, PE
» Recite: What are the rules for this?		✓		PE, maths
» Select: Which ones would I choose to use?		✓		DT
» Recall: What do I know already?		✓		science, maths, geography
» Tell: What is the key feature?		✓		
Processing Questions				
» Reason: Can I give a reason for this?		✓		English and history
» Compare: How is this like something else?		✓		art, English, music
» Contrast: How is this different from something else?			✓	can't remember doing that
» Solve: How shall I address this problem?			✓	teachers tell us
» Sort: Can I group things together?		✓		maths, geography
» Distinguish: What sets this apart?			✓	can't remember doing that
» Explain: Why do I think this is?		✓		science, DT
» Classify: How does this link with other things I know?		✓		
» Analyse: What is making this happen?			✓	science, DT
» Infer: What else might be happening here?		✓		English
Elaborating and Applying Questions				
» Estimate: How long do I think it will take?		✓		projects
» Forecast: What is likely to happen?		✓		science, English, DT, a lot
» If/Then: If I do this then what will take place?		✓		DT
» Apply a principle: Can I use any practices that I know work?			✓	Don't understand
» Speculate: What are the possible results and solutions?			✓	
» Predict: What do I think will happen?		✓		English
» Judge: Which is the best one?		✓		DT, drama
» Imagine: What will it look and feel like?			✓	
» Evaluate: What has been the most effective way?		✓		DT

The questionnaire above is based on a lexicon of questions developed by Art Costa and colleagues.

Activating and Engaging Habits of Mind edited by Arthur L Costa and Bena Kallick; Alexandria, VA: ASCD, 2000.

Questioning

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