




Bloom's revised Taxonomy

NR

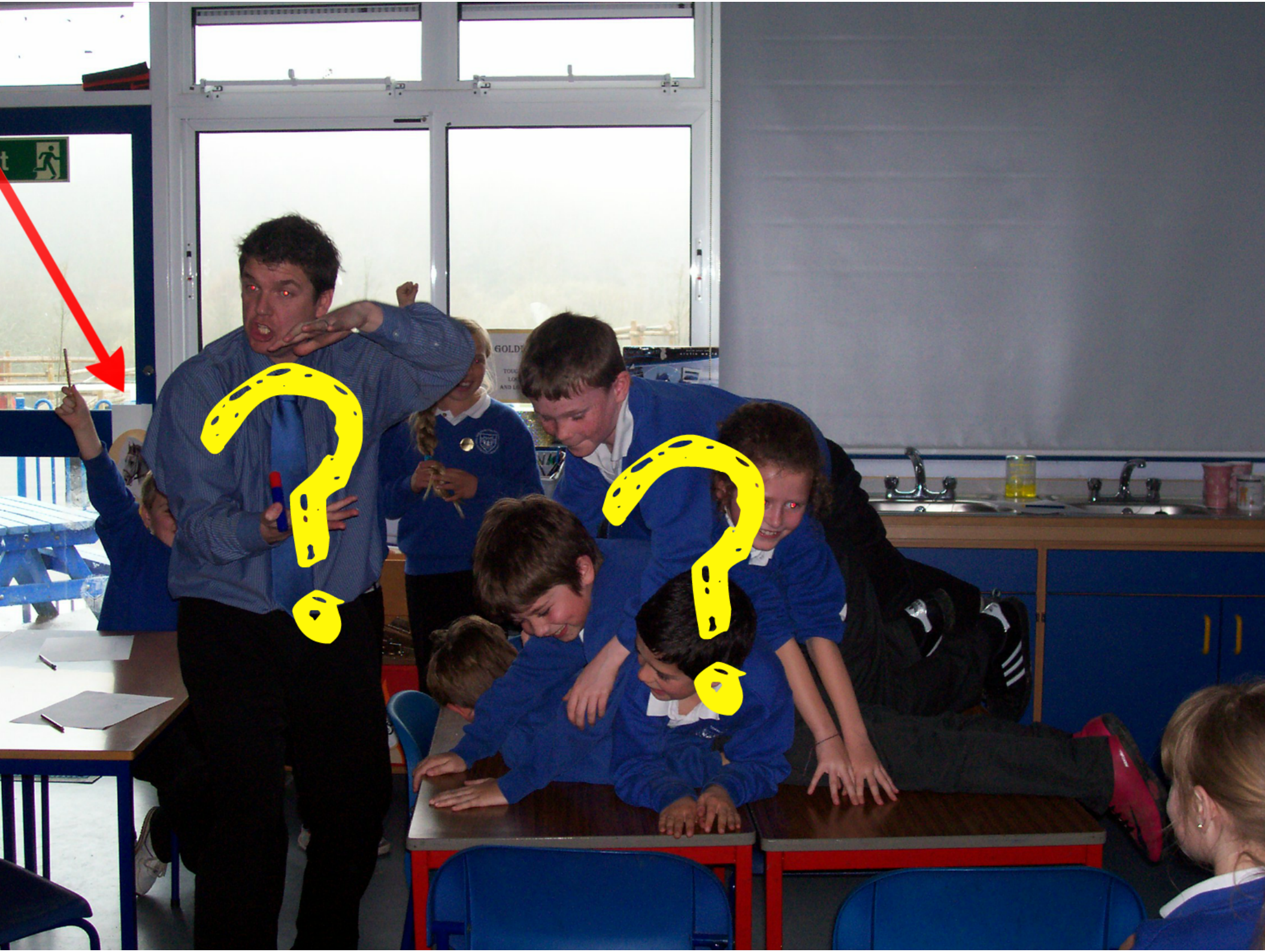

Can you...


What are your nine top strategies?
JANUARY 2012
Contact details
Six Hats
Parallel Thinking
Appropriate Technology
Questioning Techniques
Research on the Solution room for 4 key slides

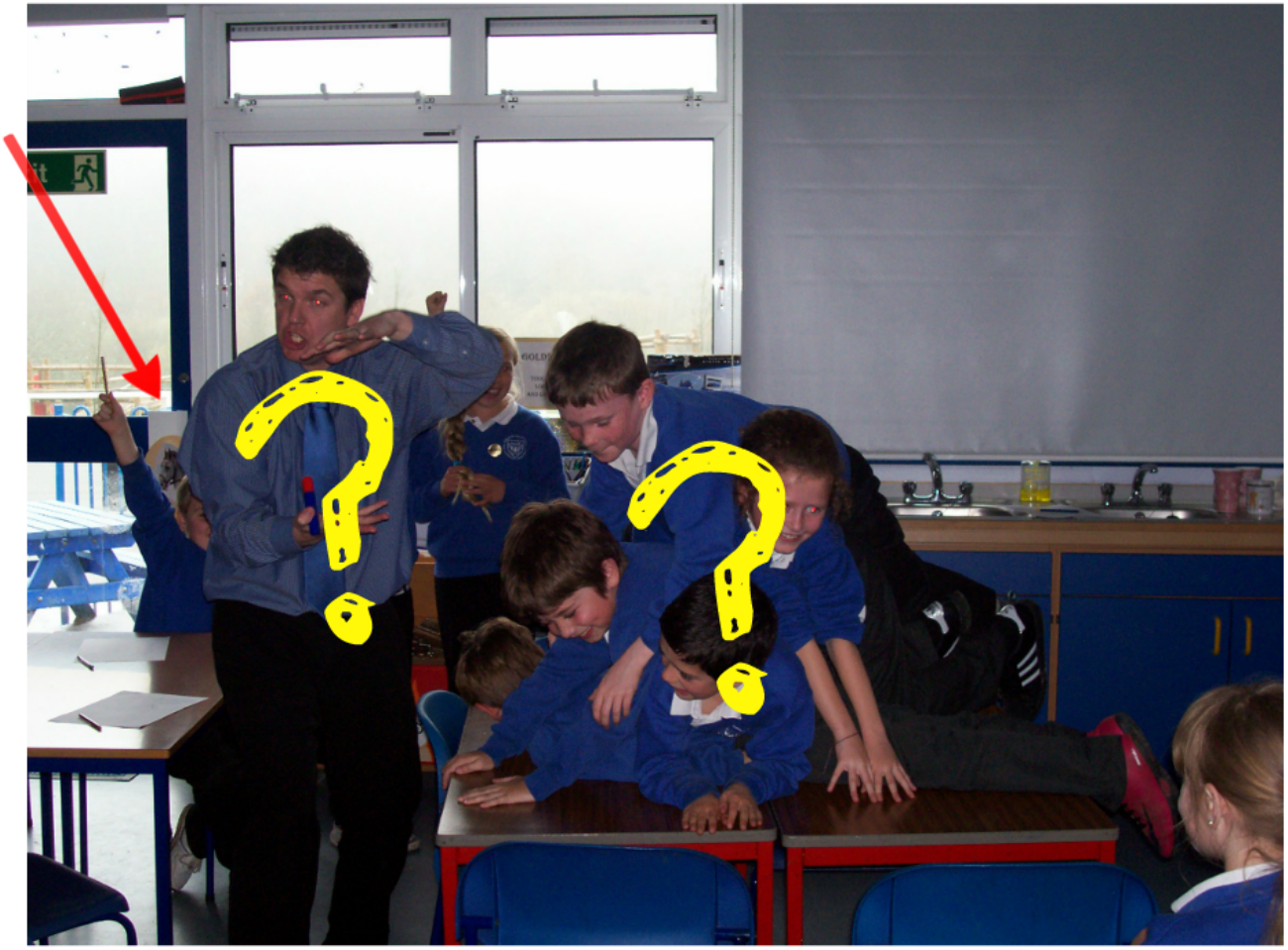
PRIFYSGOL CYMRU
Y Drindod Dewi Sant
UNIVERSITY OF WALES
Trinity Saint David

Er...um...what was the question again?

Canolfan Addysg Athrawon De-Orllewin Cymru
The South West Wales Centre of Teacher Education



Clue!

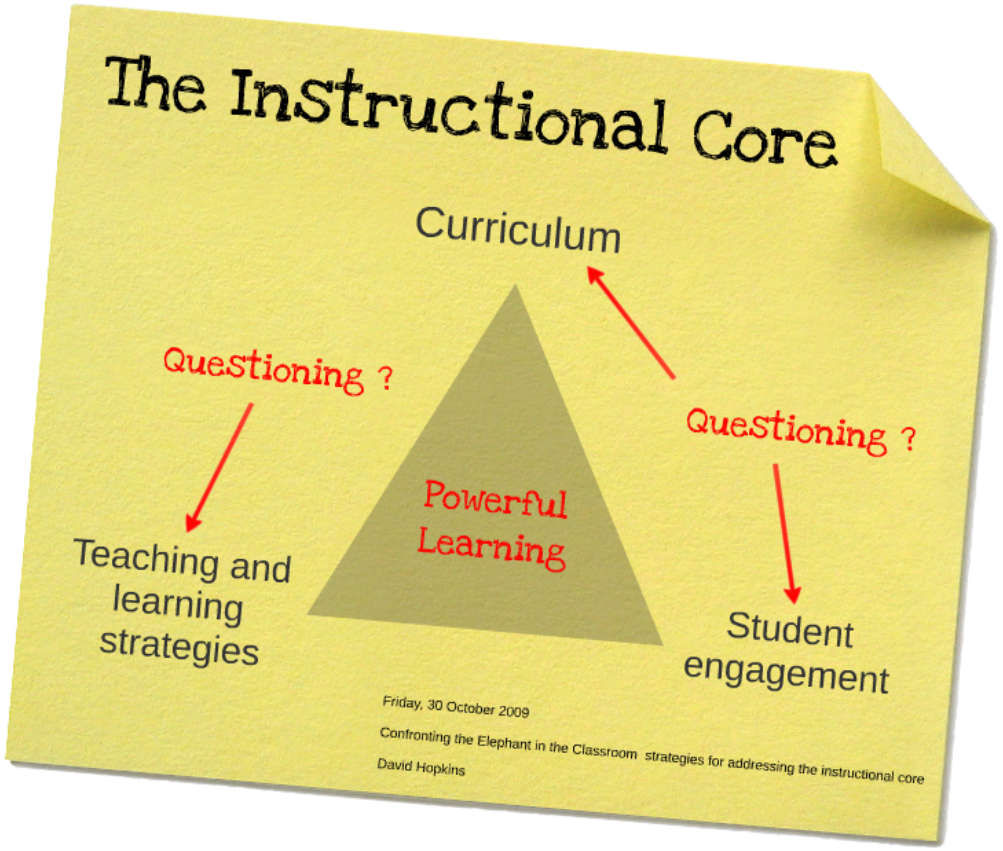




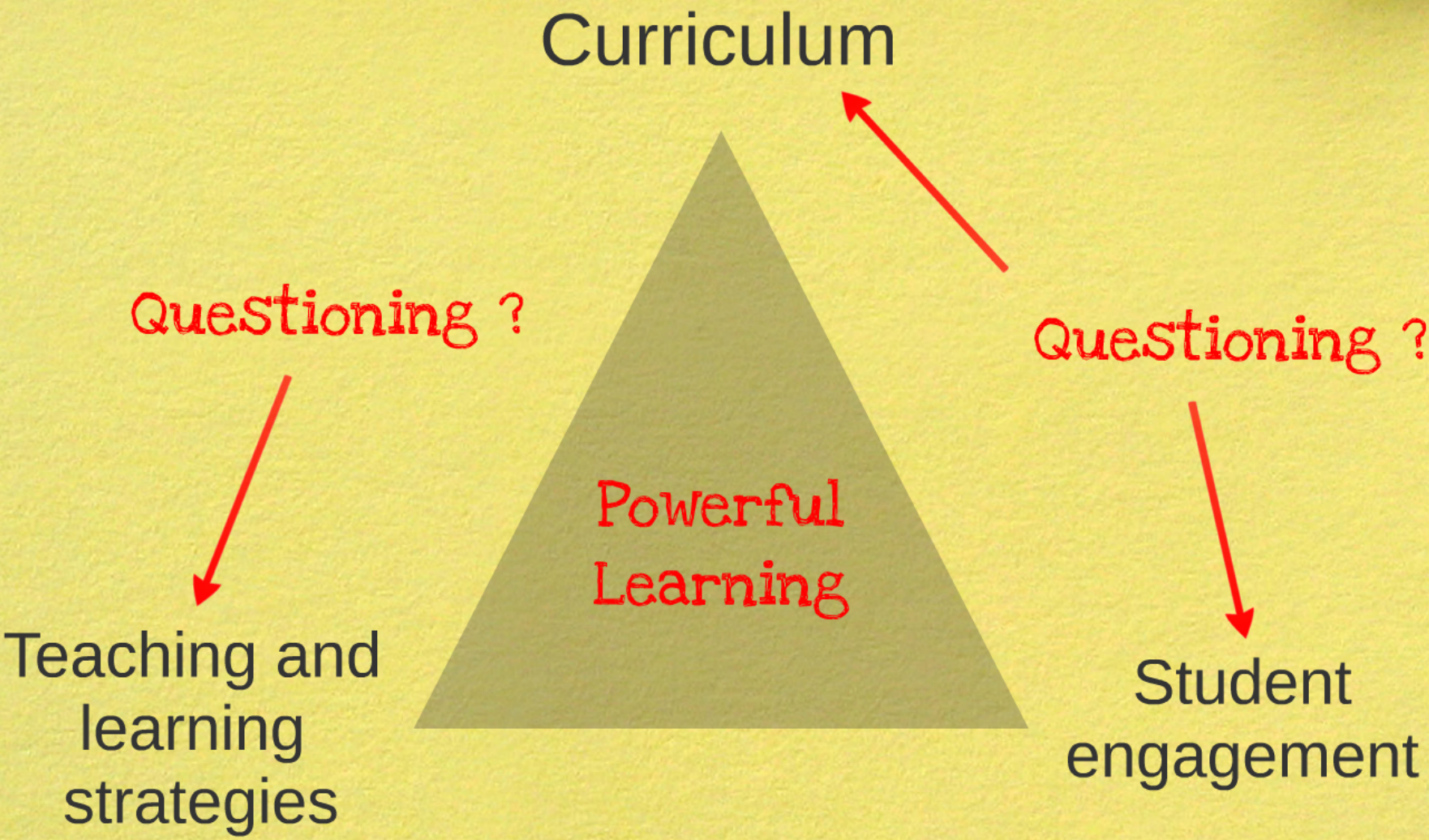
Can you spot the two main elements of this learning?



Only allowed to make nine notes!


The Instructional Core
Curriculum
Questioning ?
Questioning ?
Powerful Learning
Teaching and learning strategies
Student engagement
Friday, 30 October 2009
Confronting the Elephant in the Classroom strategies for addressing the instructional core
David Hopkins

The Instructional Core



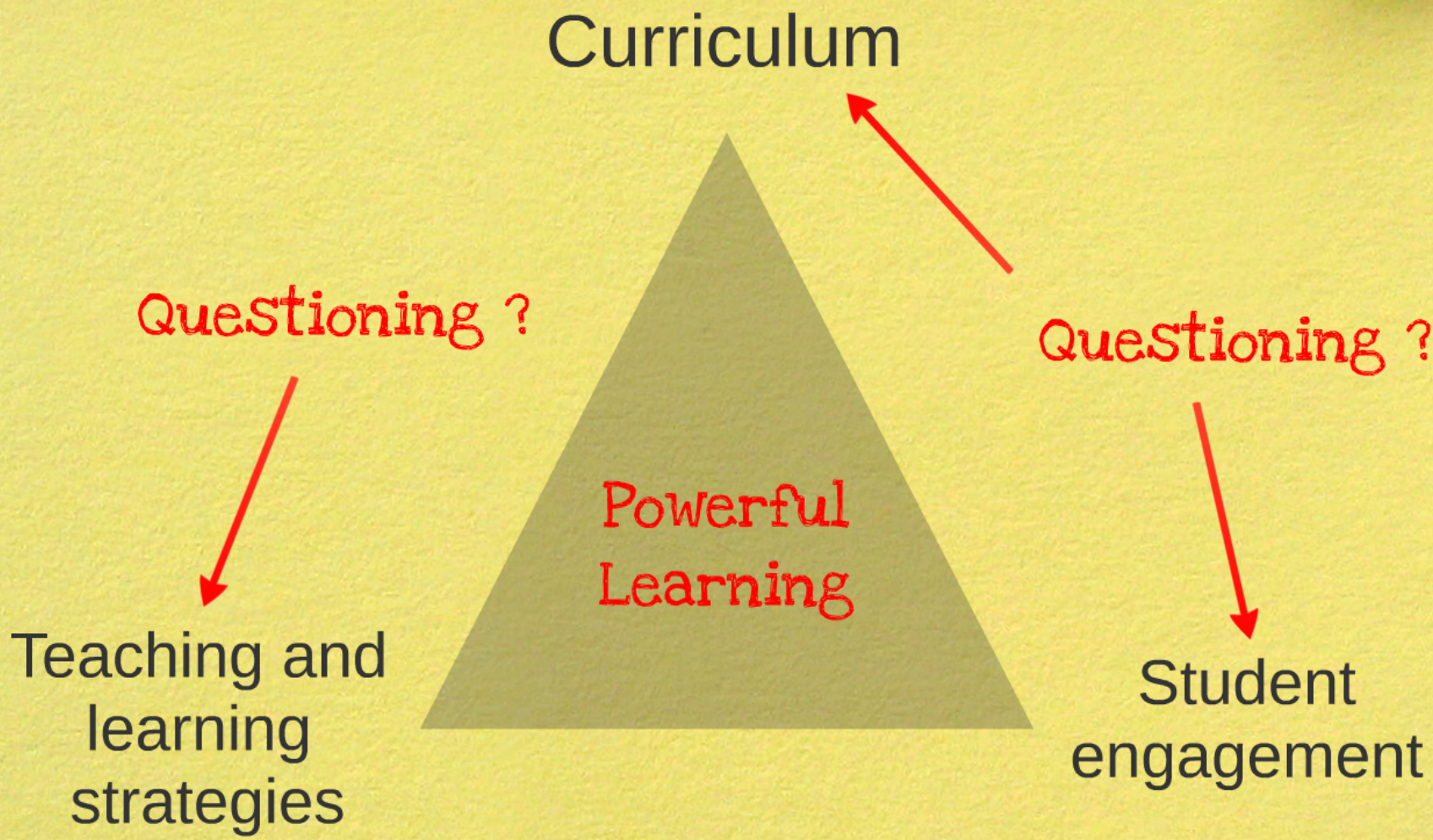
Friday, 30 October 2009

Confronting the Elephant in the Classroom strategies for addressing the instructional core

David Hopkins


Q_e_st_o_n_ng
Doing
detail!
15
29

The Instructional Core



Friday, 30 October 2009

Confronting the Elephant in the Classroom strategies for addressing the instructional core

David Hopkins

What are the benefits of the questioning approach?

Actively involve

us on understanding not just remembering

Stimulates curiosity

Lesson moved forward at learner's pace

Learner's demonstrated succ

re interesting

Learners had to think for themselves

NR

What are the benefits of the questioning approach?

Actively involved

Focus on understanding not just remembering

Stimulates curiosity

Lesson moved forward at learner's pace

Learner's demonstrated success

More interesting

Learners had to think for themselves

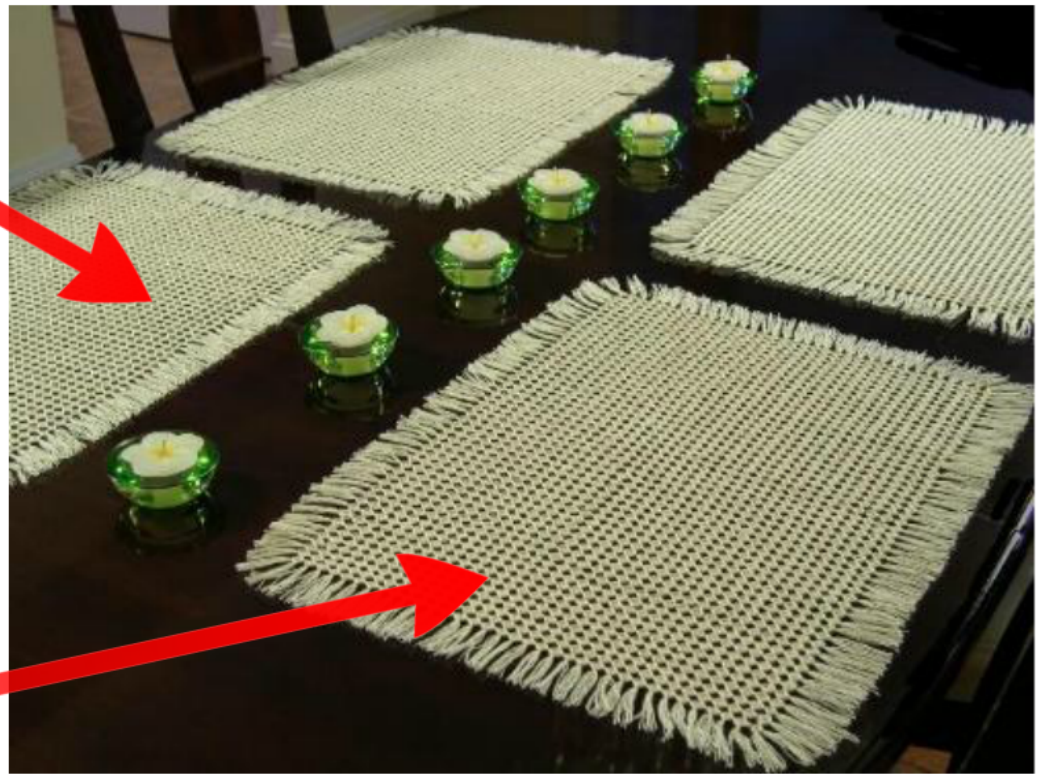
Learners had assumptions and prior knowledge challenged and corrected (Unlearning is vital)

The logic of the subject is exposed and they are encouraged to use it

Teacher and learner gaining instant feedback

TC

EXIT CARD




Before
the
learning!


Objectives
What are you looking forward to?
What don't you need?
How many brains do we have?
So what's the MRI for?
THE WORLD
Our journey today...

Objectives

- To deepen our understanding of the importance of questioning.
- To raise our awareness of specific 'doing detail' when utilising questioning techniques.
- To broaden our range of successful questioning techniques.
- To evaluate specific questioning strategies with regards to impact.

For increased engagement

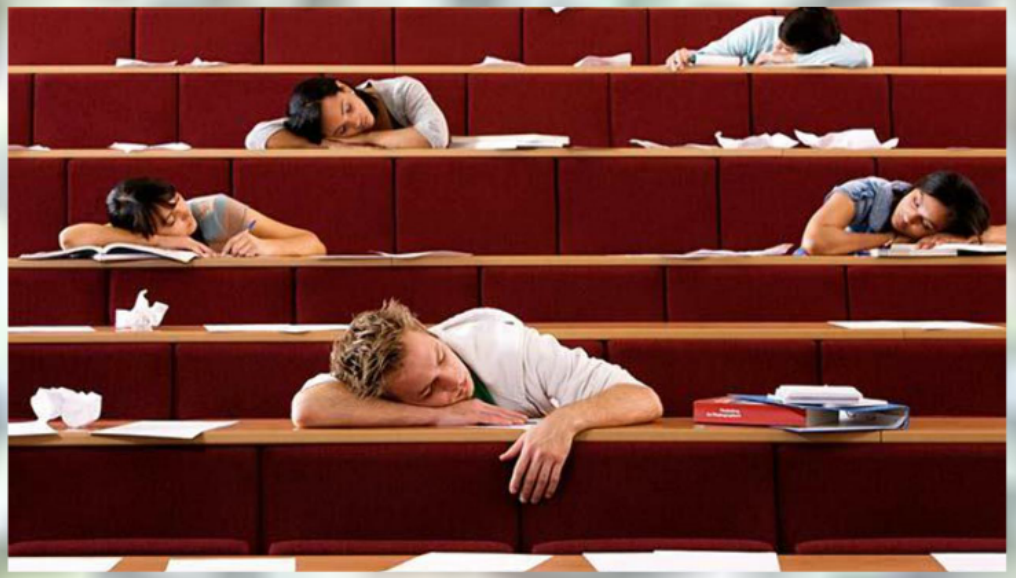
Hey...WIIFM?

Objectives

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Hey...WIIFM?





Only discussing the L.O's now?

What are you looking forward to?

What don't you need?

Objectives

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Hey...WIIFM?

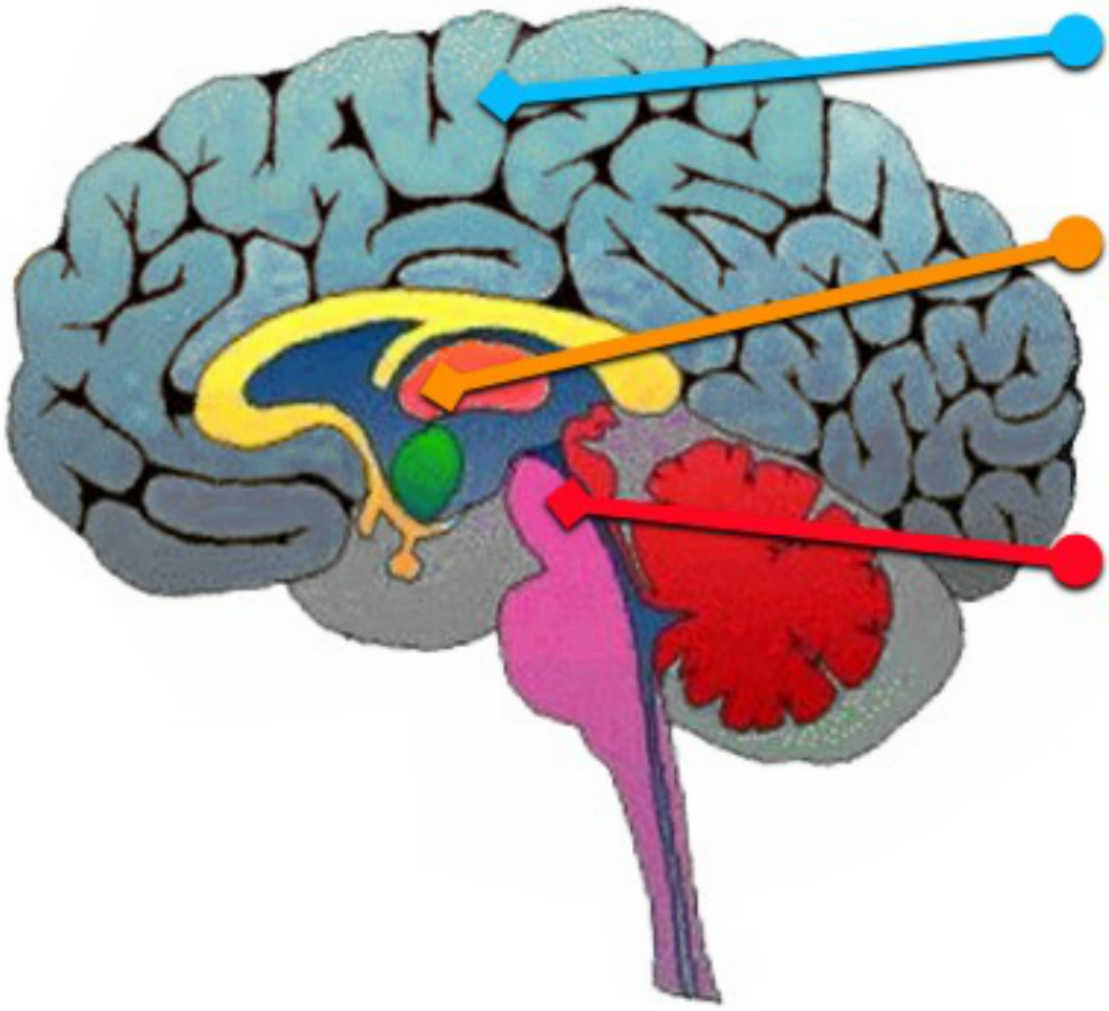
What's with the colours Coxy?

TC

What's with the colours Coxy?

Hey...WHM?

How many brains do we have?



Neocortex:
Rational or Thinking Brain

Limbic Brain:
Emotional or Feeling Brain

Reptilian Brain:
Instinctual or Dinosaur Brain

Brain is wired for survival

WIIFM = "What's in it for me?"

So what's the WIIFM Tom?



(cc) photo by jimmyharris on Flickr

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School Improvement - Effectiveness

Reduce class sizes by 30%

Increase teacher content knowledge from weak to strong

Formative assessment/ assessment for learning

Extra months of learning per year

4 (in 12 months small class achieves what larger class did in 16)

2

8

Dylan Wiliam (2009) Assessment for learning: why, what and how? London: Institute of Education

NR

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Dylan Wiliam (2009) Assessment for learning: why, what and how? London: Institute of Education

The 4 Elements of AfL

Sharing criteria with learners	Quality of questions/ quality of talk	Use and quality of feedback	Peer and self assessment
Learners know what will make their work good.	*All learners actively think up answers to good, open questions.*	*Ongoing feedback keeps learning on track.*	*Learners benefit from evaluating each other's work.*
Learners know where they are, and the next step, according to the criteria.	*Learners explain ideas to each other, reinforcing their learning and understanding.*	*Learners act on the feedback there and then. Learners take the next step.*	*Learners gradually become more independent by learning how to self-assess.*

TC

Assertive questioning



Buzz Groups



Teacher monitors
"You ok?"
"Need a hint?"
"Do you need more time?"
"everyone got an answer?"



NO ANSWERS GIVEN!

Teacher nominates one member from each group to give group answer

Thank you
Justify - Why do you think that?
Who agrees/something different?
Teacher does not evaluate!

Teacher - Point out inconsistencies

Consensus - 'class answer'

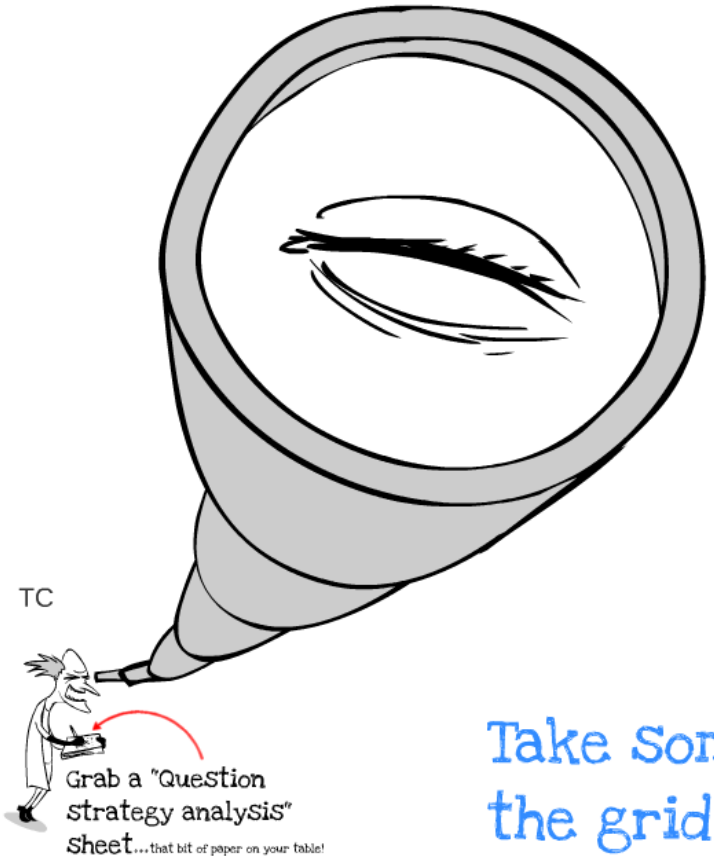
Teacher 'gives away' right answer or evaluates/ comments

TC



Grab a "Question strategy analysis" sheet...that bit of paper on your table!

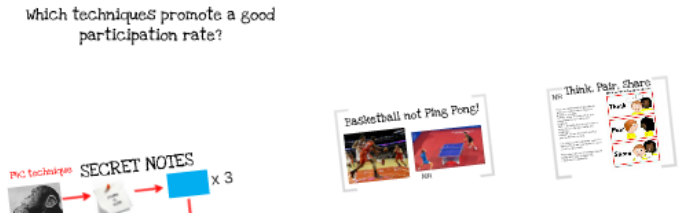
Which is the most important factor for you?



...participation rate
...Teacher's feedback
...Student's feedback
...Thinking Time
...Student comfort

Take some time to complete the grid with a friend.

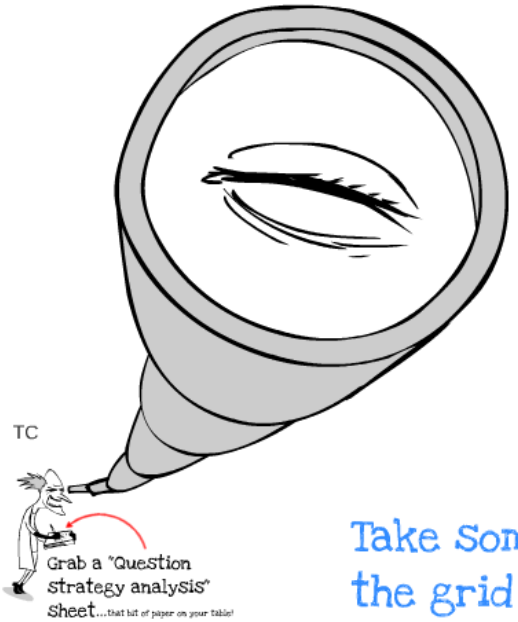
Feedback in 10 mins.





Augmenta

Which is the most important factor for you?



...participation rate
...Teacher's feedback
...Student's feedback
...Thinking Time
...Student comfort





Take some time to complete the grid with a friend.

Feedback in 10 mins.



n through the doing detail of...

Feedback

Which techniques promote a good participation rate?

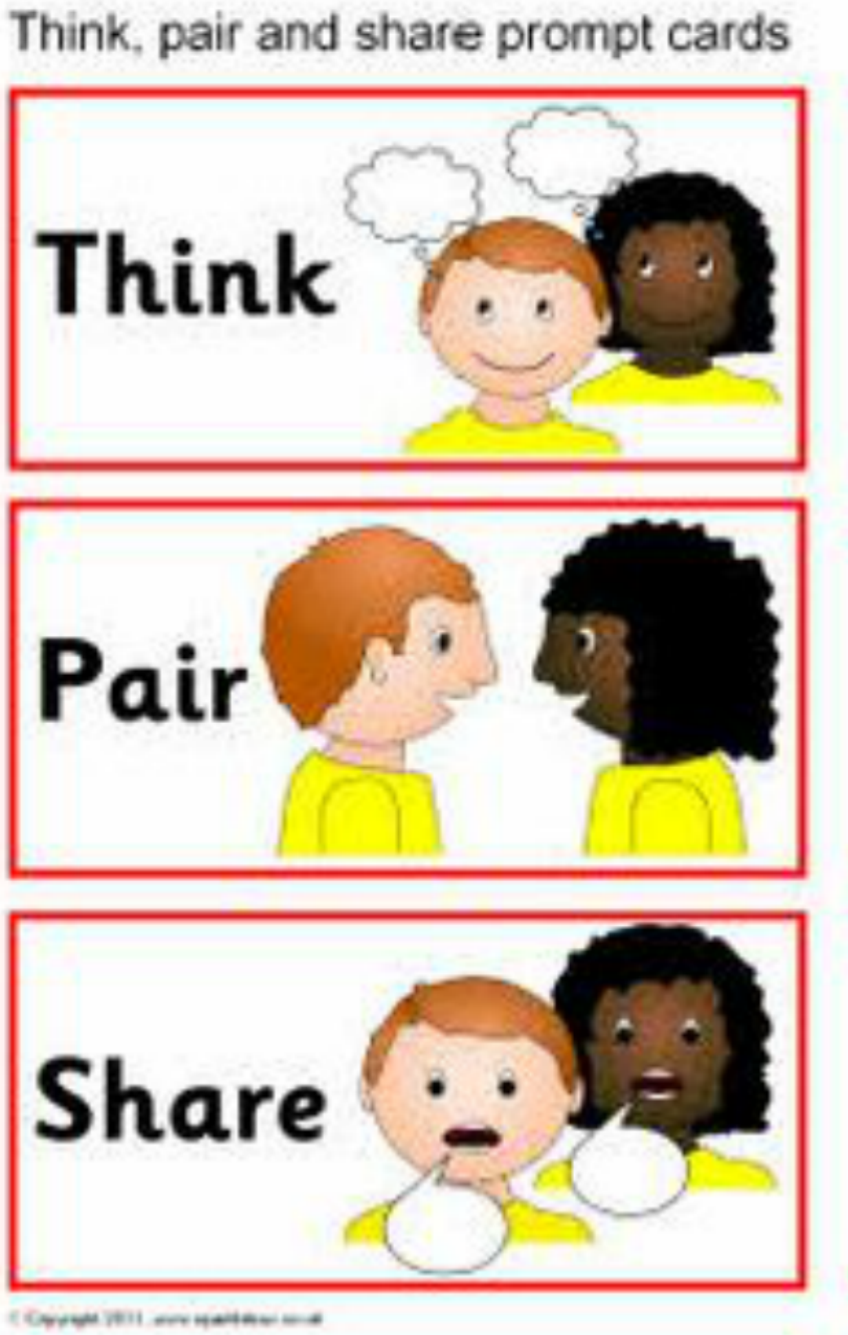
NR

Think, Pair, Share

Pose an opened ended question or problem to which there may be a variety of answers.
THINK: Allow ‘thinking time’ and direct them to think about the question.
PAIR: Students then work in pairs to share ideas, discuss, clarify and challenge.
SHARE: Share ideas with another pair or with whole class

It is important that students need to be able to share their own partner’s ideas as well as their own.

Peer interaction and thinking time are powerful factors in improving responses to questions.



Basketball not Ping Pong!





NR

P4C technique

SECRET NOTES



Individual





x 3





TC

Does anyone have a question?

GAME

CHANGER!

TC

What are your questions?

KwL Grids

NR



Maths

WALT: Plan and evaluate

What do I know?	What do I want to know?	What have I learnt?



1. Pose



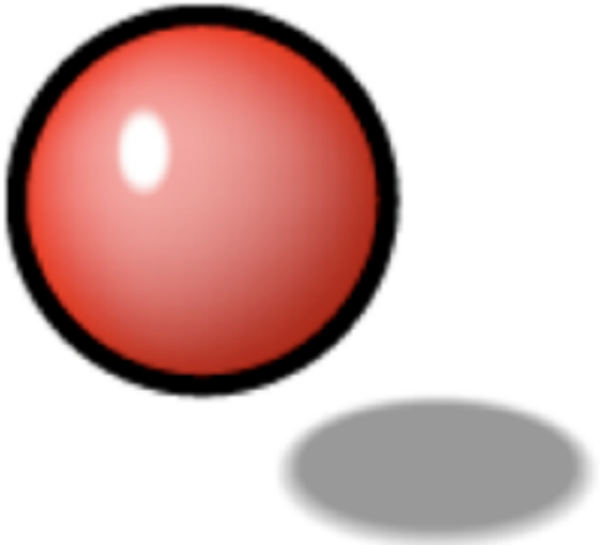
2. Pause



3. Pounce



4. Bounce



TC



Questioning is one of your most potent tools...why? NR

Let's compare two teachers developing the same teaching point.

They are teaching children in DT, how to display the cakes they have made, in the dinner hall.

Role-play activity

Knowledge gained through questioning is more likely to be...?



Transferable

NR

Questioning types

Trevor Kerry (1982)

Question Type	Example
Data recall	What is the capital of France?
Naming	What is the name of the bone in the thigh?
Observation	What colour was the litmus paper?
Control	Will you sit down John?
Pseudo-question	(Open Q but teacher expects one answer) What do you see here?
Higher-order question types	
Speculative hypothesis	What would happen if all trees were cut down?
Give reasons	Why do people in the third world chose to have so many children?
Evaluation	What evidence is there for and against the existence of an afterlife
Problem-solving	How can we drill the metal without overheating?

TC

The talk trap

Most people talk up to 100 to 200 words per minute.



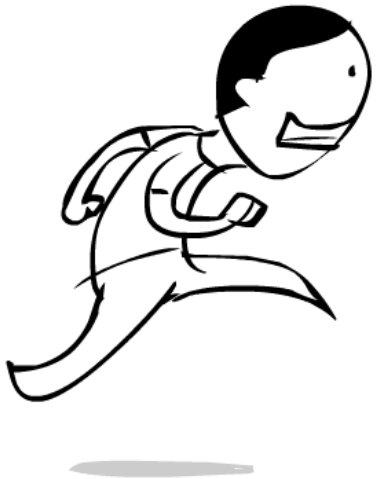
A 2 hour lecture could contain up to 24,000 words.

Effect on short/ long term memory?

5 min concentration span (Undergraduate 15-20mins).

A lecture is an event where information passes from the notes of the lecturer into the notes of the student, without passing through the brains of either. (Petty, 2009)

Run through the doing detail of...



Questioning techniques

Snowballing

TC

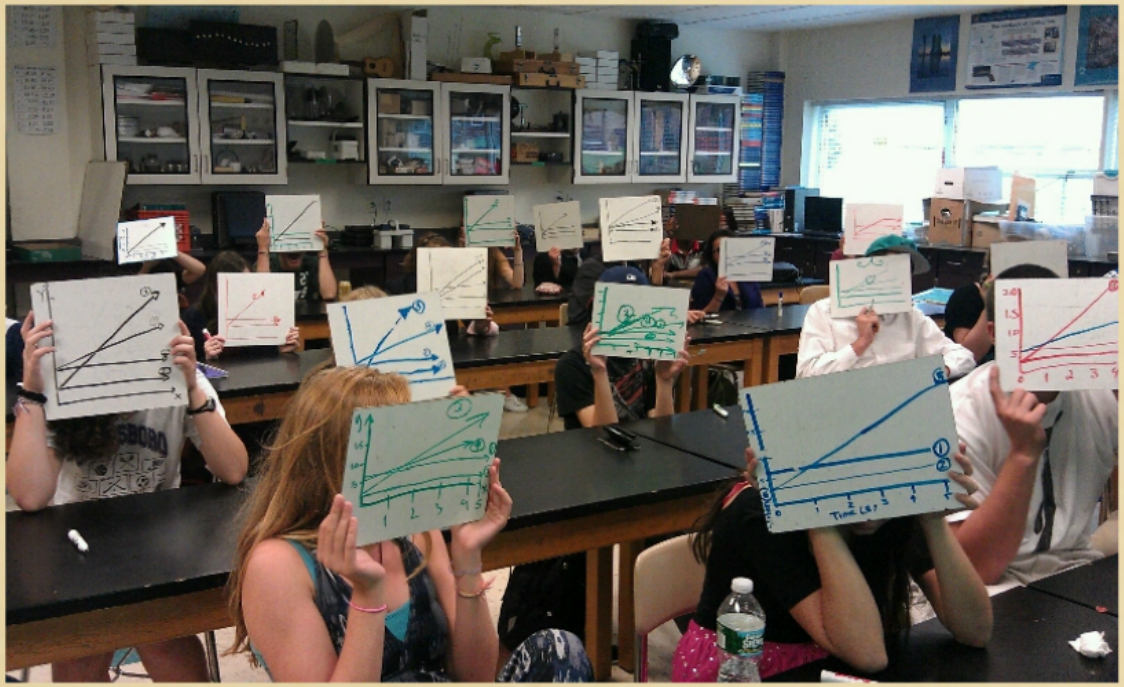




Tc

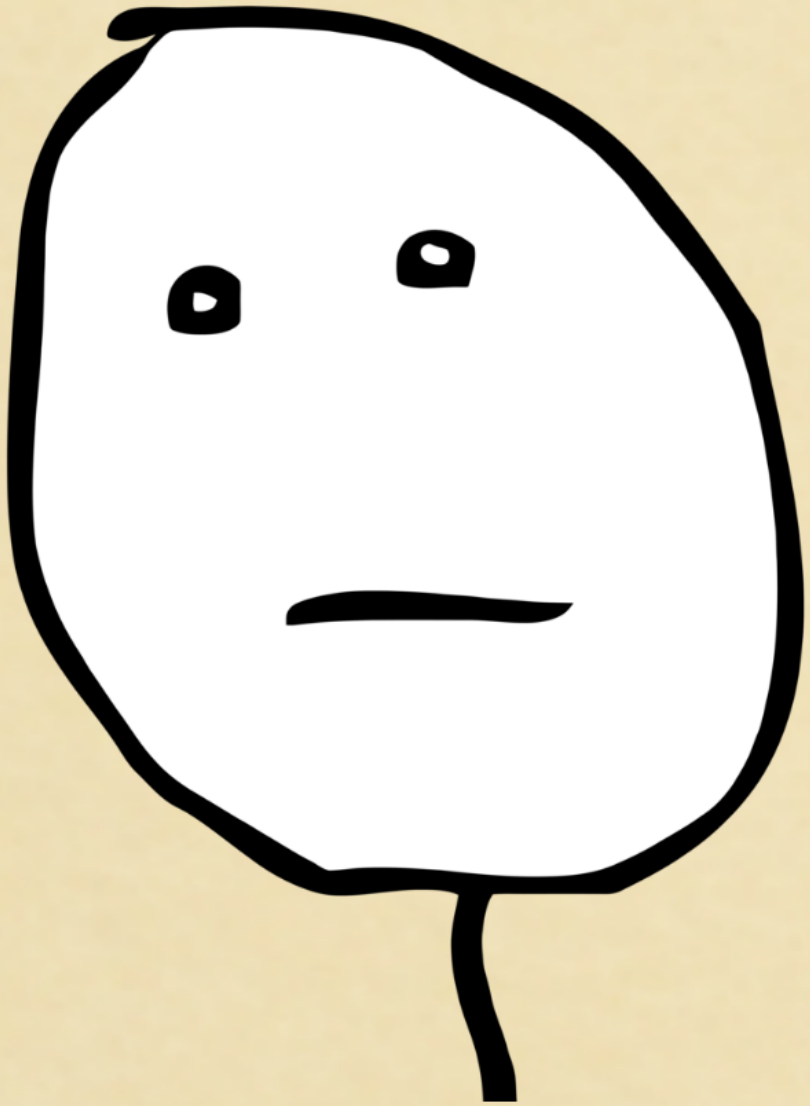
'Secret Squirrel'





Poker Face

Tc



‘Might’

NR

When questioning, insert the word ‘might’ to give students greater opportunity to think and explore possible answers.

e.g.

What is meaning of democracy?

What might the meaning of democracy be?

The first infers a single answer known by the teacher whereas the second is inherently more open.



What might the Great Depression look like today?

wait-time

(0.9 secs)



NR

Wait time allows students time to think and therefore to produce answers. Also, not everyone in the class thinks at the same speed or in the same way – waiting allows students to build their thoughts and explore what has been asked.

2 types of wait time –

Teacher speaks and then waits before taking student responses.

Student response ends and then teacher waits before responding. This gives the student space to elaborate or continue – or for another student to respond.



Don't weaken the question

X and Y

NR

Ask students why X is an example of Y

e.g.

Why is an apple an example of a fruit?

Why is a fox an example of a mammal?

Questioning in this way avoids factual recall and asks for the underlying reasoning to be made explicit.



ConSenSograms



TC

Certainty Line







TC

Butterfly Pairs

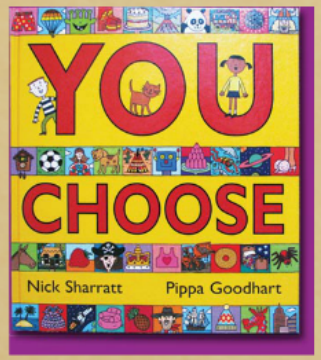


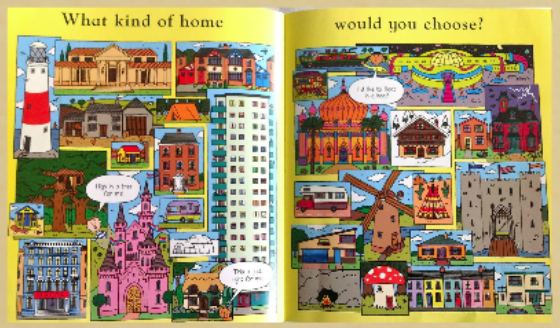
Perfect partners



NR

Eye Contact
Body language
Take turns
Listen
Time





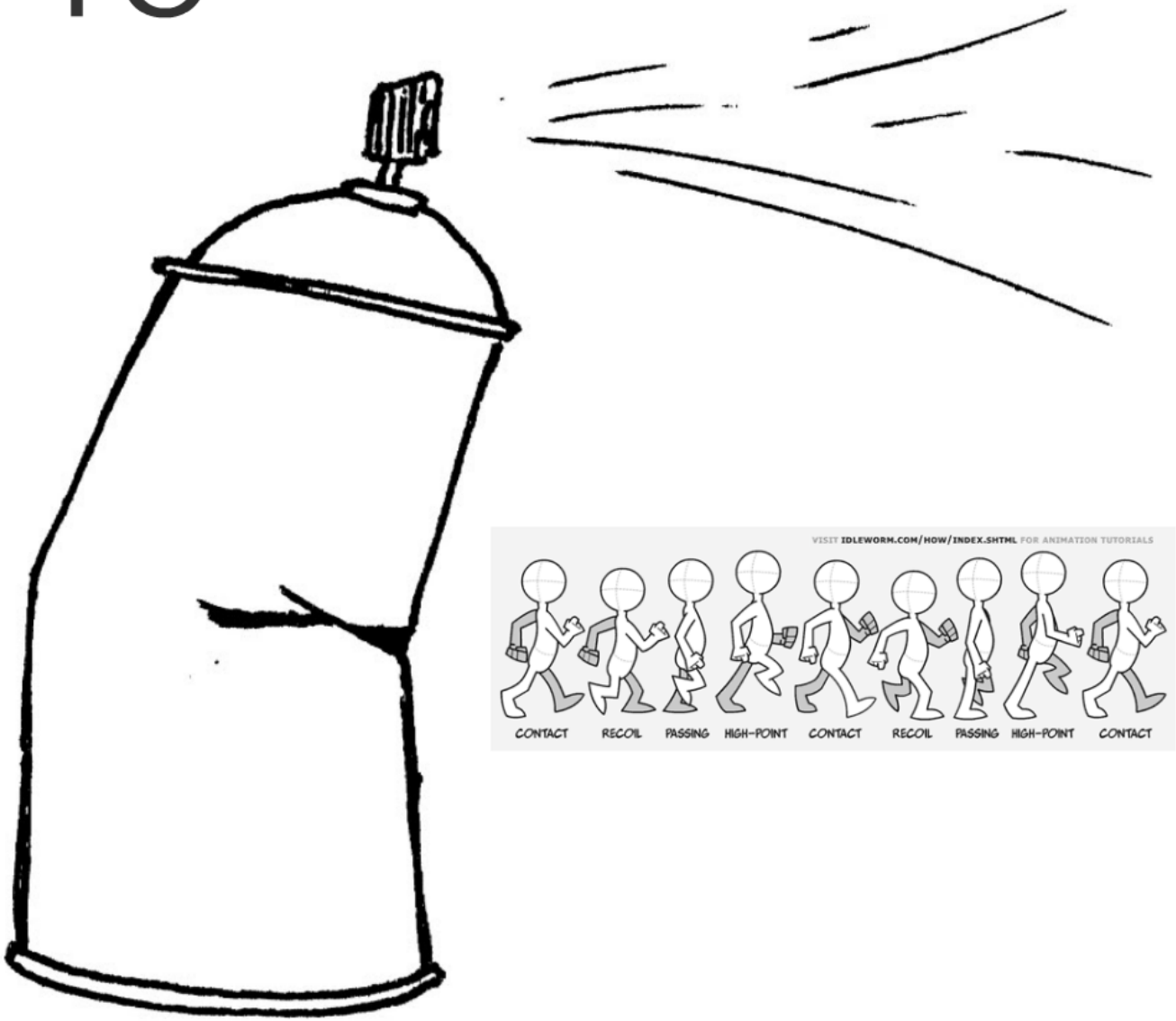
Examples of Questions

Do fish cry?

If flowers could talk, what would they say?

Why is rain wet?

TC



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CONTACT
RECOIL
PASSING
HIGH-POINT
CONTACT
RECOIL
PASSING
HIGH-POINT
CONTACT

TC

Heart beat response

Numbered heads together

NR



Divide students into groups of 4, students each given a number 1-4
Teacher poses a question or problem.
Each individual in the group has to contribute an idea, answer or solution.
The group then have to agree on which idea will be their group answer.
Teacher calls out a number randomly 1-4.
Students with that number raise their hands, and when called on, the student answers for his or her team.

TC



Think of a single teaching point...teach it in 1 min using questions only!

Common mistakes made by inexperienced teachers.



Vocabulary too complex.

Not enough ‘wait time’.

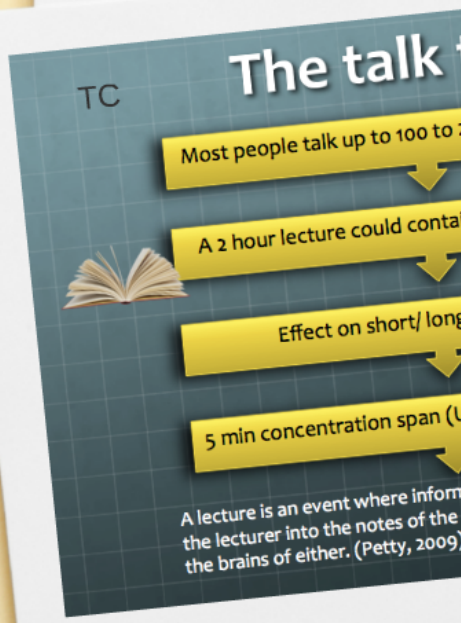
Not enough reinforcement (praise).

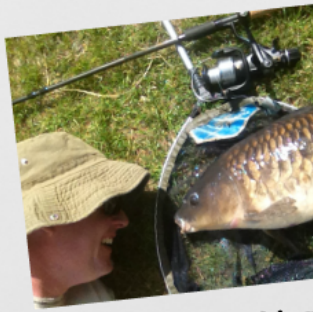
Often unable to prompt a student into producing a useful response.

Trevor Kerry (1982)



NR





Think of a single teaching
it in 1 min using quest



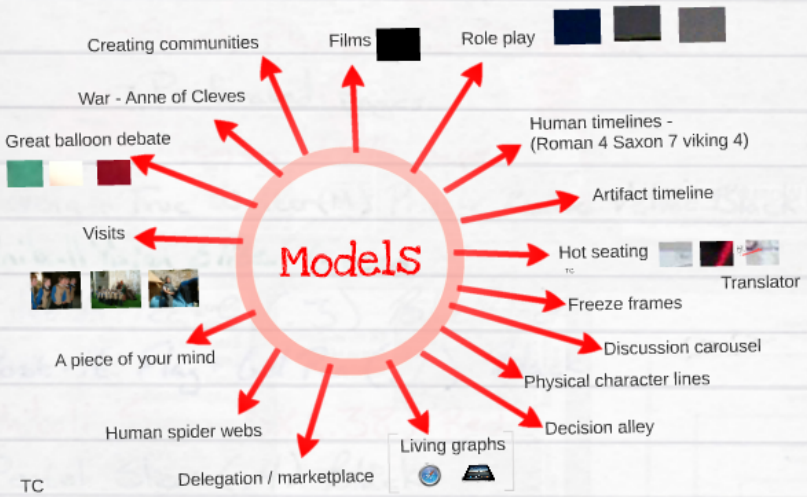
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Active learning strategies





- Intellectual processing of info
- Abstract reasoning
- Search for novelty

- Long term memory

Urine!

- Rituals
- Fight or flight
- Territory
- Mating

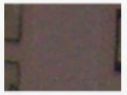
Models

Creating communities

Films

Role play





War - Anne of Cleves

Great balloon debate





Human timelines -
(Roman 4 Saxon 7 viking 4)

Artifact timeline

Visits

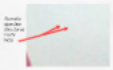




Hot seating

TC





Translator

Freeze frames

Discussion carousel

Physical character lines

Decision alley

A piece of your mind

Human spider webs

Delegation / marketplace

Living graphs




TC

Artifact timeline

Hot seating





Socratic question structures really help



TC

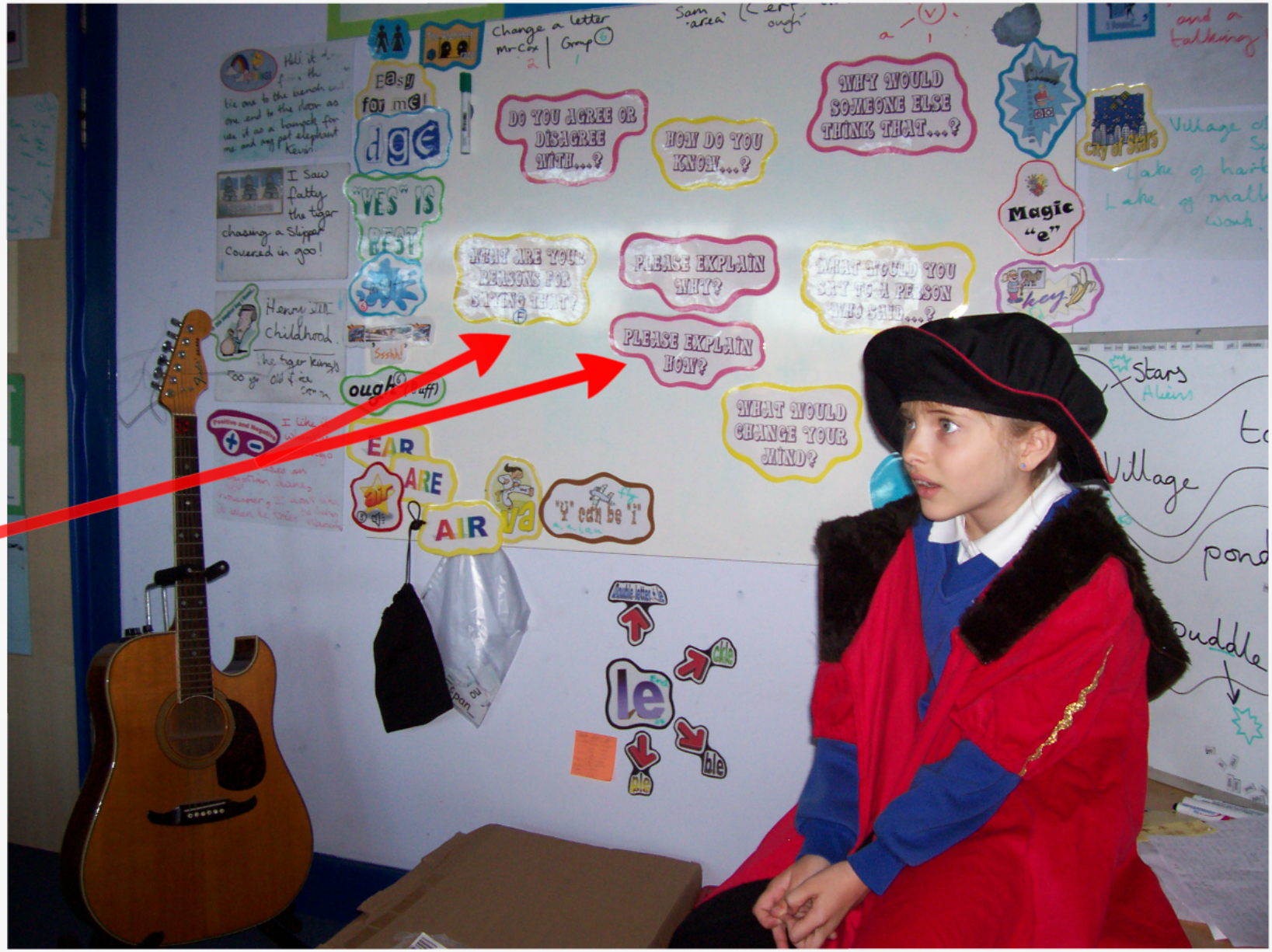
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Freeze frames

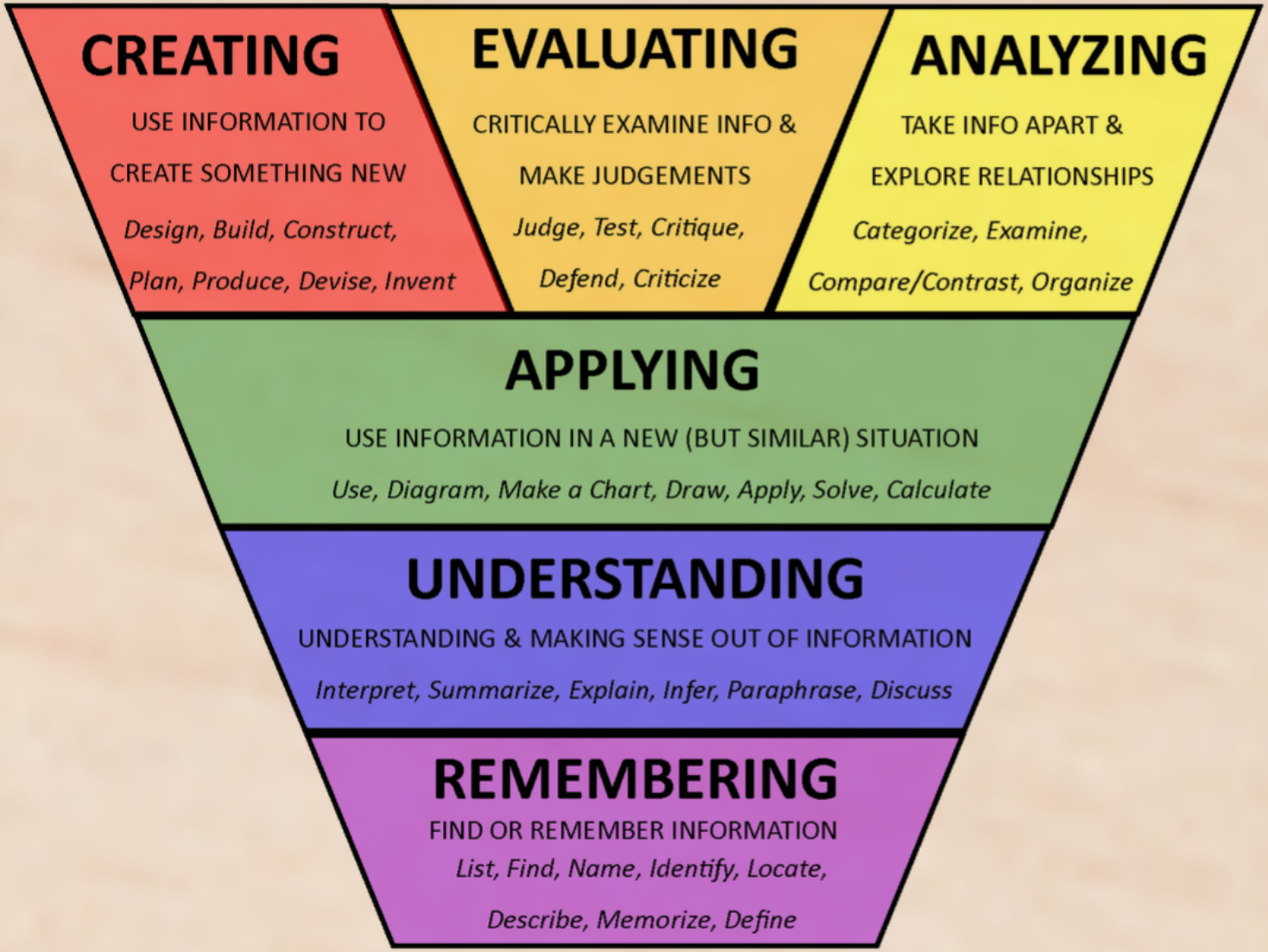

bed
Verb
Adverb
Change a letter
Easy for me!
dge
"YES" IS BEST
DO YOU AGREE OR DISAGREE WITH...?
HOW DO YOU KNOW...?
WHY WOULD SOMEONE ELSE THINK THAT...?
Magic "e"
WHAT ARE YOUR REASONS FOR SAYING THAT?
PLEASE EXPLAIN WHY?
WHAT WOULD YOU SAY TO A PERSON WHO SAID...?
PLEASE EXPLAIN HOW?
WHAT WOULD CHANGE YOUR MIND?
ough
EAR
ARE
AIR
'Y' can be 'I'
le
ARBITER
City
Lake
Pigs


Magic "e"
City
Stars
Aliens
Village
Moons
Lake
pigs

Socratic question structures really help




What happened after...?
Remembering
Where else would you see...?
Applying
Why would
How many ways can you...?
Creating
Understanding
What would be an example of...?
Understanding
THINKING DICE
6
Higher Order Thinking
made simple



Bloom's revised Taxonomy

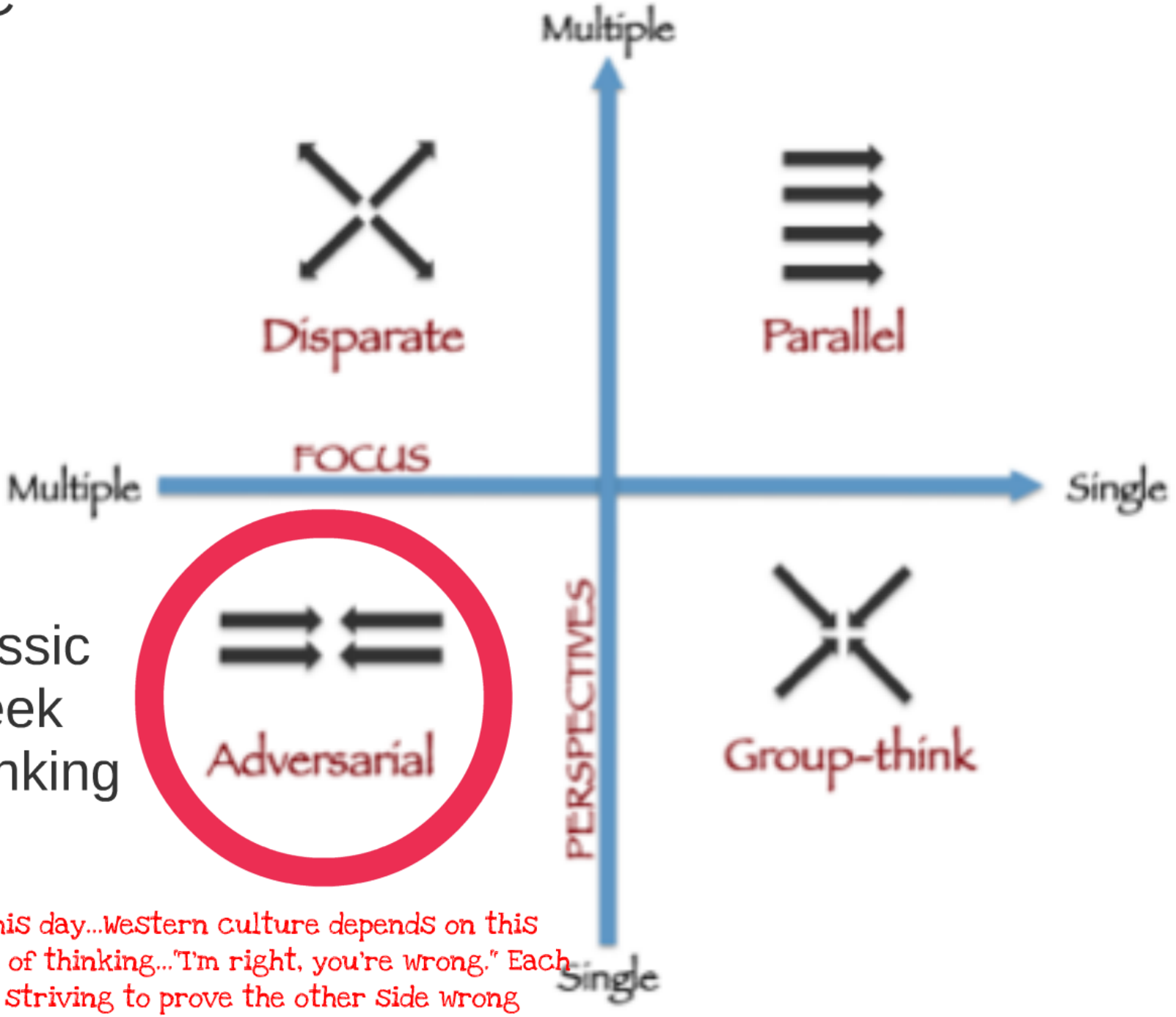
NR



Should marriage be
a five year
renewable contract?

TC

TC



Classic Greek Thinking

To this day...Western culture depends on this type of thinking..."I'm right, you're wrong." Each side striving to prove the other side wrong with logic and reason.

Great balloon debate

TC



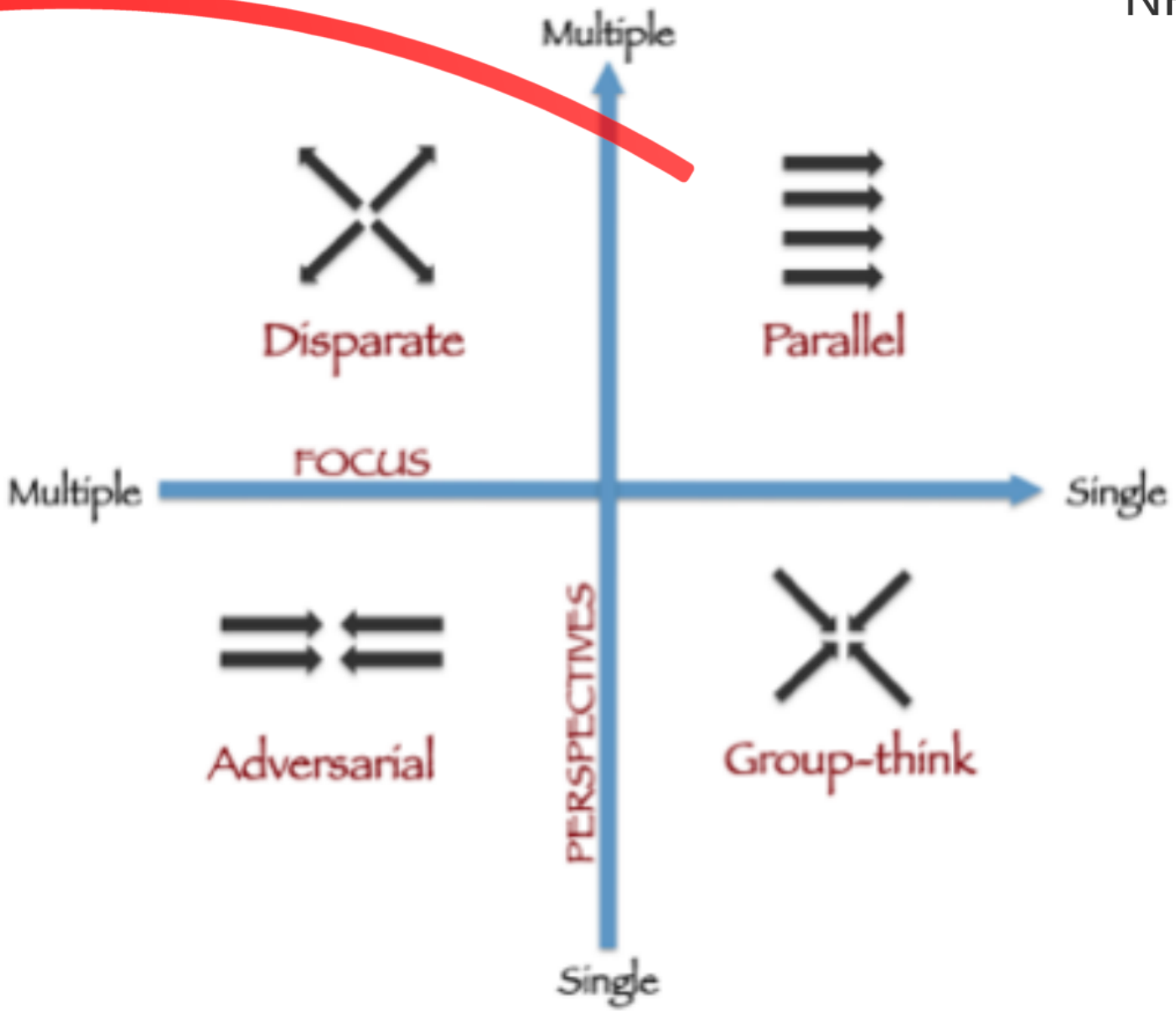





Forces
3. Always Reflect
5. Be Resilient

Parallel Thinking

NR



Six Thinking Hats®
Quick Summary

PROCESS



Blue Hat - Process

Thinking about thinking.
What thinking is needed?
Organizing the thinking.
Planning for action.

FACTS



White Hat - Facts

Information and data.
Neutral and objective.
What do I know?
What do I need to find out?
How will I get the information I need?

FEELINGS



Red Hat - Feelings

Intuition, hunches, gut instinct.
My feelings right now.
Feelings can change.
No reasons are given.

CREATIVITY



Green Hat - Creativity

Ideas, alternatives, possibilities.
Provocations - "PO".
Solutions to black hat problems.

BENEFITS



Yellow Hat - Benefits

Positives, plus points.
Logical reasons are given.
Why an idea is useful.

CAUTIONS



Black Hat - Cautions

Difficulties, weaknesses, dangers.
Logical reasons are given.
Spotting the risks.

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NR

Six



1 Highest

2 3

4 5 6

7 8

9 Lowest

what are your nine top strategies?

NR

References and further reading

Groisser, P. (1964) How to use the fine art of questioning, Englewood cliffs, NJ: Teachers Practical Press.

Kerry, T. (1982) Effective questioning, London: Macmillan.

Marzano, R.J. et al. (2001) Classroom instruction that works: Research-Based strategies for Increasing Student Achievement, Alexandria, VA: ASCD.

Petty, G. (2006) Evidence Based Teaching, Cheltenham: Nelson Thornes.

Contact details









Step four?

Augmented Rea

PRIFYSGOL CYMRU
Y Drindod Dewi Sant
UNIVERSITY OF WALES
Trinity Saint David

Er...um...what was the question again?

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