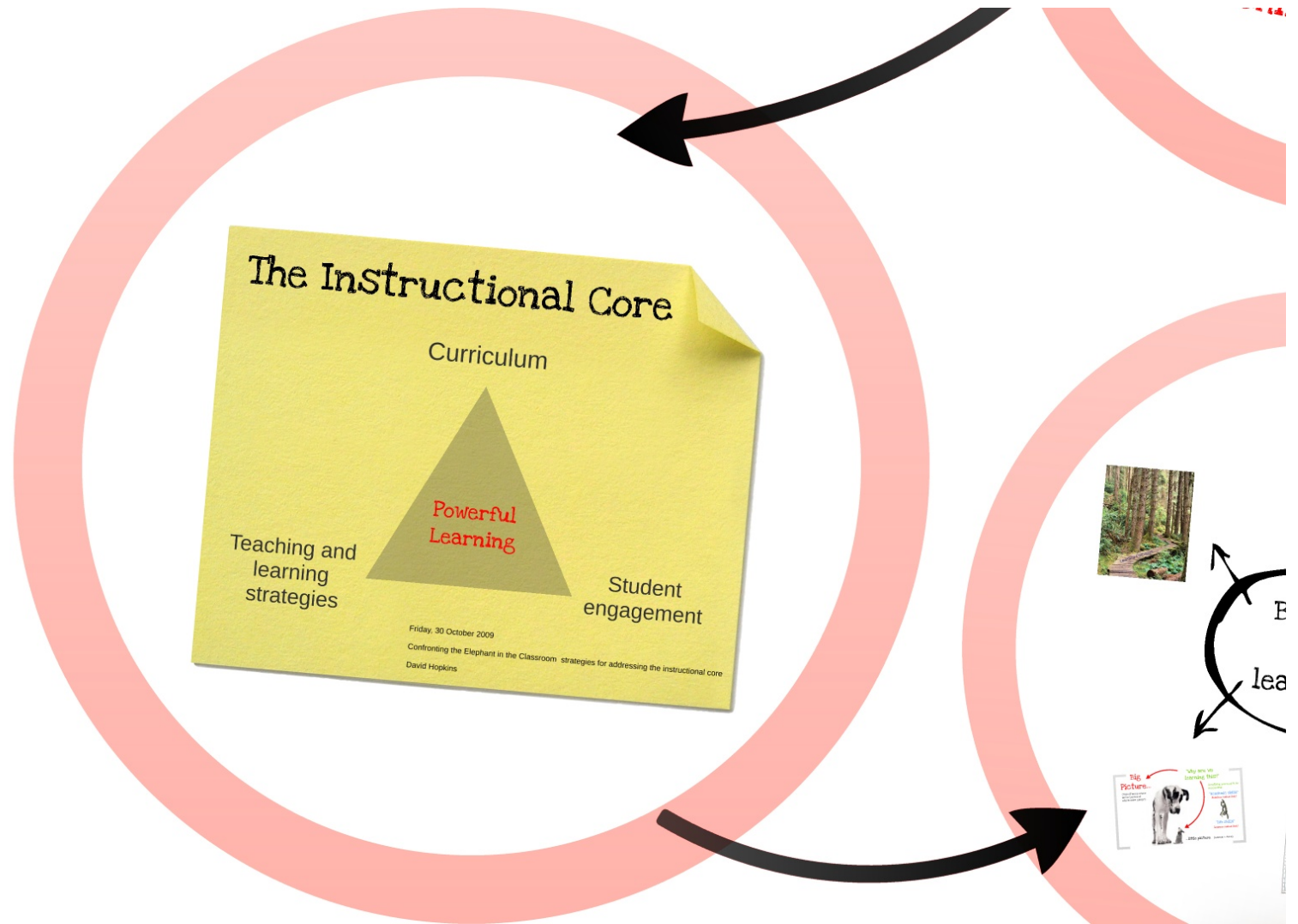




Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Institute of Education
Addysg i Gymru Education for Wales

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



The Instructional Core

Curriculum

Powerful
Learning

Teaching and
learning
strategies

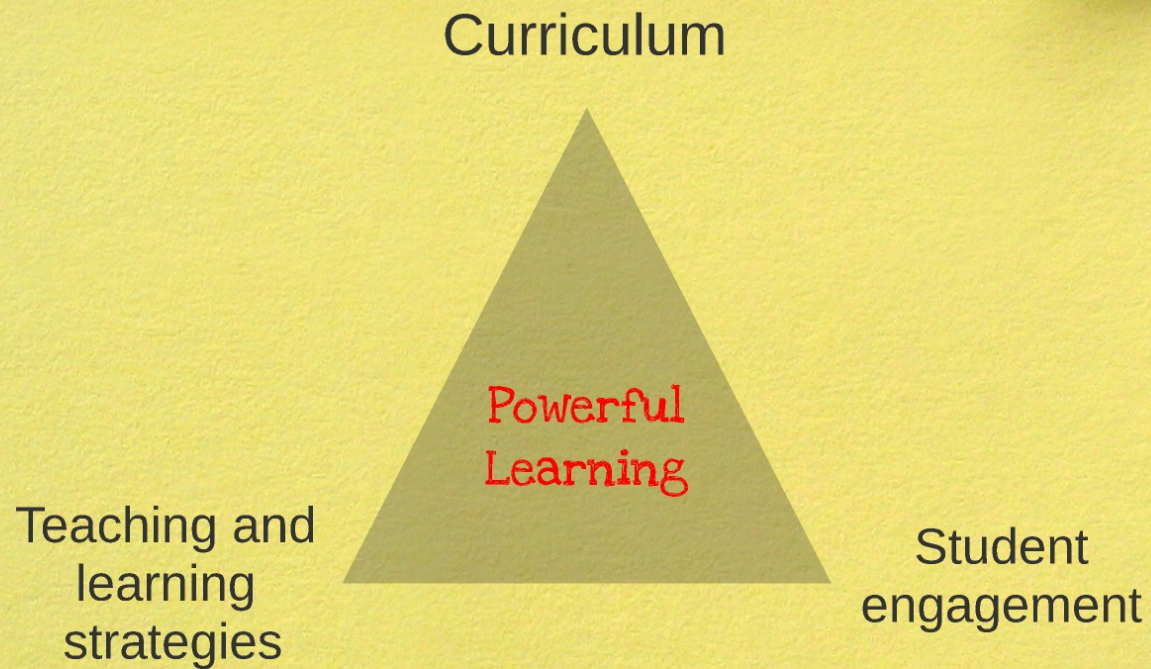
Student
engagement

Friday, 30 October 2009

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

David Hopkins

The InStructional Core

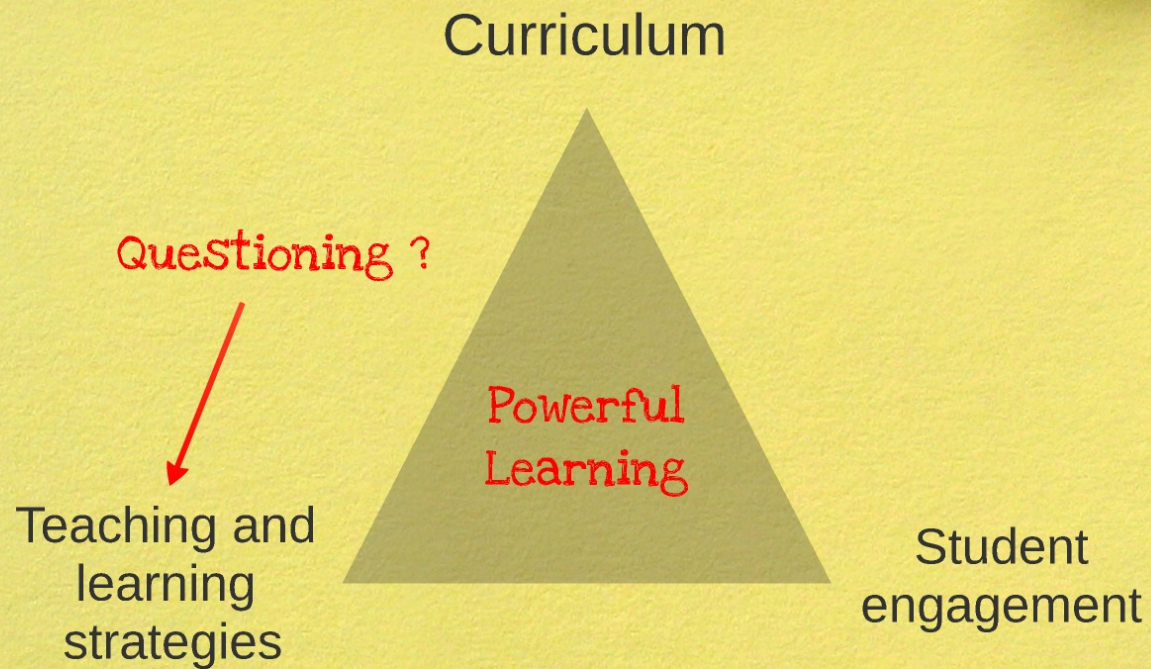


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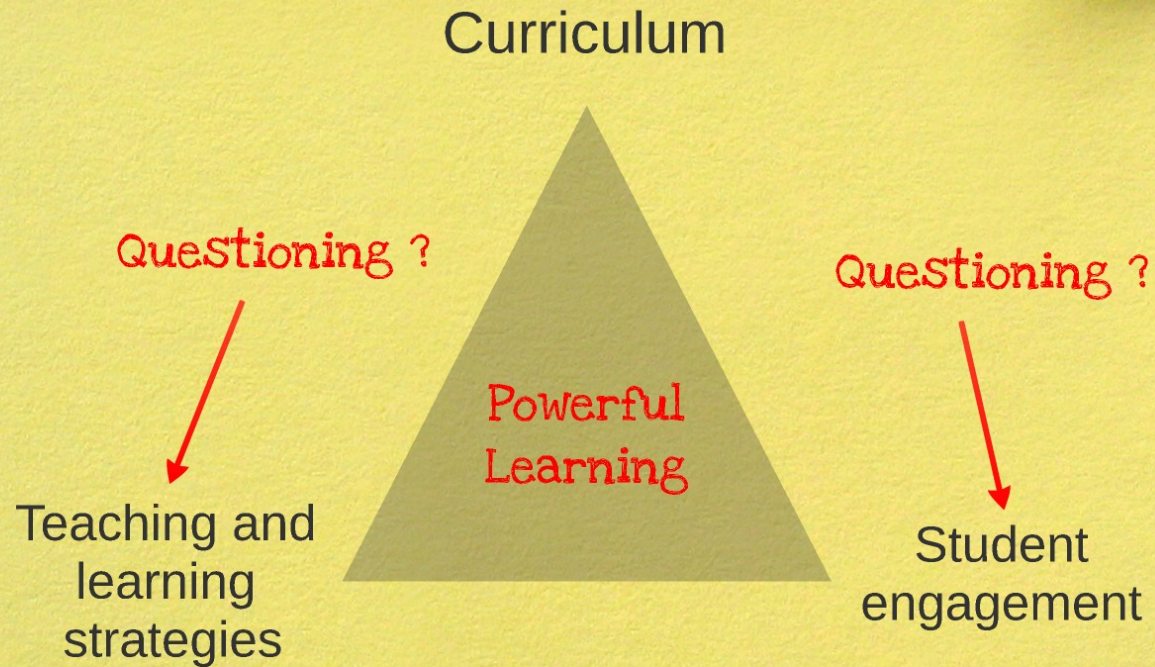


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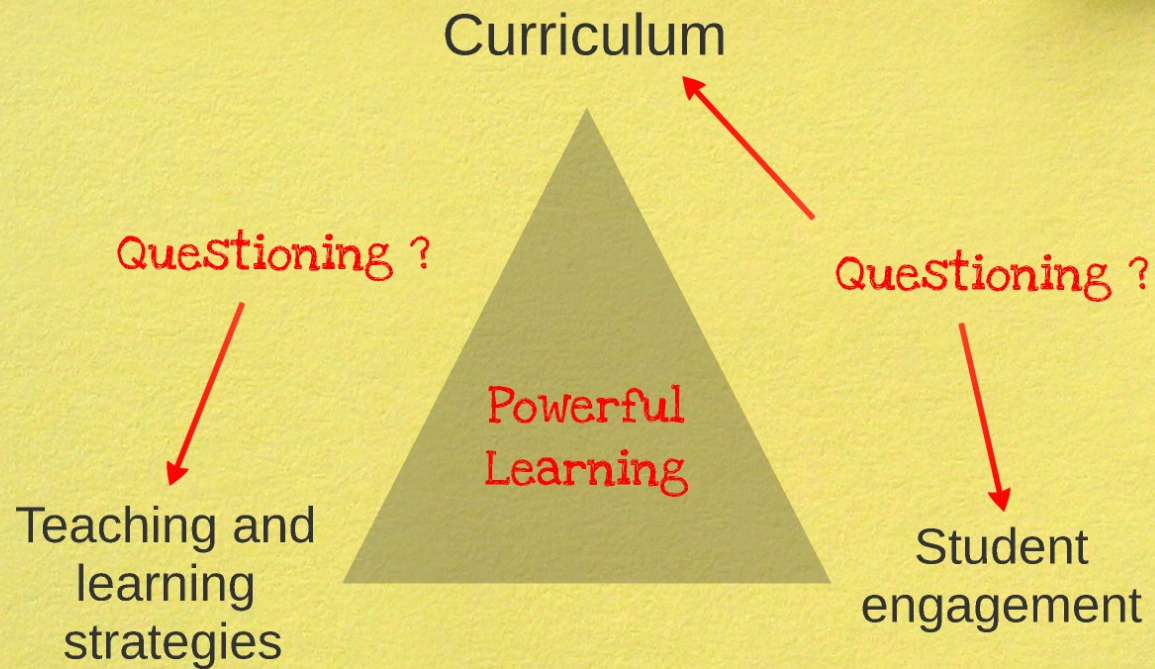


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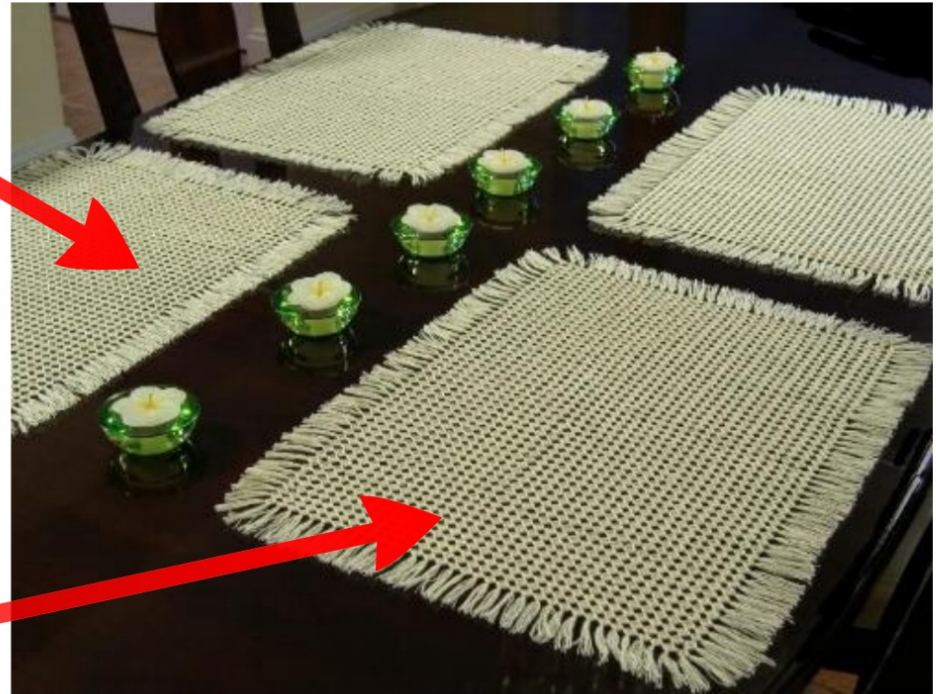
The 4 Elements of AfL



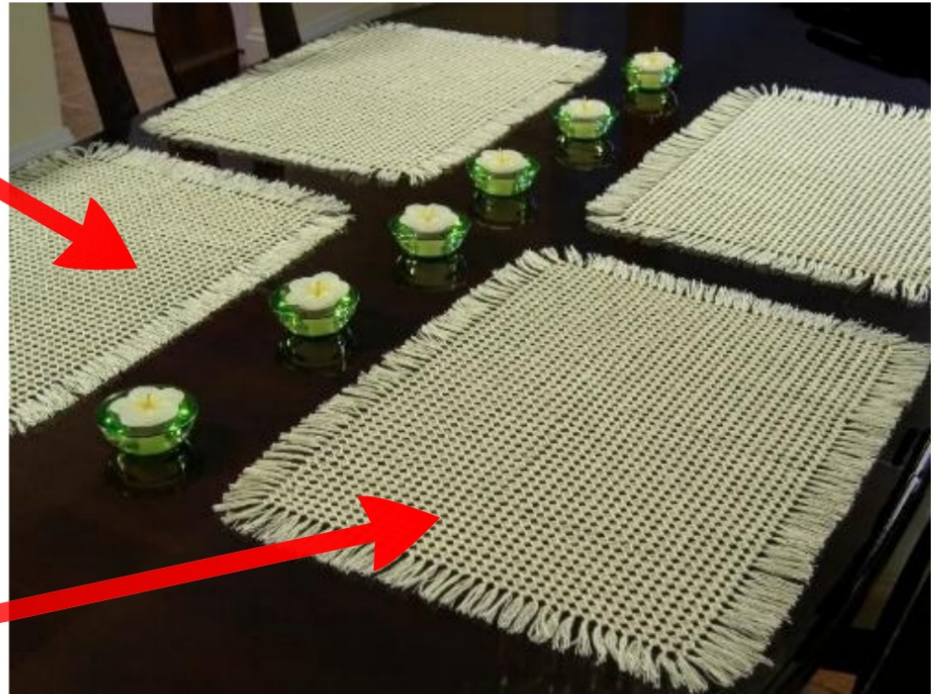
Sharing criteria with learners	Quality of questions/ quality of talk	Use and quality of feedback	Peer and self assessment
<i>Learners know what will make their work good.</i>	<i>All learners actively think up answers to good, open questions.</i>	<i>Ongoing feedback keeps learning on track.</i>	<i>Learners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



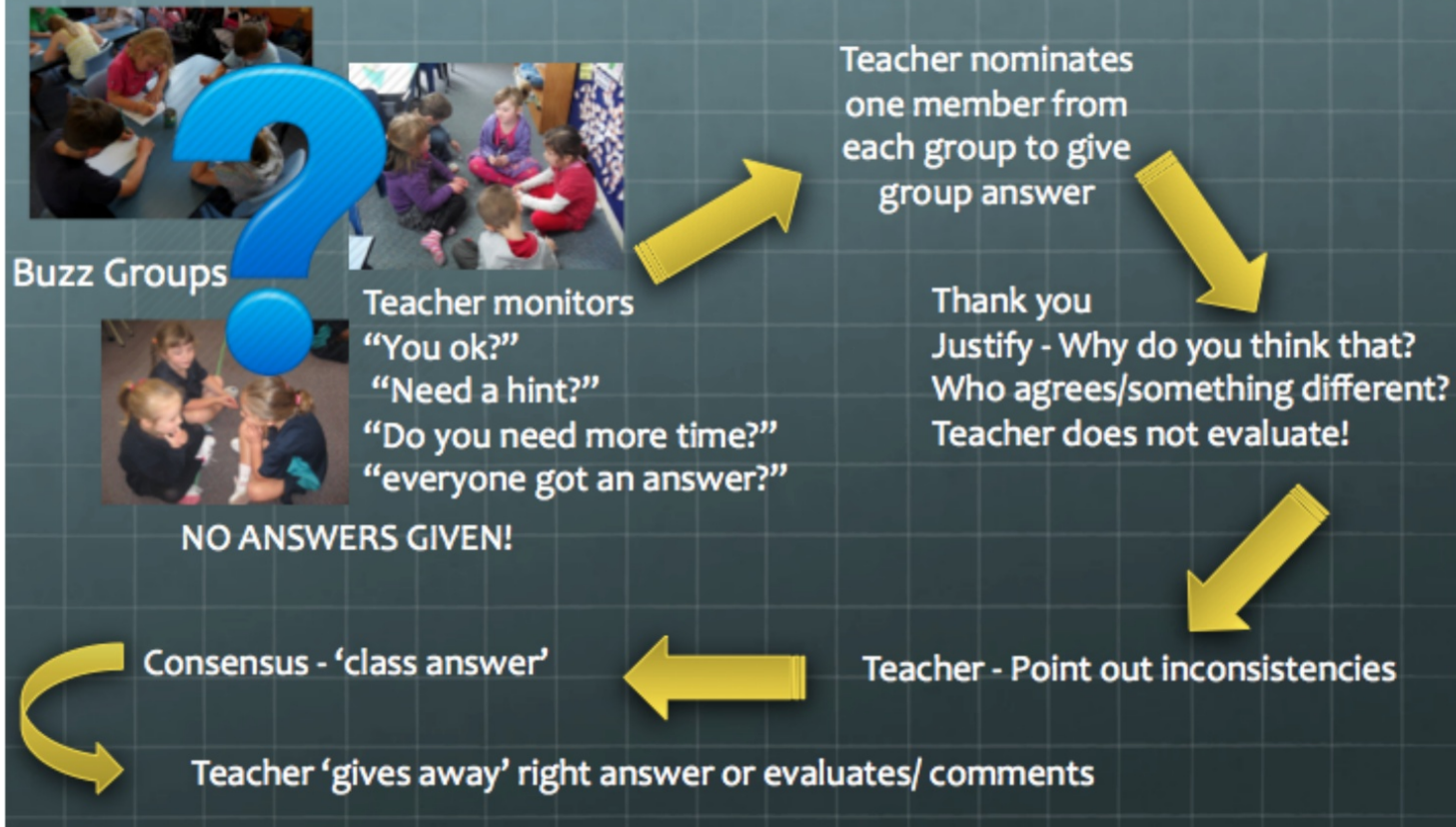
TC

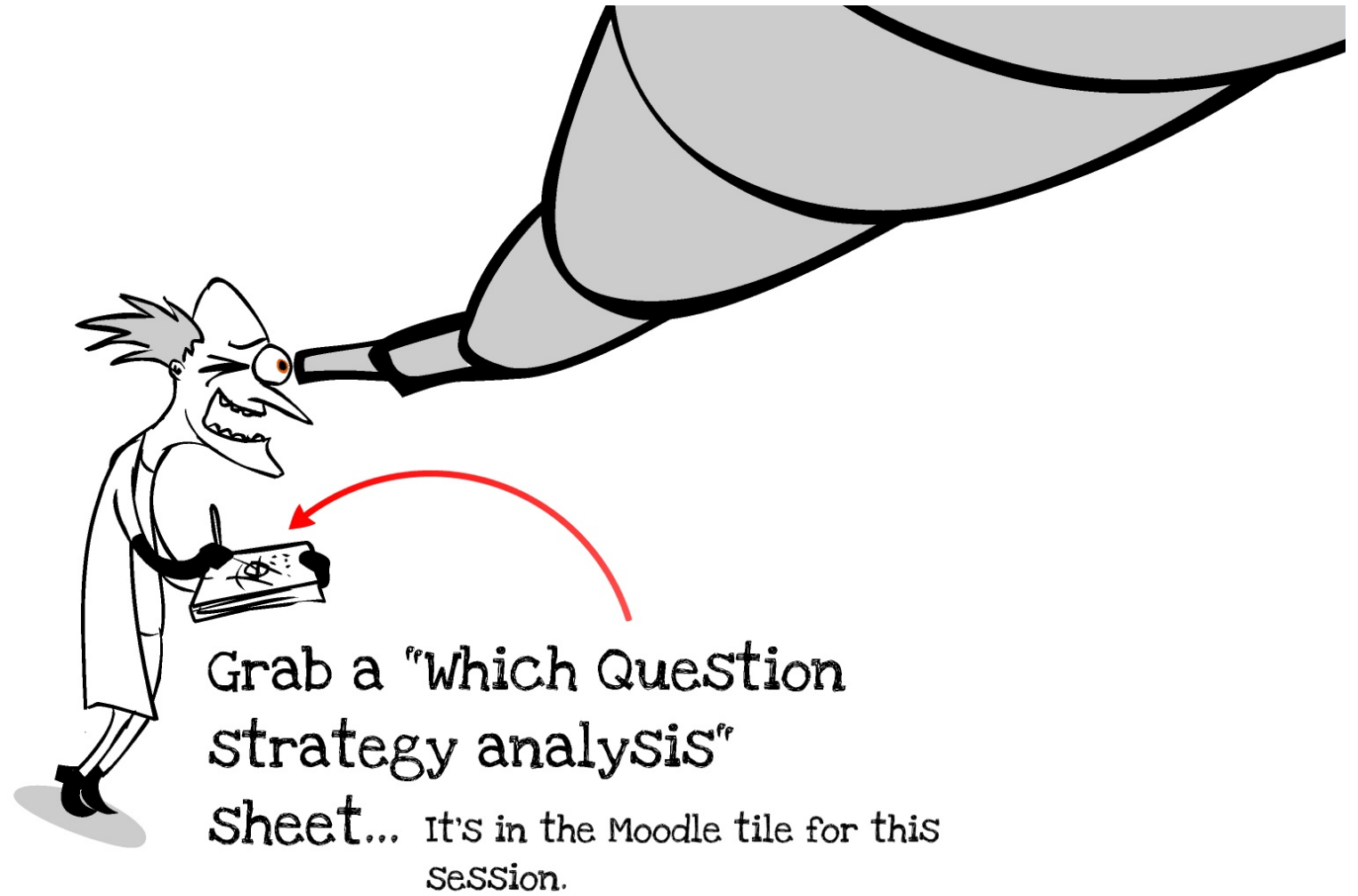


TC



Assertive questioning





'Which' Questioning Strategy?

version 4

Excellent ***

good **

weak *

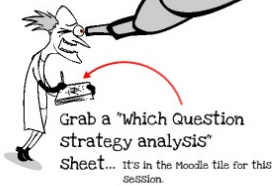
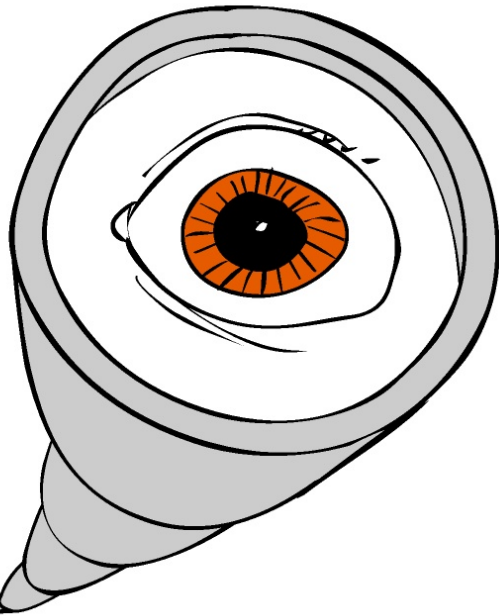
poor !!

Questioning Strategy (Students anticipate these strategies in advance)	Participation Rate	Teacher's feedback	Student's feedback	Thinking time	Student comfort
Q&A: volunteers answer Students volunteer to answer questions					
Q&A: nominees answer Students nominated by the teacher answer questions					
Buzz groups: volunteers answer Students work in small groups to answer a thought provoking question. Teacher asks each group in turn to contribute part of the answer. A volunteer answers for their group.					
Buzz groups: nominees answer As above, but after the discussion the teacher nominates the student in each group who will contribute that group's answer(s).					
Assertive Questioning Groups work on a thought provoking question. Teacher asks individuals to give their group's answer, and then asks the rest of the class to discuss and agree a 'class answer'. Only then does the teacher 'give away' the right answer.					
Pair checking Teacher asks a question, then students work alone to answer it. Pairs then compare their answers, giving their partner one good point and one way their answer could be improved while the teacher observes. The teacher then gives the correct answer. Pairs now suggest another improvement to their partner's answer.					
Participation Rate: The proportion of students who are engaged in trying to answer the question is high. There are few 'passengers'. Teacher's feedback: The teacher gets representative feedback on the quality of students' reasoning and understanding in the class. Student's feedback: The students get feedback on the quality of their understanding, e.g. by discussing their understandings with others: 'dialogue' Thinking time: A given student is likely to spend a good deal of time thinking productively about the question, and the quality of their answer Student comfort: Students are not 'put on the spot' and they are unlikely to feel humiliated by the teacher or by others in the class.					

Feedback

Which techniques promote a good participation rate?

Which is the most important factor for you?



Grab a "Which Question
Strategy analysis"
Sheet... it's in the Moodle file for this
session.

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

Take some time to complete
the grid with a friend.

Feedback

Which techniques promote a good

Think, Pair, Share

Think, pair and share prompt cards

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.



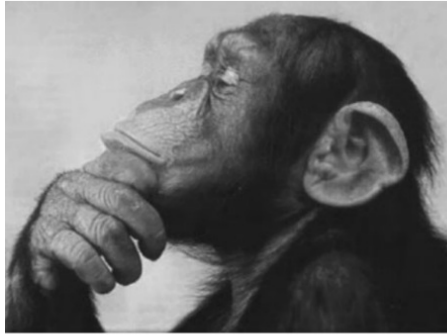
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Basketball not Ping Pong!



P4C technique

SECRET NOTES



Individual



x 3



TC

Does anyone have a question?

GAME
CHANGER!

what are your questions?

KWL Grids

Maths

WALT: Plan and evaluate

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



1. Pose



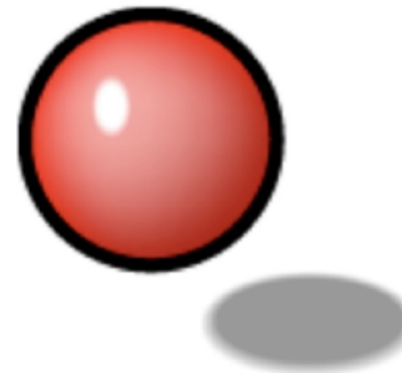
2. Pause



3. Pounce

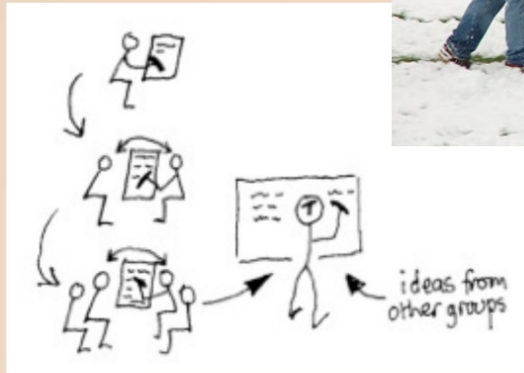


4. Bounce



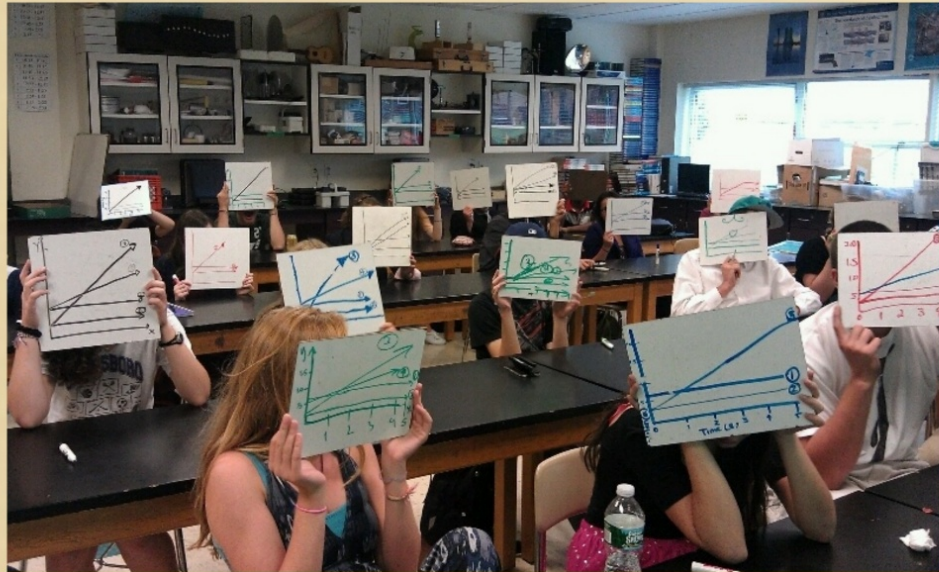
Snowballing

TC



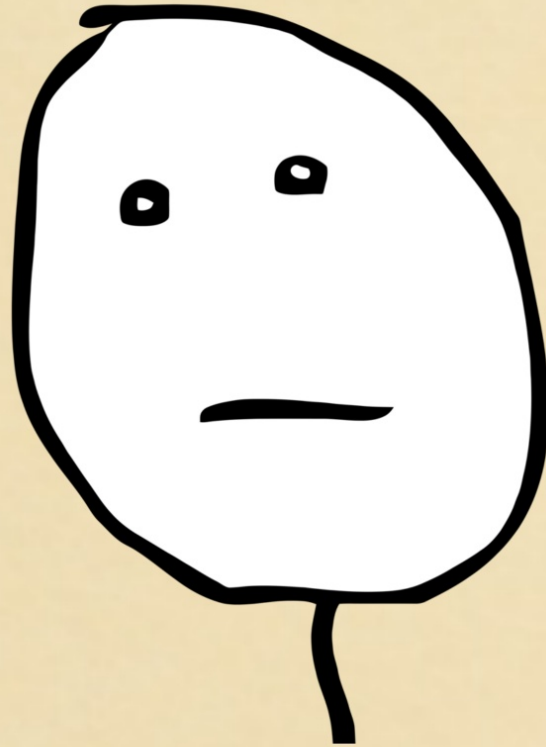
Tc

'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.



Wait-time

(0.9 secs)

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.

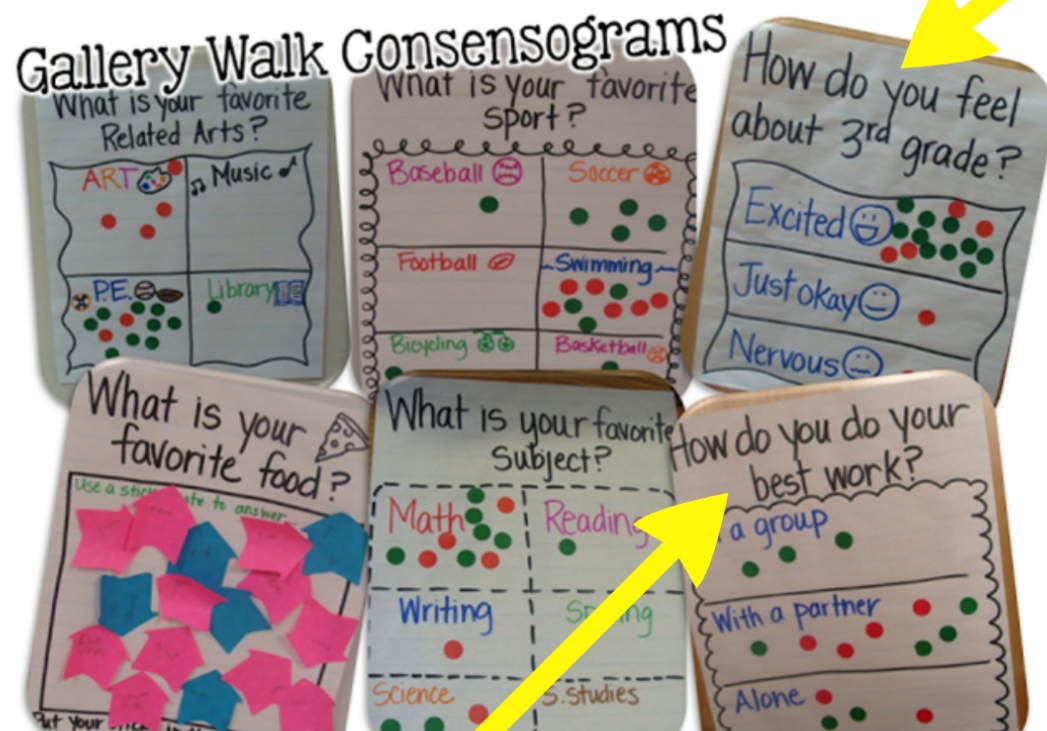
Don't weaken the question



NR



ConSenSograms



TC

Certainty Line



TC

Certainty Line



TC

Certainty Line



TC

Certainty Line



TC

Numbered heads together



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.

Common mistakes made by inexperienced teachers.



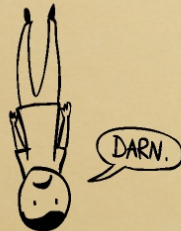
Vocabulary too complex.

Not enough 'wait time'.

Not enough reinforcement (praise).

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

Trevor Kerry (1982)



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)

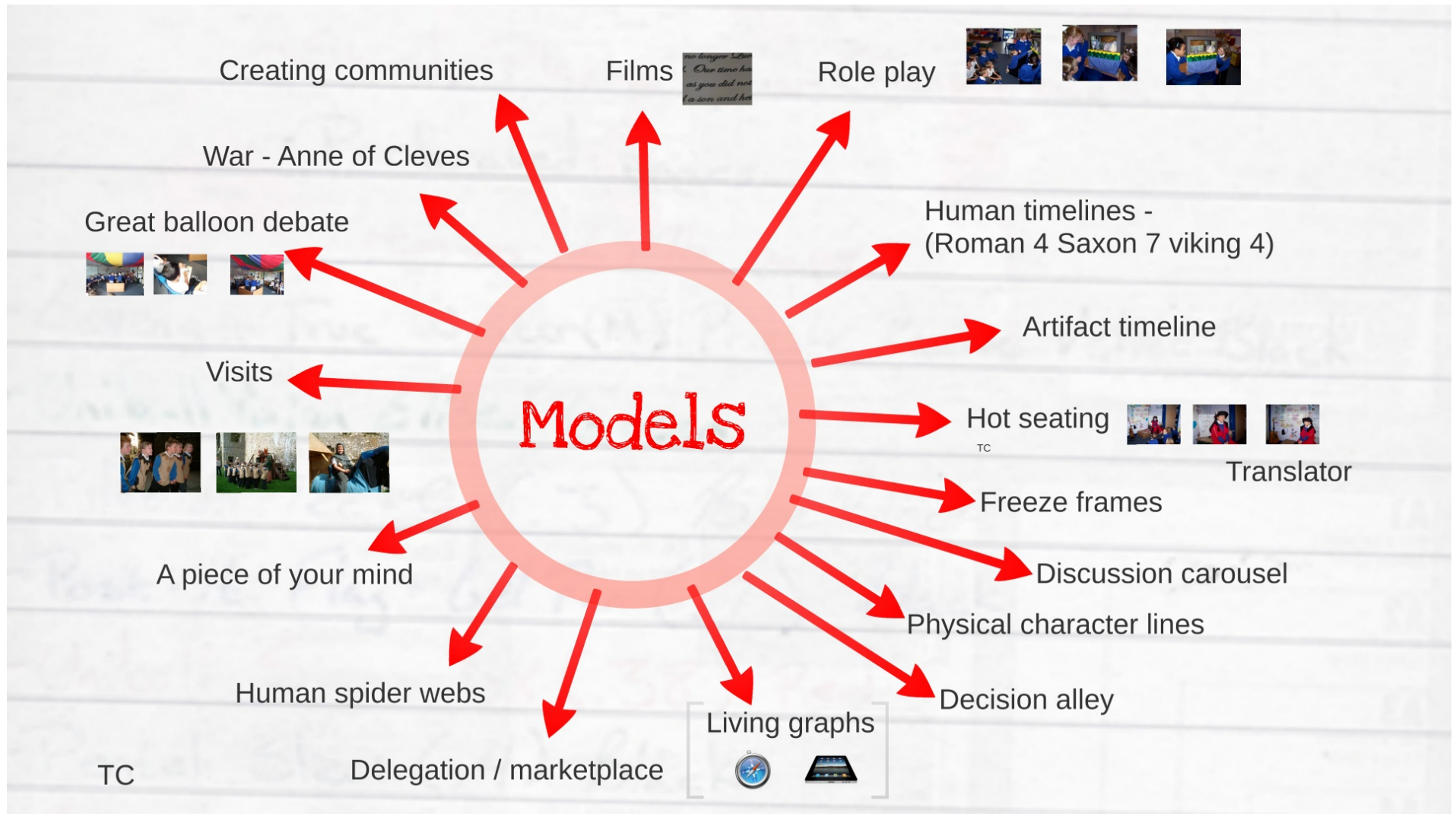
Knowledge through questions more like



TC



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





Artitact timeline

Hot seating

TC



Translat



Freeze frames



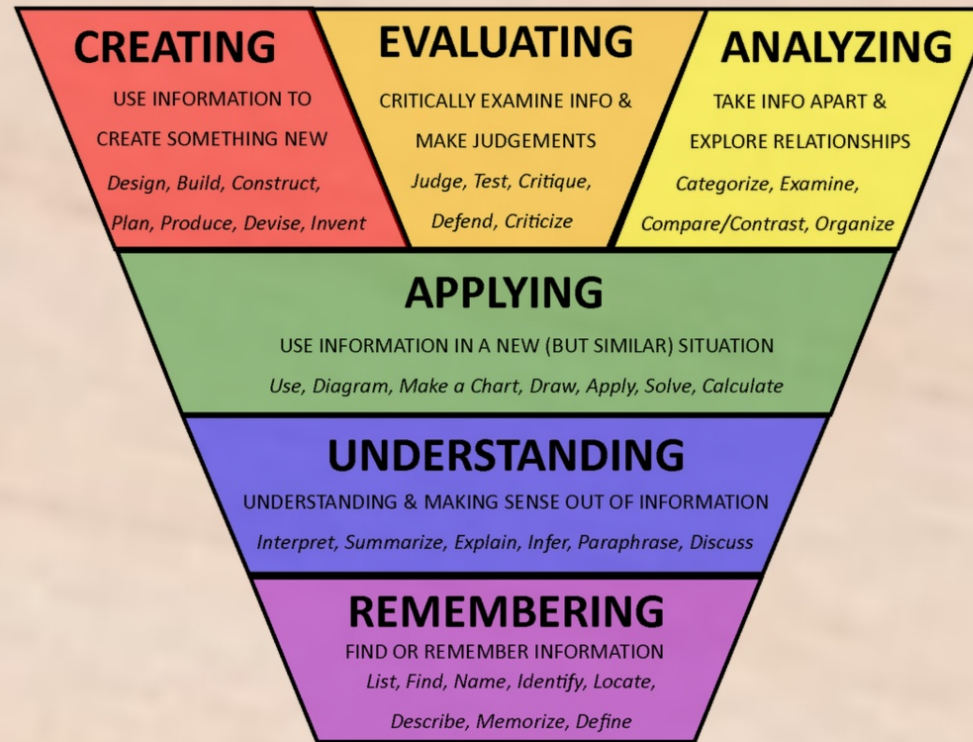


Socratic
question
structures
really
help









Bloom's revised Taxonomy

NR



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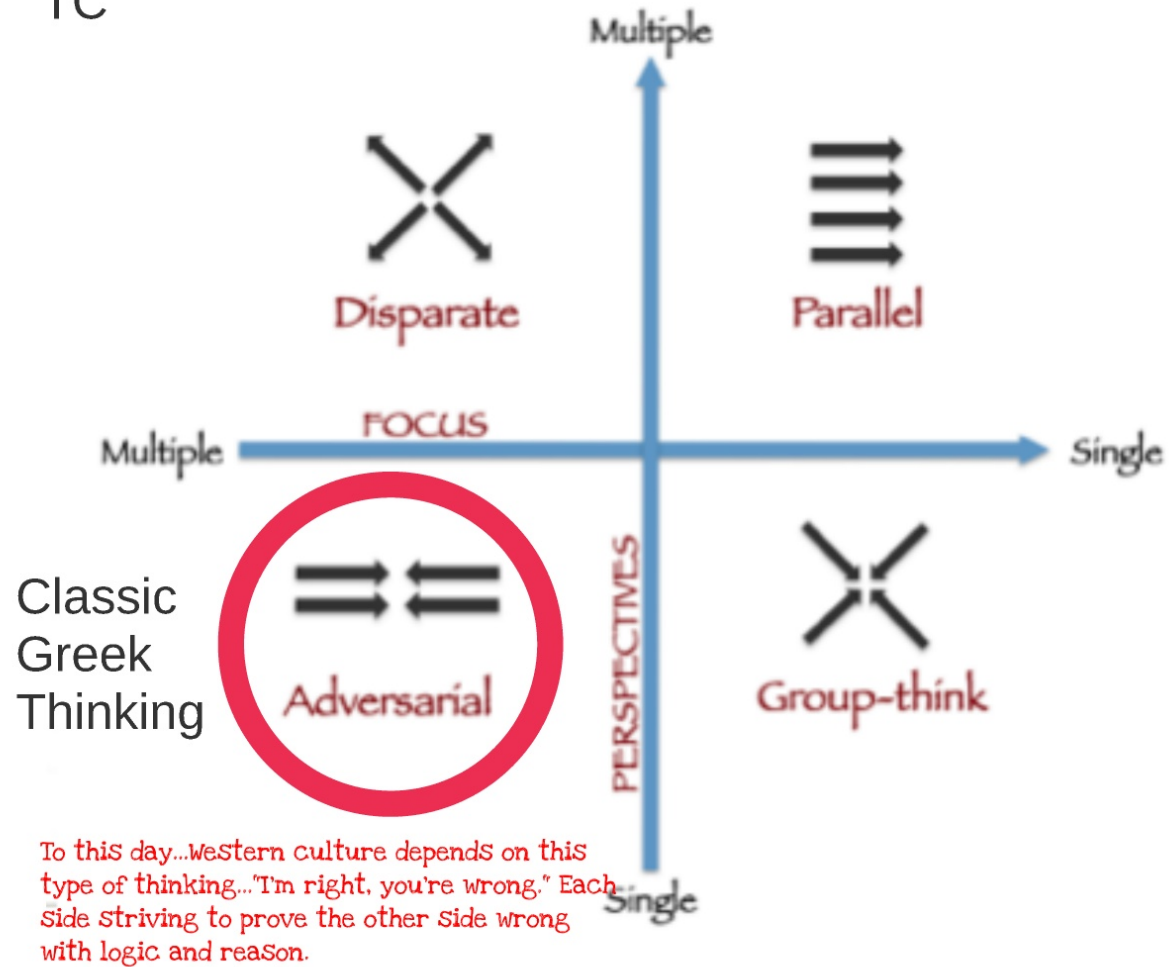
TC



Should marriage be
a five year
renewable contract?

TC

TC



Great balloon debate

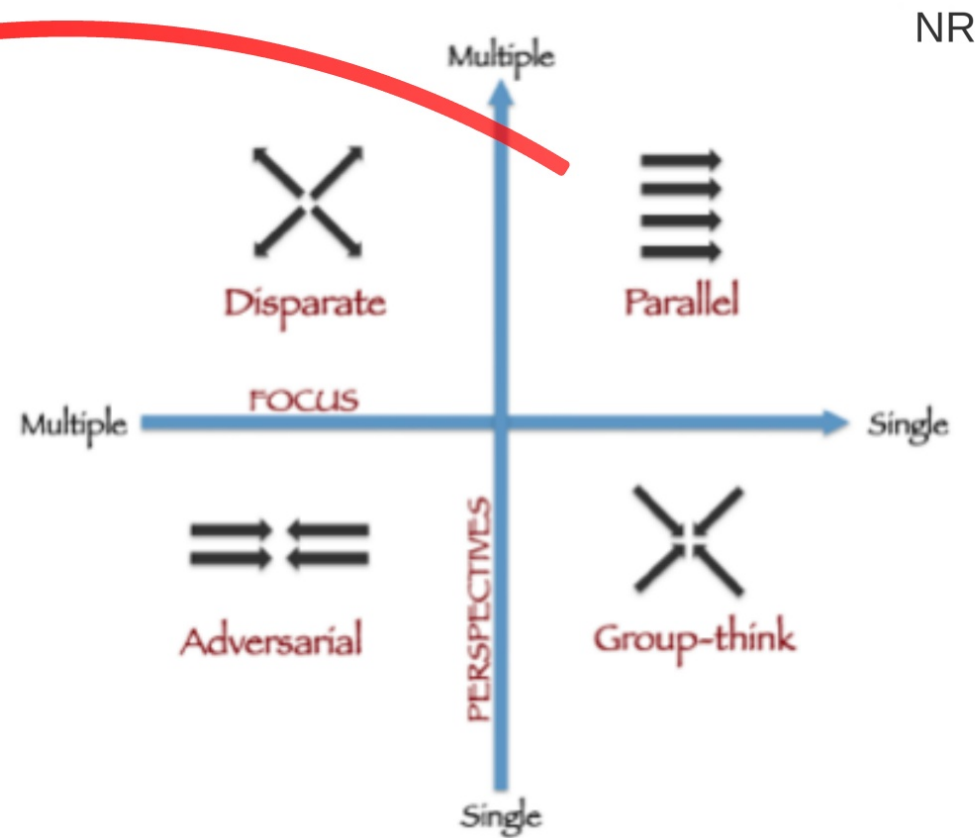
TC



C



Parallel Thinking



CASE-STUDY2

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



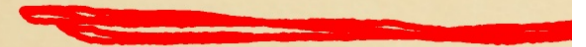
Black Hat - Cautions

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

Stock Number 80701 © 2008 The McQuaig Group

NR

Six Hats



Questioning



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



~~Three~~
~~Step Two~~
Aris



As mobile technology becomes more ubiquitous, the possibility of our environment becoming more interactive is increasing.

Here's how it works:

Step four?



Augmented Reality



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