Challenge in the classroom

TWILIGHT WORKSHOP

23RD MARCH 2023

Session Content:

- What do we mean by challenge in a secondary school?

- Linking to L E A R N

- The Learning Model – How do we learn?

- The importance of challenge...the importance of hard work

- Theory: Zone of proximal development, struggle zone...

- Strategies for challenge in the classroom and homework (Pygmalion effect, Growth Mindset, Solo/Blooms, rigour and depth, knowledge organisers, flipped learning, Questioning, ICE, oracy, discussions, pupils asking questions)

- Creating a challenging climate (Growth mindset and the Power of Not Yet)

- Philosophy, thoughts and feedback

- Further reading and resources

Do Now: Key terms and meanings

Task:

Which key terms do you recognise?

Which key terms can you accurately define at the start of this session?

- Adaptive teaching
- Macro adaptations
- Micro adaptations
- Zone of proximal development
- The Struggle Zone

Do Now: Key terms and meanings

Task: Match these 3 key words and meanings: adaptive teaching, micro adaptations, macro adaptations.

Macro adaptations

Teachers make large scale adjustments in their curriculum and classroom teaching, for example following an assessment or for particular cohorts of pupils e.g. HAPs or EAL (whole scale changes)

Micro adaptations

Decisions made on a moment-by-moment basis, tweaks, changes made in the classroom which enable pupils to achieve within an ambitious curriculum.

Adaptive teaching

Teachers adapt or adjust their teaching to make it appropriate for all students in their classroom. To allow all pupils to access new learning.

What is meant by Challenge?

Task:
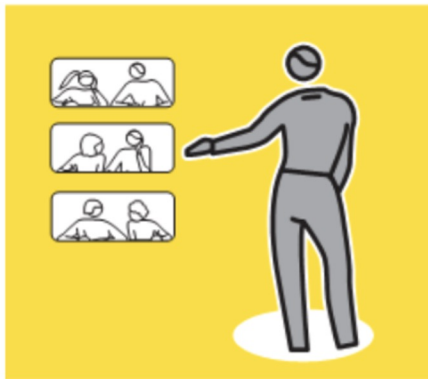**Discuss with your partner**
Come up with a definition
2 minutes
Some sentence starters…
- Challenge is…
- Challenge is when…
- Pupils find the work challenging when…

Think → **Pair** → **Share**

THINK, PAIR, SHARE
① ② ③ ④ ⑤

ESTABLISH TALK PARTNERS FOR EVERY STUDENT

SET THE QUESTION WITH A GOAL AND A TIMEFRAME

BUILD IN THINKING TIME

CIRCULATE TO LISTEN AS PAIRS ARE TALKING

**USE COLD CALL TO SAMPLE PAIRS' RESPONSES**

What is meant by Challenge?

"Stretching and challenging all learners means creating lessons where challenge is at the forefront of teaching and learning. This takes learners out of their comfort zone, encouraging them to push towards the outer edge of what is possible for them to achieve"
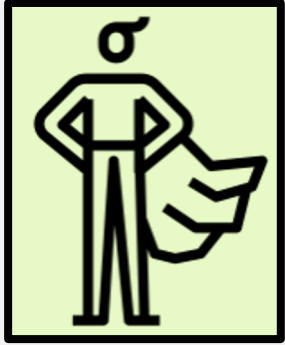
Mike Gershon – Educational Author and Trainer

Share Your Ideas on Challenge...
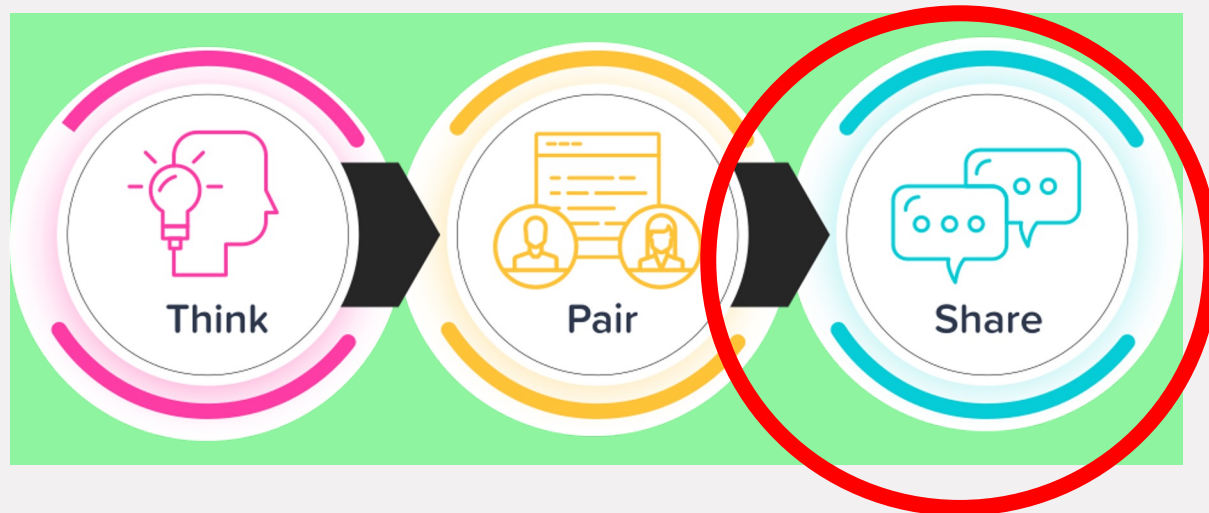
Wanstead High Habits: How we LEARN

L — Leaders

- We arrive on time and DO NOW.
- Be prepared for learning – equipment and mindset.
- Engage with and respond to feedback.
- Know next steps and targets.
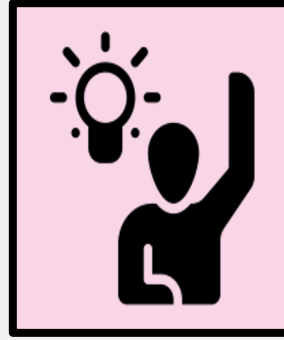- Complete home learning by deadline and to best of their ability.

E — Enquirers

- Connect to new learning.
- Ask questions of your learning journey – where, why, how, what?
- Ask your teacher questions about the new learning.
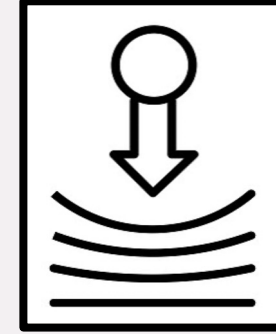- Question what you don't understand.

A — Active Participants

- Participate and are actively engaged in all learning activities.
- Collaborate with your peers and learning partners.
- Avoid opting out.

R — Resilient

- Ready to be challenged and to think hard.
- Adapt strategies to develop resilience.
- Ask teacher when need to get unstuck.
- Keep making those improvements.
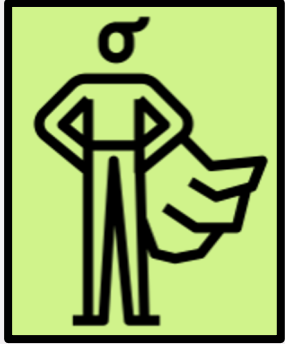- Keep going with your home learning, developing independent study skills.

N — No Fear

- Rise to the challenge and stretch yourself.
- Embrace a Growth Mindset.
- Know your Targets and strive towards these.
- High aspirations beyond your goals.
- Believe in yourself!

Wanstead High Habits: How we L E A R N
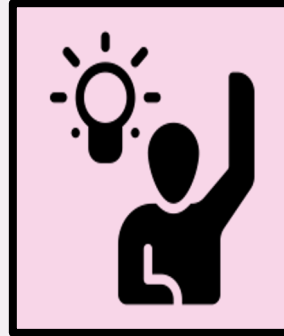
L
Leaders

Leadership roles

E
Enquirers

Extend knowledge

Evidence

Evaluate

Empowered

A
Active Participants

Ambition

Aspiration

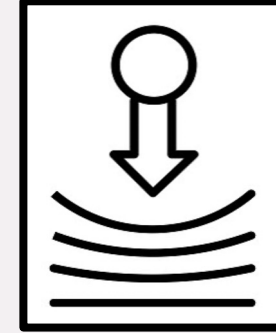Argue

Accuracy

Assess

Analyse

R
Resilient

Rigour

Routine

Reachable

Rapid progress

N
No Fear

K*n*ow the learning journey

K*n*owledge organisers

Thinking activity:
Review The Learning Model from previous sessions
Do we have a volunteer to take us through the
Learning Model?

Explain the importance of challenge in the way we
learn?
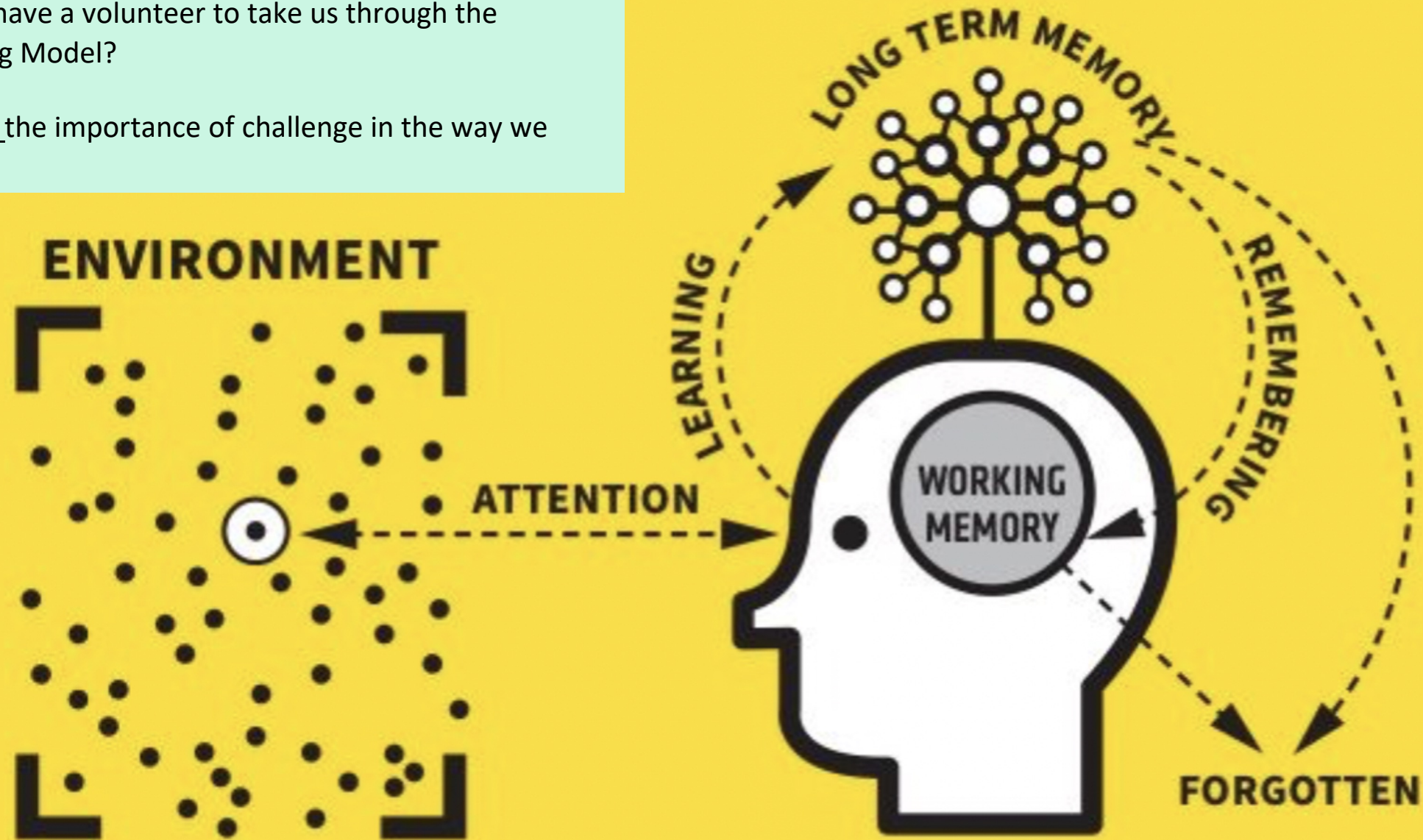
The importance of challenge...the importance of hard work

Example 1:

You have 30 seconds to calculate in your head:

57 x 3489 =

Most of us would fail

Why is this?

Example 2:

You have 30 seconds to calculate in your head:

2 x 10 =

Confident you will all succeed

Why is this?

The importance of challenge...the importance of hard work

Example 1
- You may decide this question is unachievable
- Or attempt and fail simply because processing would require too much from your working memory and you'd get to the point of cognitive overload.
- Therefore, you are unable to learn something new.
- New learning would not occur.
- You'd incur nothing new into your long-term memory.
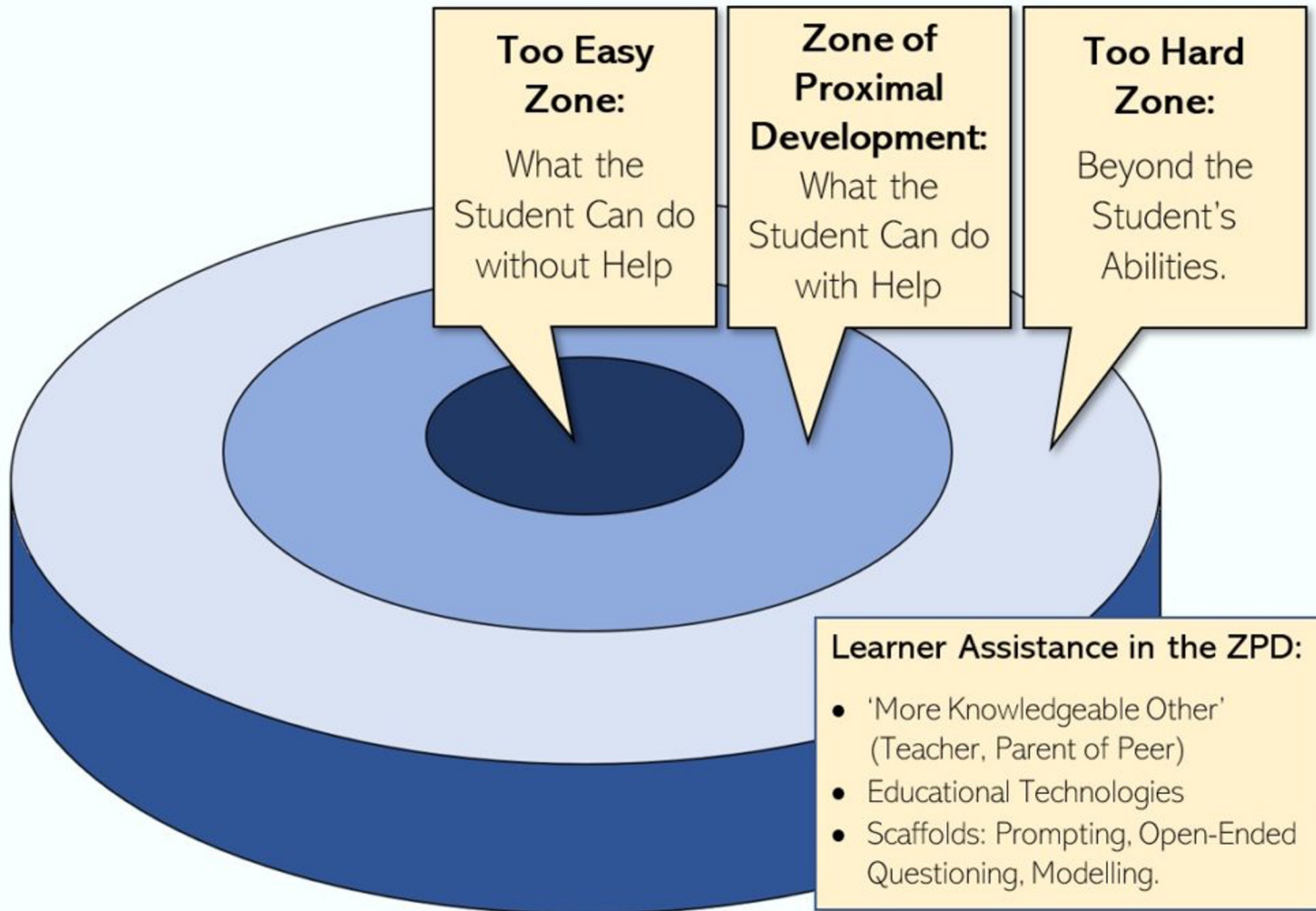- Therefore, the task would have been pointless.

Example 2
- I'm confident you would all succeed
- You would need a minute
- You'd know instantaneously.
- No calculation needed
- Automatic answer
- No need to engage your working memory
- As you've practiced your timetables so much before, it's now automatic.
- No need to engage your active attention. Like tying shoelaces, buttoning a shirt, driving to a regular destination.
- Again, pointless as no new learning takes place.

If we want our pupils to learn anything, then we need to stimulate their senses in order to gain the active attention of their working memories, then we need to get them thinking hard. We need to pitch work in pupils' 'struggle zone', what they can do with time, effort and support. This is sometimes referred to as the 'zone of proximal development'.

Zone of Proximal Development

Vygotsky's Zone of Proximal Development

Too Easy Zone: What the Student Can do without Help

Zone of Proximal Development: What the Student Can do with Help

Too Hard Zone: Beyond the Student's Abilities.

Learner Assistance in the ZPD:
- 'More Knowledgeable Other' (Teacher, Parent of Peer)
- Educational Technologies
- Scaffolds: Prompting, Open-Ended Questioning, Modelling.

If we want pupils to learn we need to pitch work in pupil's **struggle zone.**

Zone of Proximal Development

What is Known
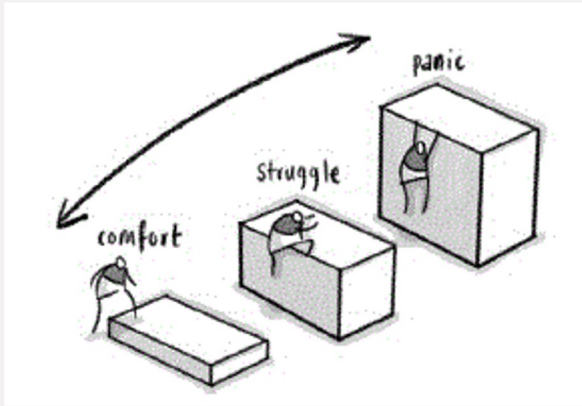
Skills too difficult for a child to master on his/her own, but that can be done with <u>guidance</u> and <u>encouragement</u> from a knowledgeable person.
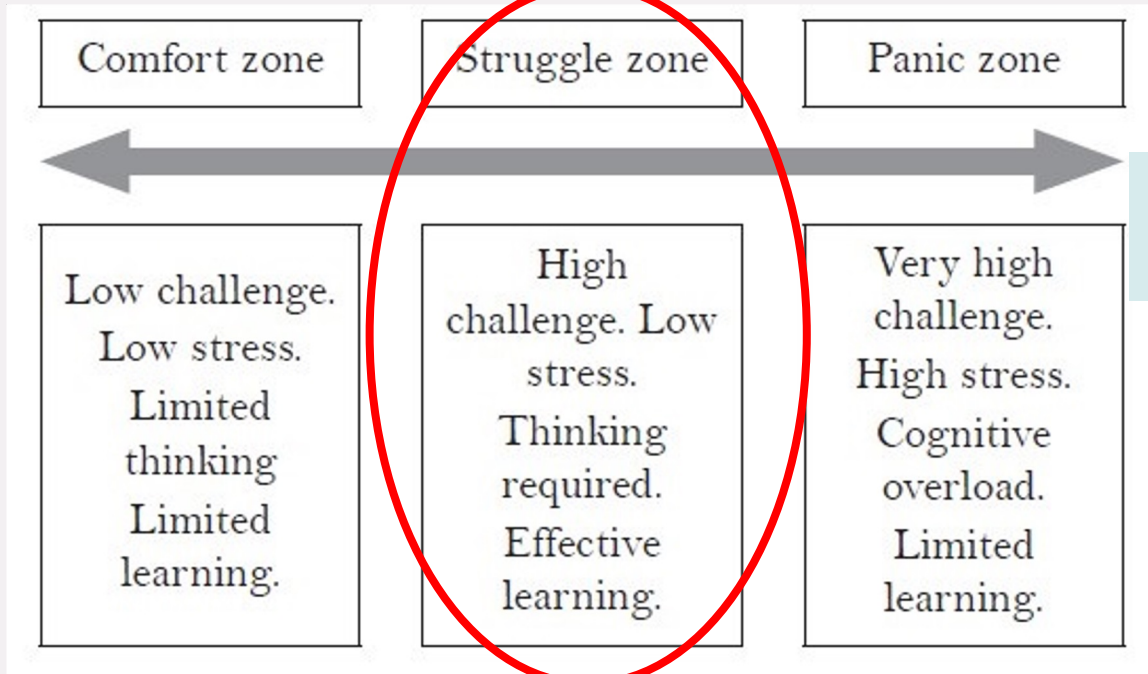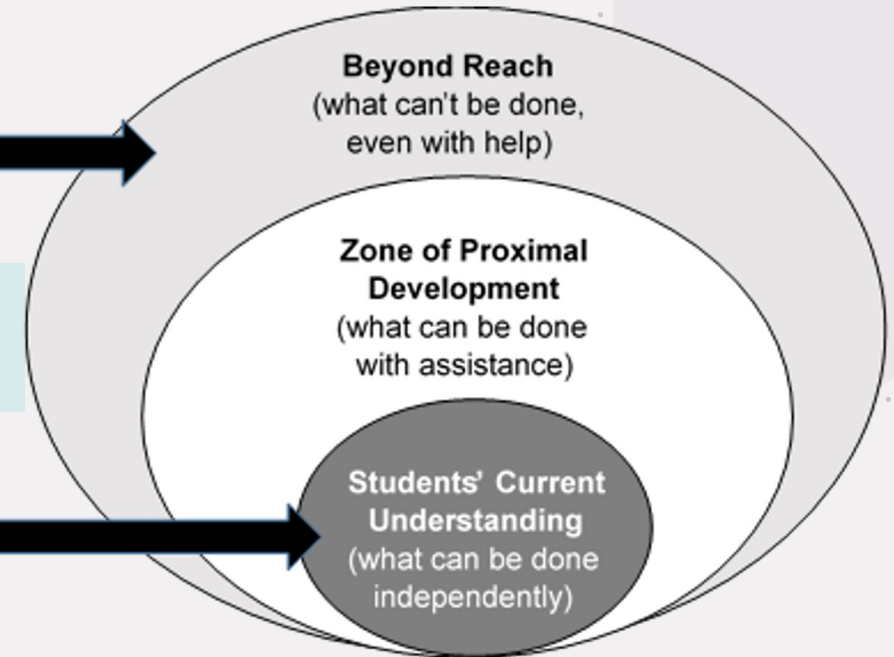
What is not Known

Learning

"Put simply, challenge in education is the provision of difficult work that causes students to think deeply and engage in healthy struggle" – Allison and Tharby (Making Every Lesson Count)

Comfort zone	Struggle zone	Panic zone
Low challenge. Low stress. Limited thinking Limited learning.	High challenge. Low stress. Thinking required. Effective learning.	Very high challenge. High stress. Cognitive overload. Limited learning.

Beyond capabilities but within reach.

TOO HARD

TOO EASY

Beyond Reach
(what can't be done, even with help)

Zone of Proximal Development
(what can be done with assistance)

Students' Current Understanding
(what can be done independently)

Strategies

A better proxy for learning?

Learning happens when people have to think hard

Pygmalion effect and Growth Mindset

Important Research

- Growth mindset – Dweck et al
  - Intelligence isn't fixed. Fixed mindsets can be changed.
  - Psychological interventions can improve outcomes if they are linked to increased effort/grit applied to specific strategies.
- The Pygmalion Effect- Rosenthal et al
  - If you think your students are more able, you will be nicer to them, ask them more questions, give them longer thinking time and set a higher bar for the work you accept.

teacherhead.com

These two sets of research findings are powerful. Too often high attainers are regarded as having special gifts – which negates the need for them to also work hard.
It's really important to challenge fixed mindsets in higher attainers. It is also a challenge for teachers who may not be 100% confident with the most challenging material. Modelling earned fluency through hard-work and self-belief is powerful.
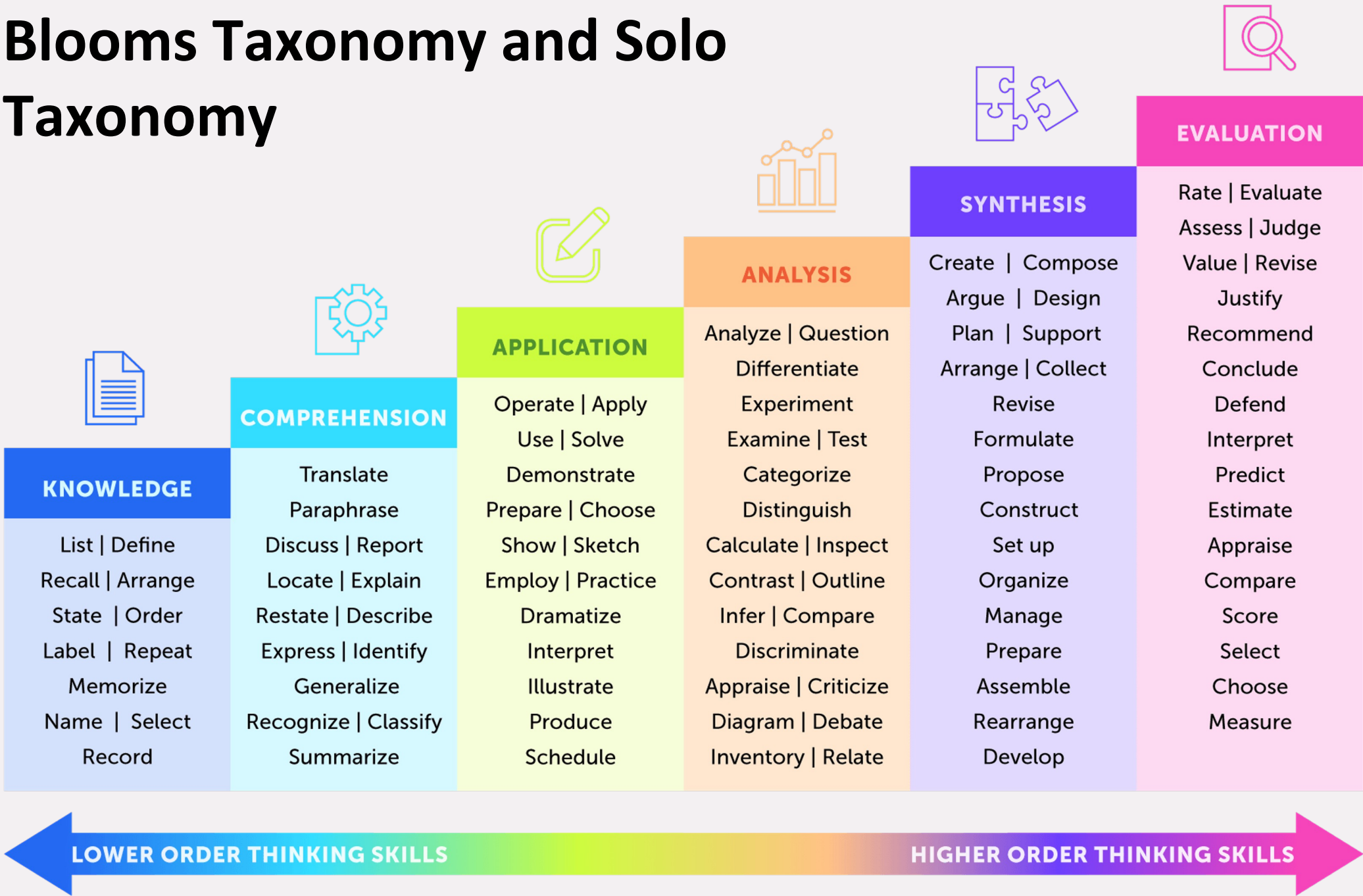
https://www.youtube.com/watch?v=4aN5TbGW5JA

https://www.youtube.com/watch?v=wh0OS4MrN3E

Rosenthal Pygmalion effect – is powerful; expect more, you get more and vice versa.

THE PYGMALION EFFECT

KHANACADEMY   #You Can Learn Anything

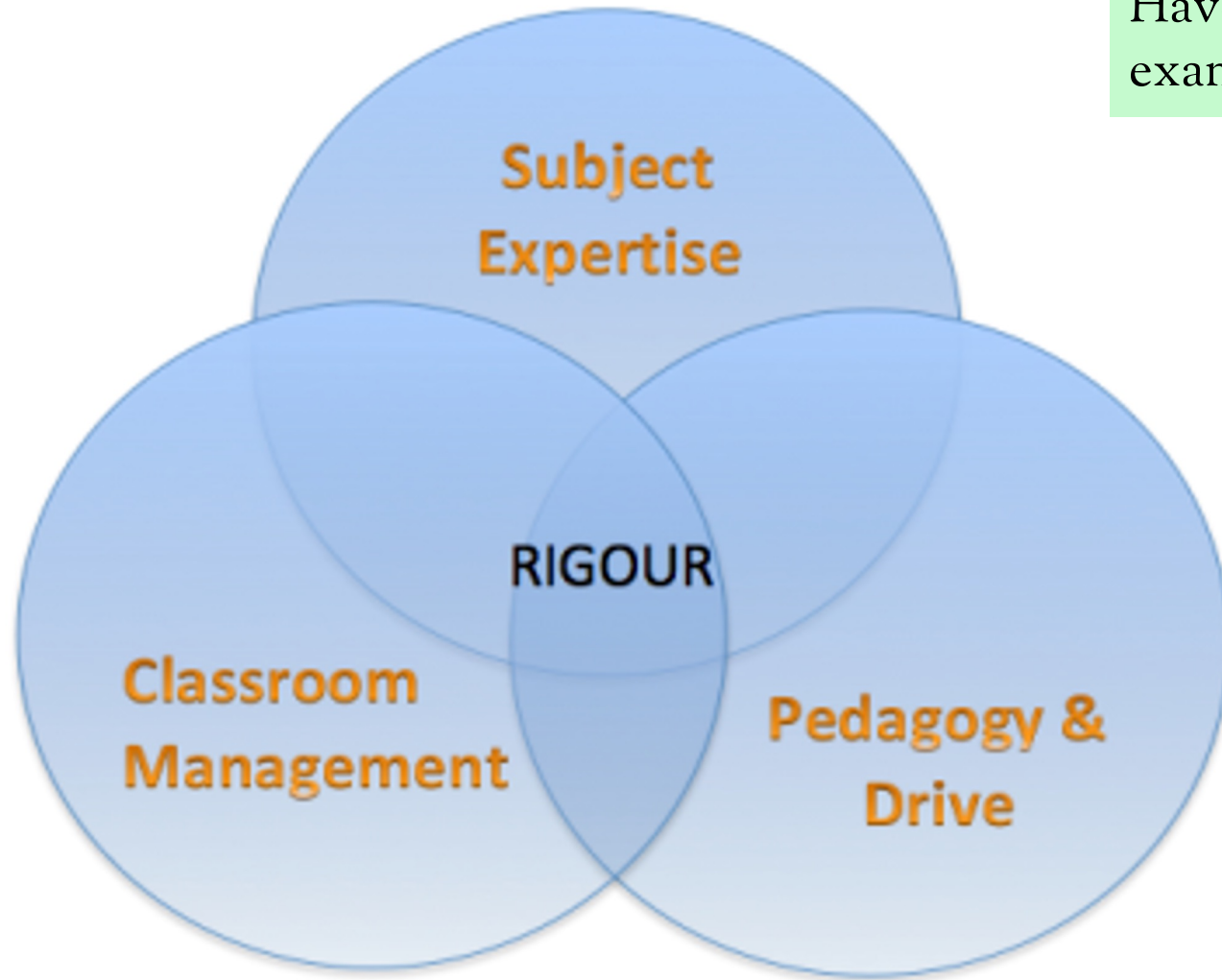The Growth Mindset
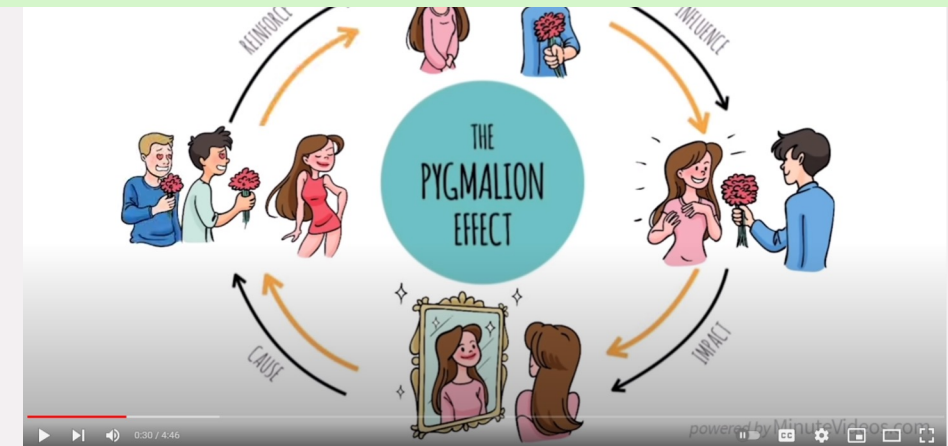
The Pygmalion Effect

Blooms Taxonomy and Solo Taxonomy

I'm not a fan of Bloom's or Solo BUT every pupil at every level needs full access to the Bloom's Taxonomy spectrum.

KNOWLEDGE
List | Define
Recall | Arrange
State | Order
Label | Repeat
Memorize
Name | Select
Record

COMPREHENSION
Translate
Paraphrase
Discuss | Report
Locate | Explain
Restate | Describe
Express | Identify
Generalize
Recognize | Classify
Summarize

APPLICATION
Operate | Apply
Use | Solve
Demonstrate
Prepare | Choose
Show | Sketch
Employ | Practice
Dramatize
Interpret
Illustrate
Produce
Schedule

ANALYSIS
Analyze | Question
Differentiate
Experiment
Examine | Test
Categorize
Distinguish
Calculate | Inspect
Contrast | Outline
Infer | Compare
Discriminate
Appraise | Criticize
Diagram | Debate
Inventory | Relate

SYNTHESIS
Create | Compose
Argue | Design
Plan | Support
Arrange | Collect
Revise
Formulate
Propose
Construct
Set up
Organize
Manage
Prepare
Assemble
Rearrange
Develop

EVALUATION
Rate | Evaluate
Assess | Judge
Value | Revise
Justify
Recommend
Conclude
Defend
Interpret
Predict
Estimate
Appraise
Compare
Score
Select
Choose
Measure

LOWER ORDER THINKING SKILLS ← → **HIGHER ORDER THINKING SKILLS**

Rigour; depth before speed

Great lessons are characterised by a high level of rigour.

How does rigour come across in your classroom/your subject.

Have a look at some examples see hand out.

- Pitch high
- Probing questions and tasks
- Wider discussion
- Examples and counter-examples
- Precise answers
- Extended answers
- Why and How...not just What?
- Accurate subject specific language
- Challenge
- Pupils challenge teacher with questions

Pitching it up:

- Direct, rigorous teaching is the Number 1 strategy for effective teaching of high attainers:
- Deep subject knowledge
- Expert questioning; great explanations
- Awareness of optimal concept sequencing
- High expectations; drive
- Strongly positive relationships

teacherhead.com

Pitching it up:

- Acceleration through depth, not speed. There's always another level of challenge
- Rigour: details, accuracy, recall, extended verbal answers, grammar, fluency, correct terminology
- Eliminate soft, dumbed-down activities: the cover page, the easy gap-fill, the word-search

teacherhead.com

Knowledge organisers

Provide pupils with the bigger picture

Allow / Enable them to run ahead

Know where everything is going

Know their learning journey

Why they are learning what they are lea[...]
why (how it all fits)

Course outlines

Reading lists

Vocabulary

Revision websites

Independent learning resources.

Flipped learning

What can students do independently either side of the lesson that makes them part of the learning, and raises expectations of them?

Traditional Classroom Learning Approach

Before the Class

The learners come to the classroom based on the topic and schedule given to them.

In the Classroom

The instructor delivers the lecture to the classroom and provides with the study material.

After the Class

The learners are given practice exercises or activities to enhance their learning.

Flipped Classroom Learning Approach

Before the Class

The learners are given study material to read and assimilate the learning content.
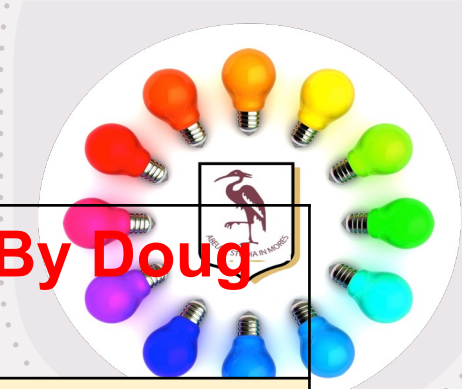
In the Classroom

The learners discuss the content with their peers and the instructor.

After the Class

The learners check and confirm their understanding by doing further learning activities.

Questioning to boost thinking

Questioning	Techniques from Teach Like a Champion By Doug Lemov
Thunk questions	What Are Thunk Questions? Thunk Questions are highly abstract questions which require students to think creatively to provide a response. There will never be a single correct answer to a Thunk Question and they are always open to individual interpretation.
No opt out	Teachers with **high expectations** don't accept "I don't know," but expect students to be engaged and "give it a shot."
Right is Right	This technique accepts **no half-answers** but asks for complete and correct answers to questions.
Stretch it / Challenge	This technique pushes a teacher to take correct answers and ask students **to add depth** or **nuance** to their answers.
Cold Calls	Like the sales technique, the teacher asks someone who is unsuspecting for an answer. It avoids "opting out," and **keeps all your students on their toes.**
Name the steps	Great coaches, like great teachers, break down the tasks into steps.
Circulate	**Keep moving!** Make room between the desks so the teacher moves unhindered
Get pupils to explain	**Ask pupils to explain** what they have learnt and engage with **deep** rather
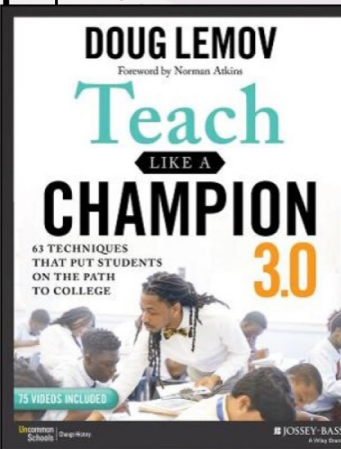
Thunk questions

- If your pet dog could talk, how would it describe you?
- What colour is Wednesday?
- Can you touch the wind?
- Is combing your hair art?
- Is your shadow part of you?
- If the answer is, 'never before in history,' what is the question?
- Can I be accused of cheating if I don't know the rules?
- Can your clothes ever be unethical?
- What's larger, your personality or your intelligence?
- What do you have in common with a pencil?
- What does success smell like?
- If you paint over a window, is it still a window?
- Are you what you eat?
- Is there more happiness or sadness in the world?
- Is a white piece of paper more blank than a black one?
- Can a baby commit a crime?
- If you read a magazine in a shop, is that stealing?
- What colour would a zebra be if it lost all of its stripes?
- Can you have a friend that you don't really like?
- If I borrow a million pound am I a millionaire?

I C E

What does ICE stand for?

Activity menus

Praise/Rewards for Independence, Curiosity and Engagement.

Teacher passion and enthusiasm.

Problem solving and mysteries

Thunks

Pose questions to teacher

Step back

Grow
I C E

Research and Flipped Learning

Meta-cognition

Open-ended questions and tasks

Group work/collaborate and co-construct

Discussion and debate

Takes risks

Awe and wonder - WAGOLL

One of the best pieces of kit to equip a classroom with is a visualiser. They can be a great asset for live modelling.

- Modelling - WAGOLL
- Live feedback and assessment
- Walking talking mocks
- Demonstrating practicals (e.g. science)
- Modelling - showing students how
- Model extended writing
- Practisable steps (step-by-step)
- Annotate and edit ideas as you think out loud
- Multiple examples
- Backward fading (partially completed)
- I do / We do / You do
- Sharing text/chapter - no need to photocopy
- Mini plenaries/plenaries
- All of the above improves metacognition.

Austin 9-3-02

6:12 / 6:30

Introducing the HUE HD Pro

Watch later   Share

PLUG & PLAY

HUE

Watch on ▶ YouTube
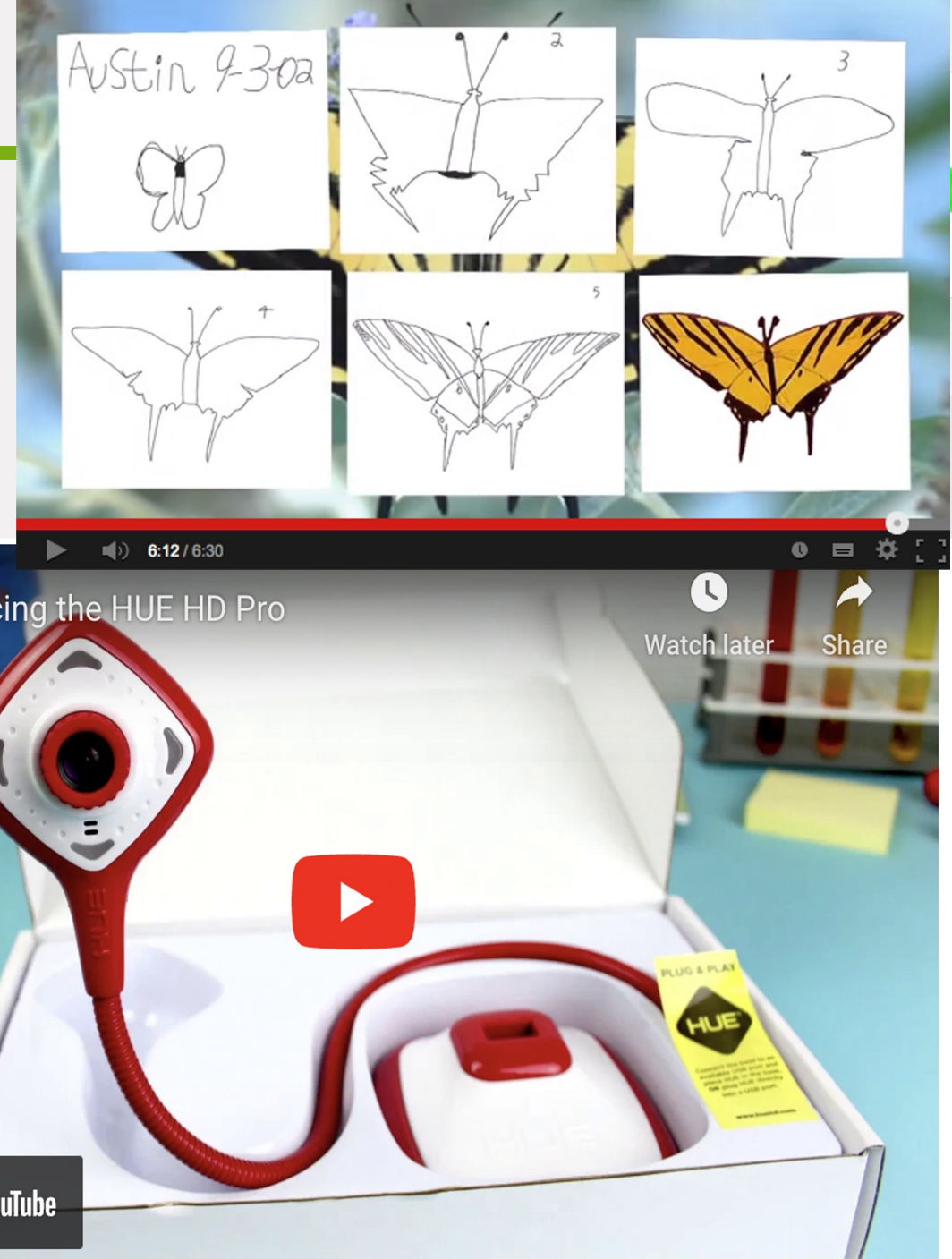
No Fear Classroom Environment

GROWTH MINDSET

Is Freedom

Persevere in the face of failures

Effort is required to build new skills

Find inspiration in others success

Embrace challenges

Accept criticism

Desire to learn

Build abilities

FIXED MINDSET

Is Limiting

Avoid challenges   Give up easily

Threatened by others success

Desire to look smart

Effort is fruitless

Ignore feedback

Fixed abilities

The Power of Not Yet

Carol Dweck

https://www.youtube.com/watch?v=ZyAde4n IIm8

10
APPROACHES TO DEVELOP STRETCH AND CHALLENGE

1 LEARNING INTENTIONS
Sharing challenging learning intentions with students so they have a clear understanding of their learning journey and how they will progress through it.

2 INDEPENDENCE AND RESILIENCE
Increasing students' ability to work for increasingly extended periods of time without support from the teacher.

3 QUESTIONING AND DISCUSSION
Developing students' questioning and participating in group discussion to improve the quality of their thinking.

4 CHOICE OF TASK
Offering a range of tasks with different levels of challenge so all students, regardless of their starting point, can accelerate their learning.

5 RESOURCES
Creating a range of resources to support students in accessing a challenging task but deciding when it is most appropriate to allow students to use them.

6 GROUPINGS
Identifying how students should be grouped together and to ensure they are appropriately challenged and can make an effective contribution.

7 FEEDBACK
Framing feedback so that students have to take responsibility for improving their own learning and closing their learning gaps.

8 ACADEMIC VOCABULARY
Increasing the language demands you place on the students by explicitly teaching them academic vocabulary that they can use verbally and in writing.

9 HOMEWORK
Creating a bank of homework challenge tasks that enable students to extend their learning outside of class time.

10 TEACHING ASSISTANTS
Collaborating with TAs to ensure all students can access the learning and support students to challenge themselves further.

Adapted from Bloomsbury CPD Library: Stretch and Challenge

What to avoid…

Can we create a list of what not to do…

@TeacherTweaks

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What to avoid…

Can we create a list of what not to do…

Philosophy, thoughts and feedback

"I think teachers should consider the curriculum and plan activities based on the capabilities of the highest attainers as a total priority – lifting the lid. Providing appropriate scaffolds for other pupils flows from this but teachers need to have the courage and confidence to challenge at the top end, relentlessly".

Task

1. How much can you or disagree with this statement?
2. What's your philosophy?
3. What are you going to do differently?

Further reading and video clips