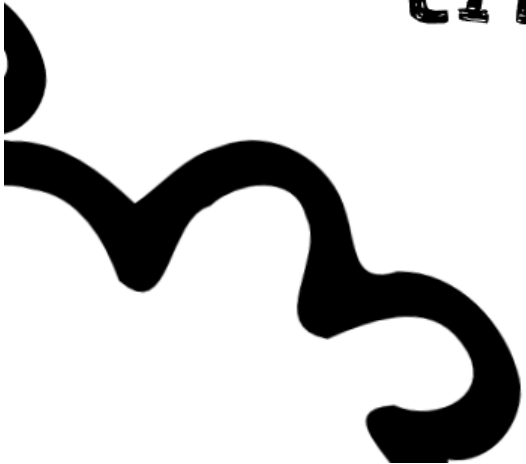
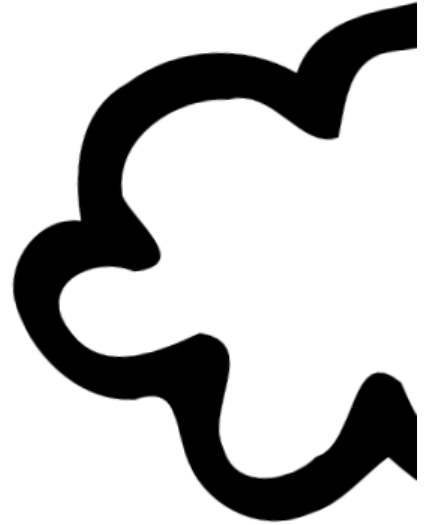




Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

Yr Athrofa
Institute of Education
Addysg i Gymru Education for Wales

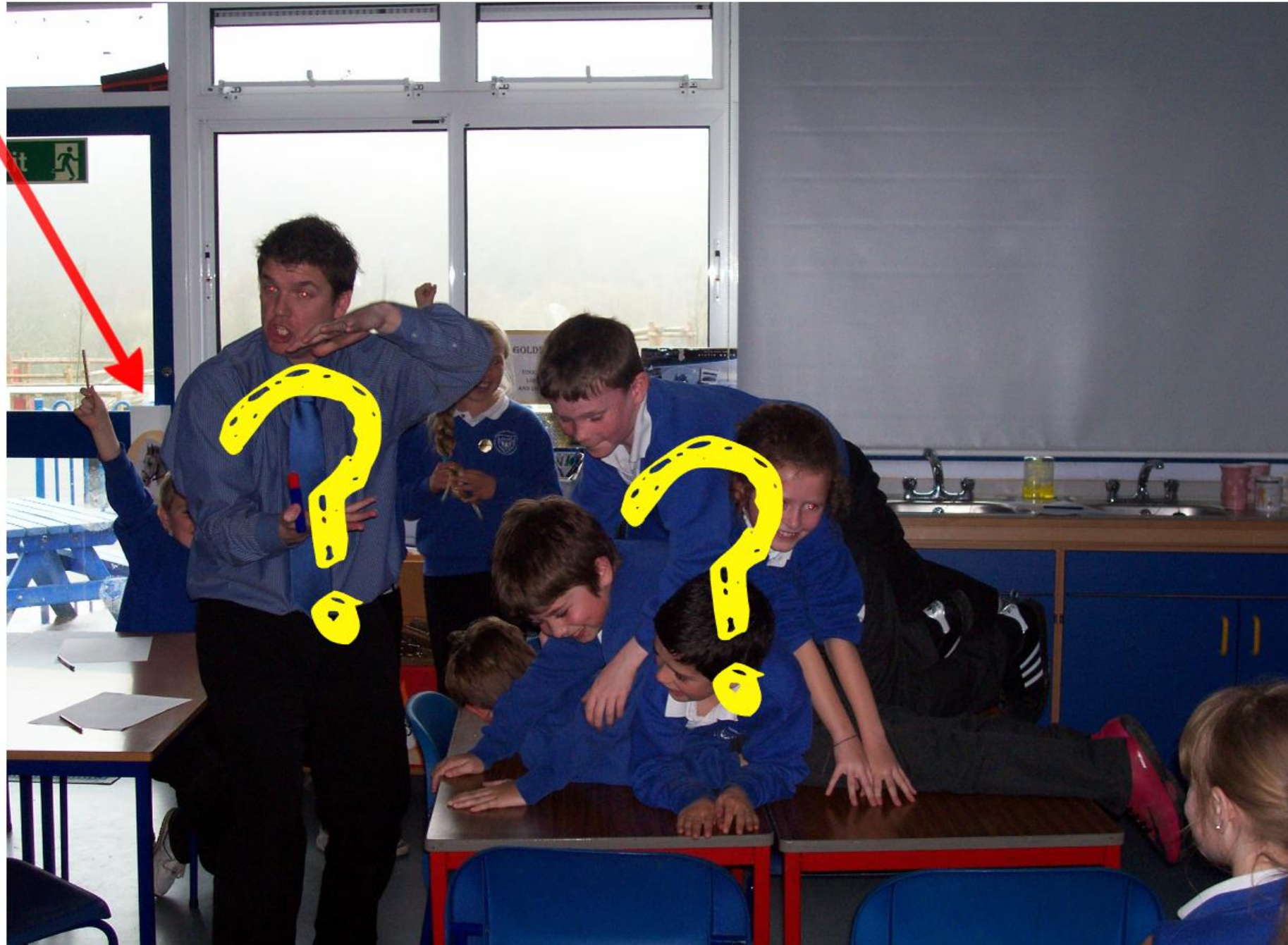
Er...um...what was
the question again?





Can you spot the two main elements of this learning?

Clue!



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.

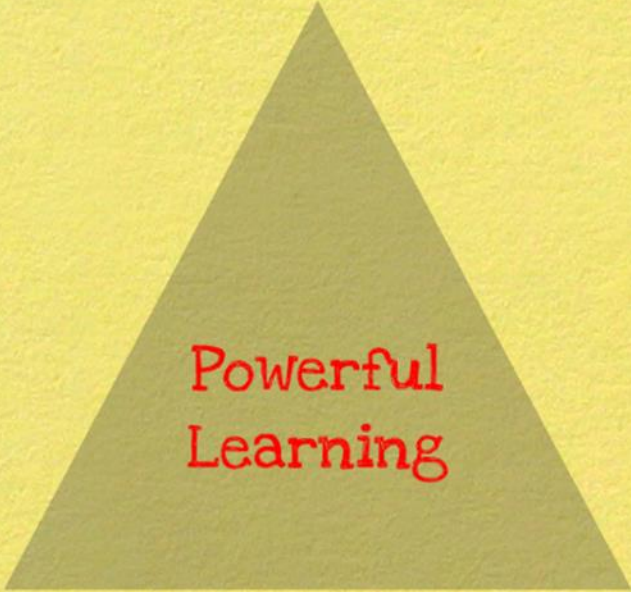
For increased engagement



Only
allowed
to make
nine
notes!

The InStructional Core

Curriculum



Powerful
Learning

Teaching and
learning
strategies

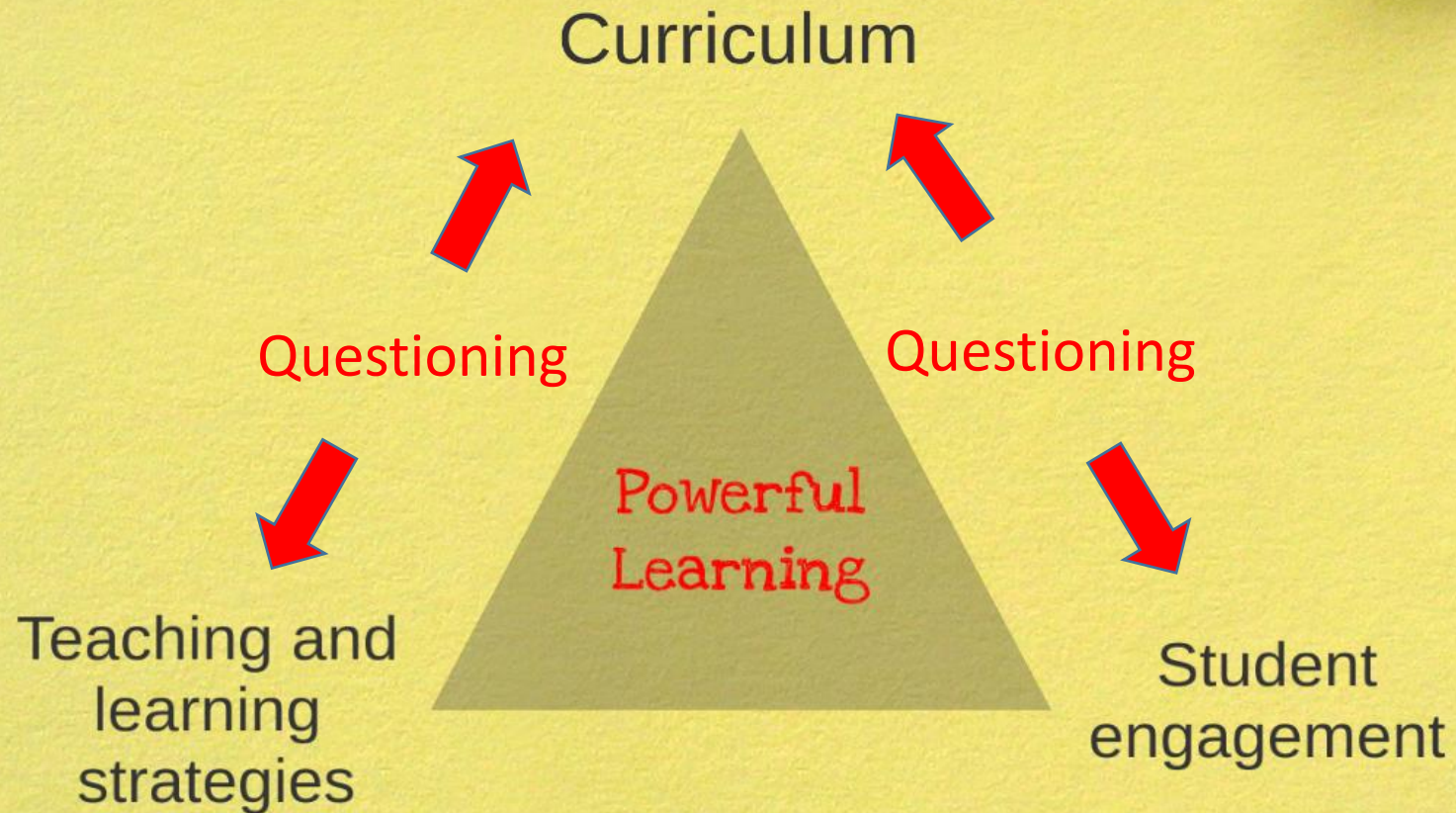
Student
engagement

Friday, 30 October 2009

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

David Hopkins

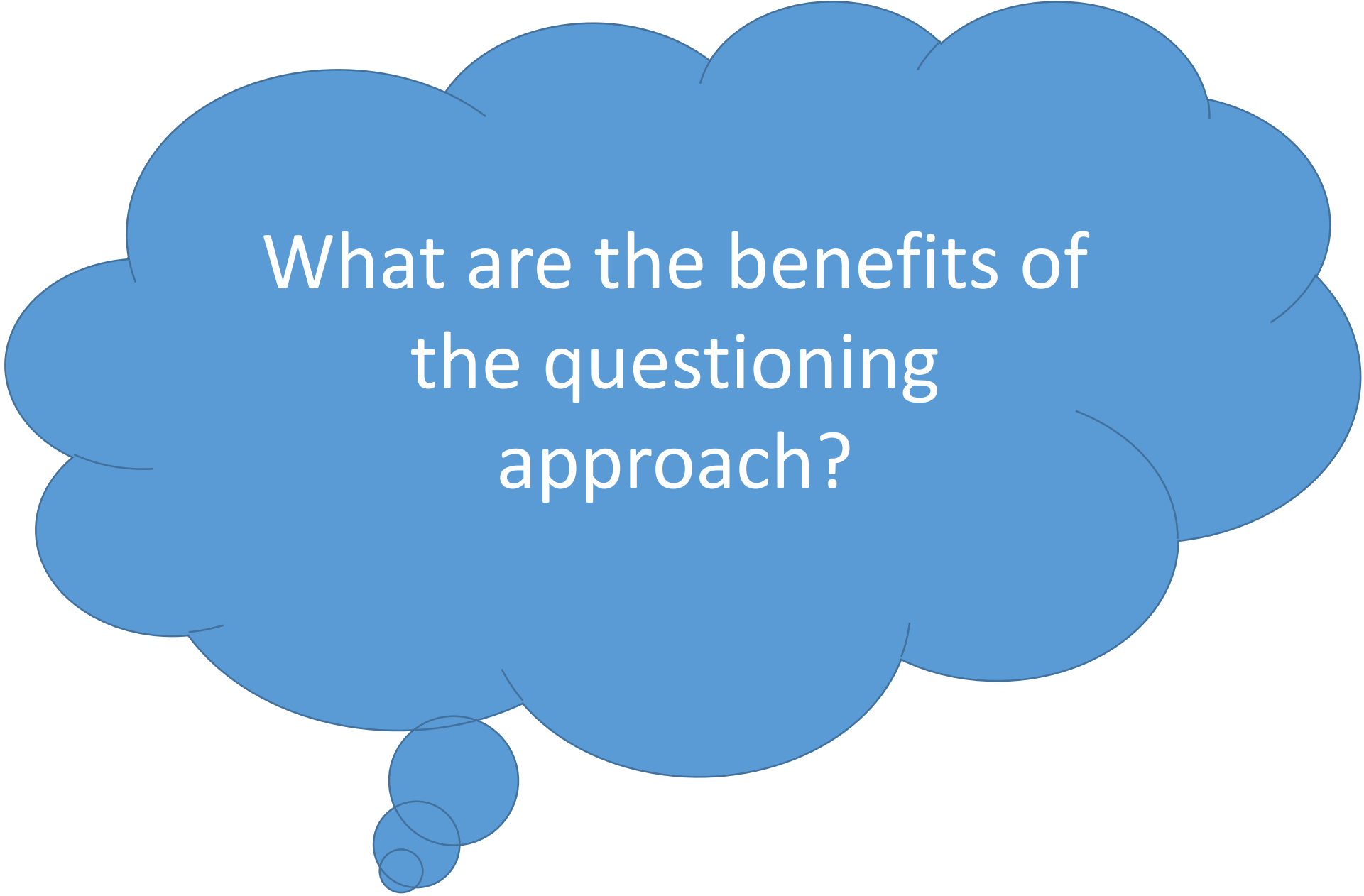
The InStructional Core



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?

NR

What are the benefits of the questioning approach?

Focus on understanding not just remembering

Actively involved

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

NR

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

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

Assertive questioning



Buzz Groups



NO ANSWERS GIVEN!



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

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!

Consensus - 'class answer'

Teacher - Point out inconsistencies

Teacher 'gives away' right answer or evaluates/ comments

NR

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.

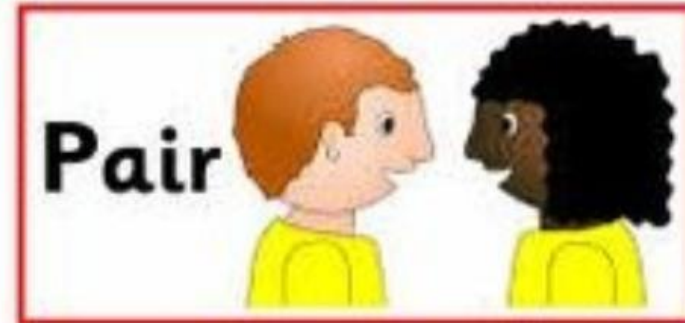
THINK: Allow 'thinking time' and direct them to think about the question.

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.



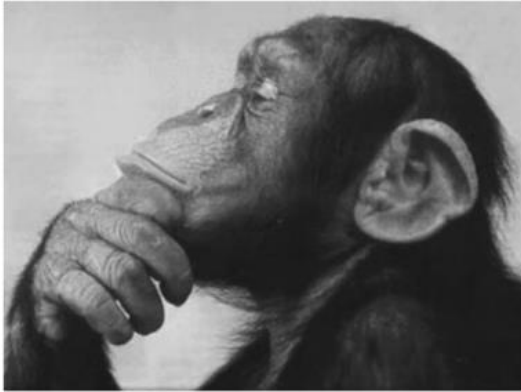
Basketball not Ping Pong!



NR

P4C technique

SECRET NOTES



Individual



x 3



TC

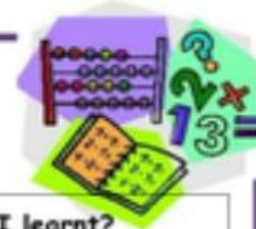
KWL Grids

NR

Maths

WALT: Plan and evaluate

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



1. Pose



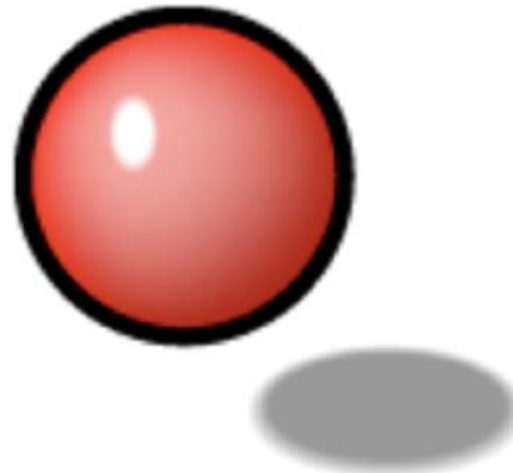
2. Pause



3. Pounce



4. Bounce



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



Transferable

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).

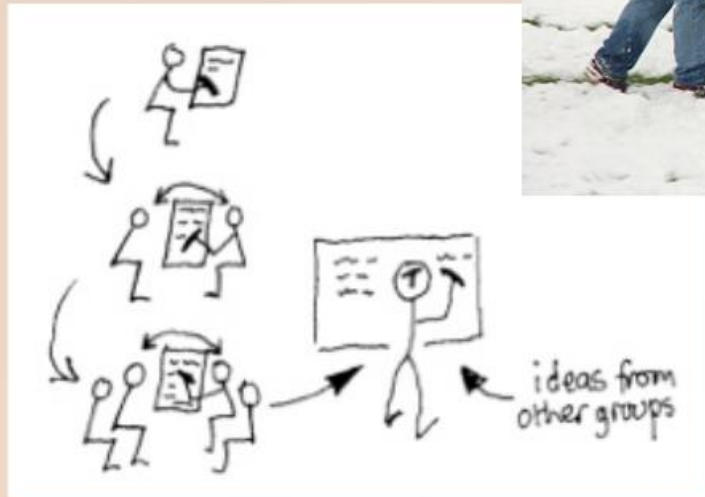


A lecture is an event where information passes from the notes of the lecturer into the notes of the student, without passing through the brains of either. (Petty, 2009)



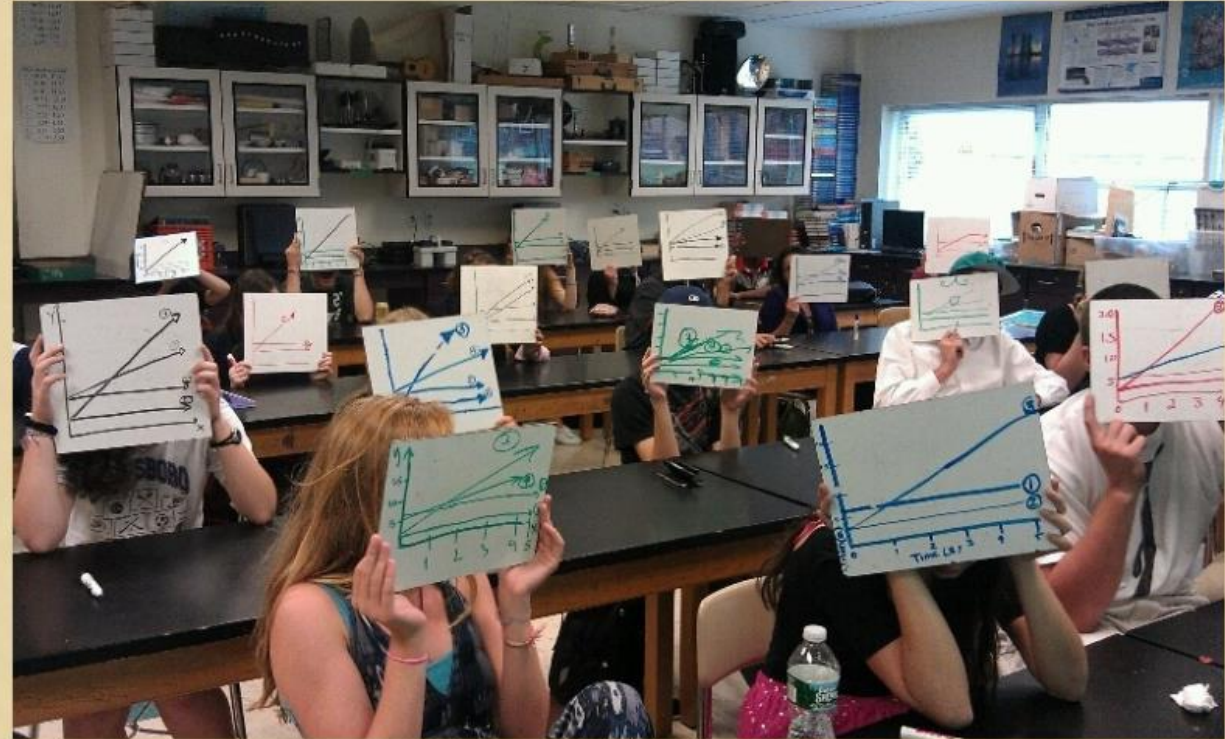
Snowballing

TC

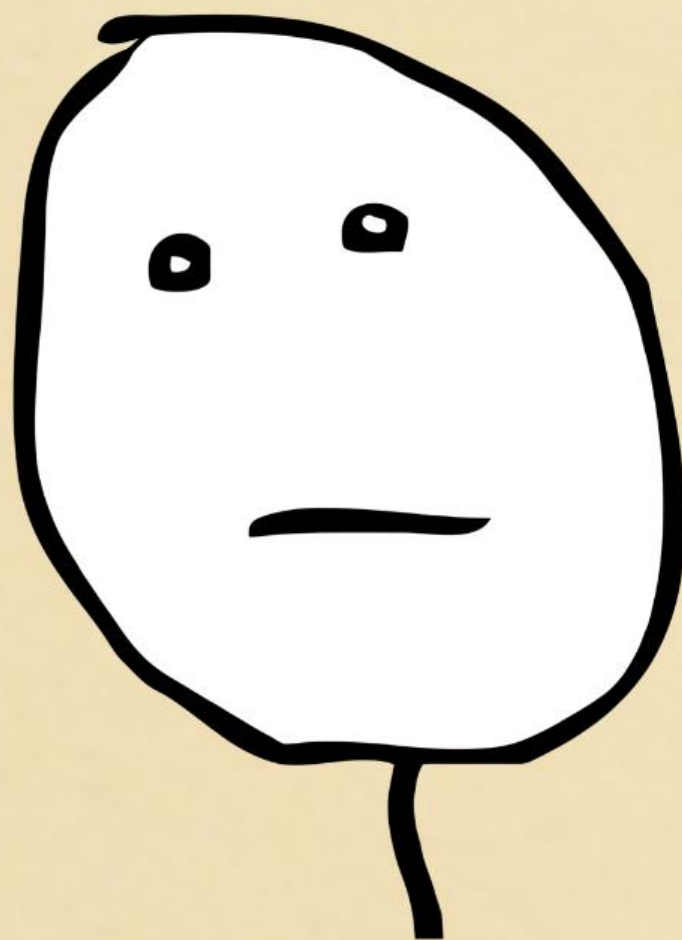


Tc

'Secret Squirrel'



Poker Face



'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





X and Y

NR

Ask students why X is an example of Y
e.g.

Why is an apple an example of a fruit?

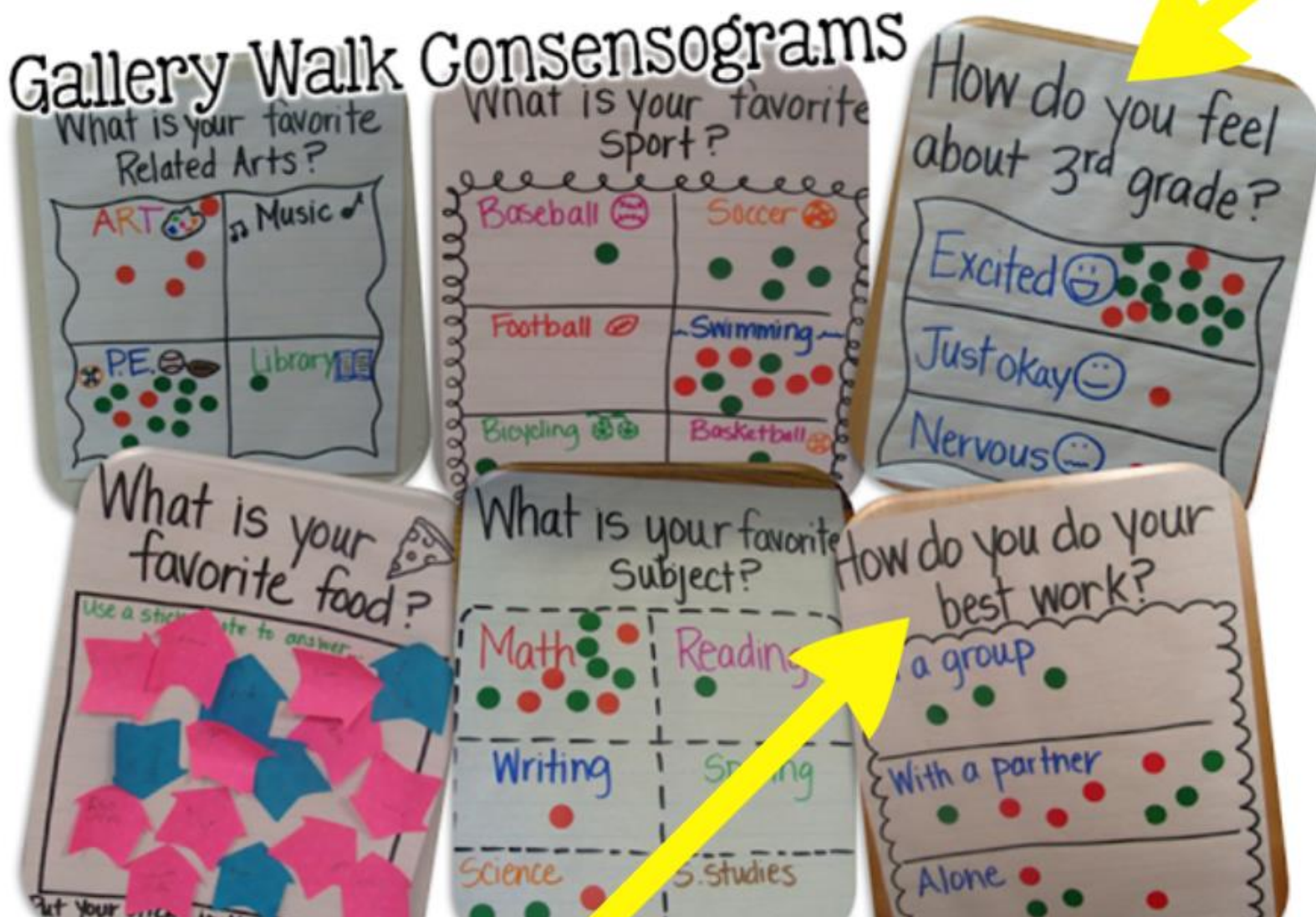
Why is a fox an example of a mammal?

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



ConSenSograms

Gallery Walk Consensograms



Certainty Line



Butterfly Pairs

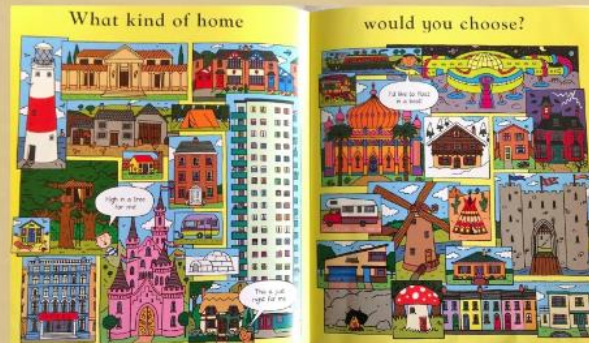
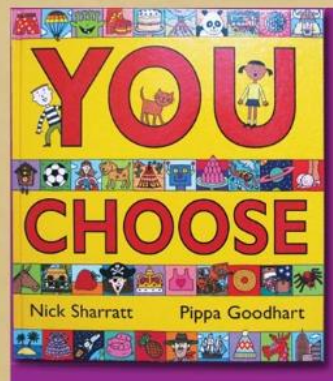


Perfect partners



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?

NR

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.

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'.

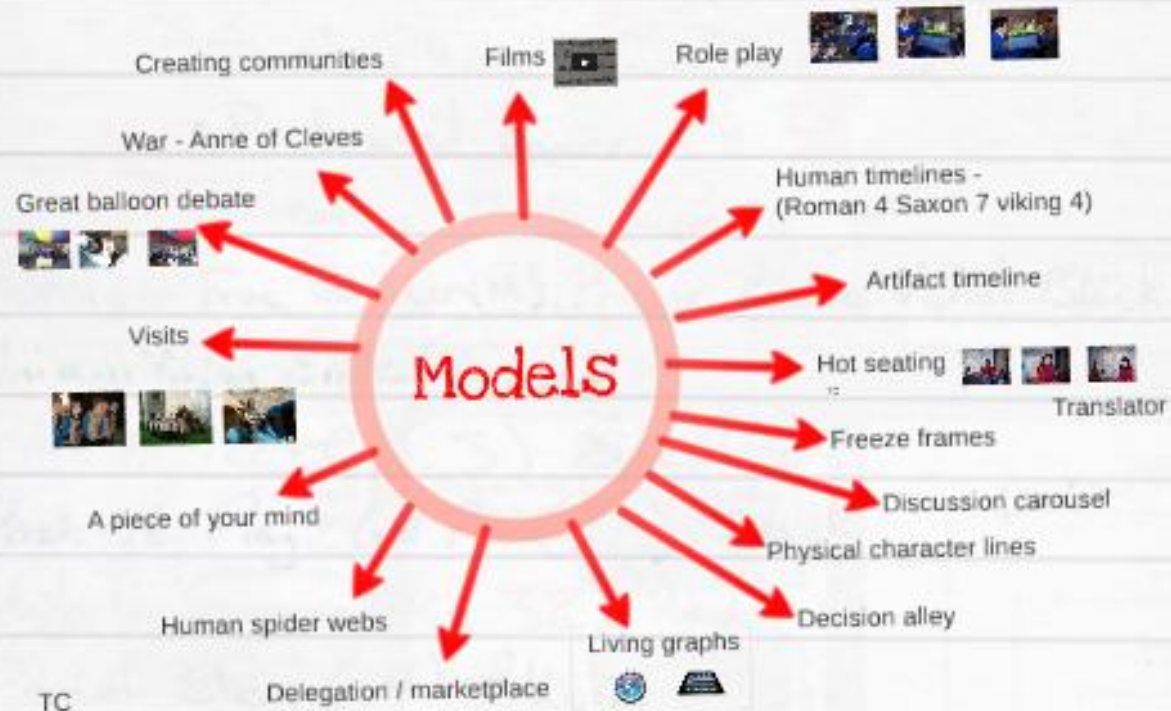
Not enough reinforcement (praise).

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

Trevor Kerry (1982)



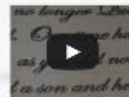
Active learning strategies



Models

Creating communities

Films



Role play



War - Anne of Cleves

Great balloon debate



Visits



A piece of your mind

Human spider webs

Delegation / marketplace

Living graphs



Human timelines -
(Roman 4 Saxon 7 viking 4)

Artifact timeline

Hot seating

TC



Translator

Freeze frames

Discussion carousel

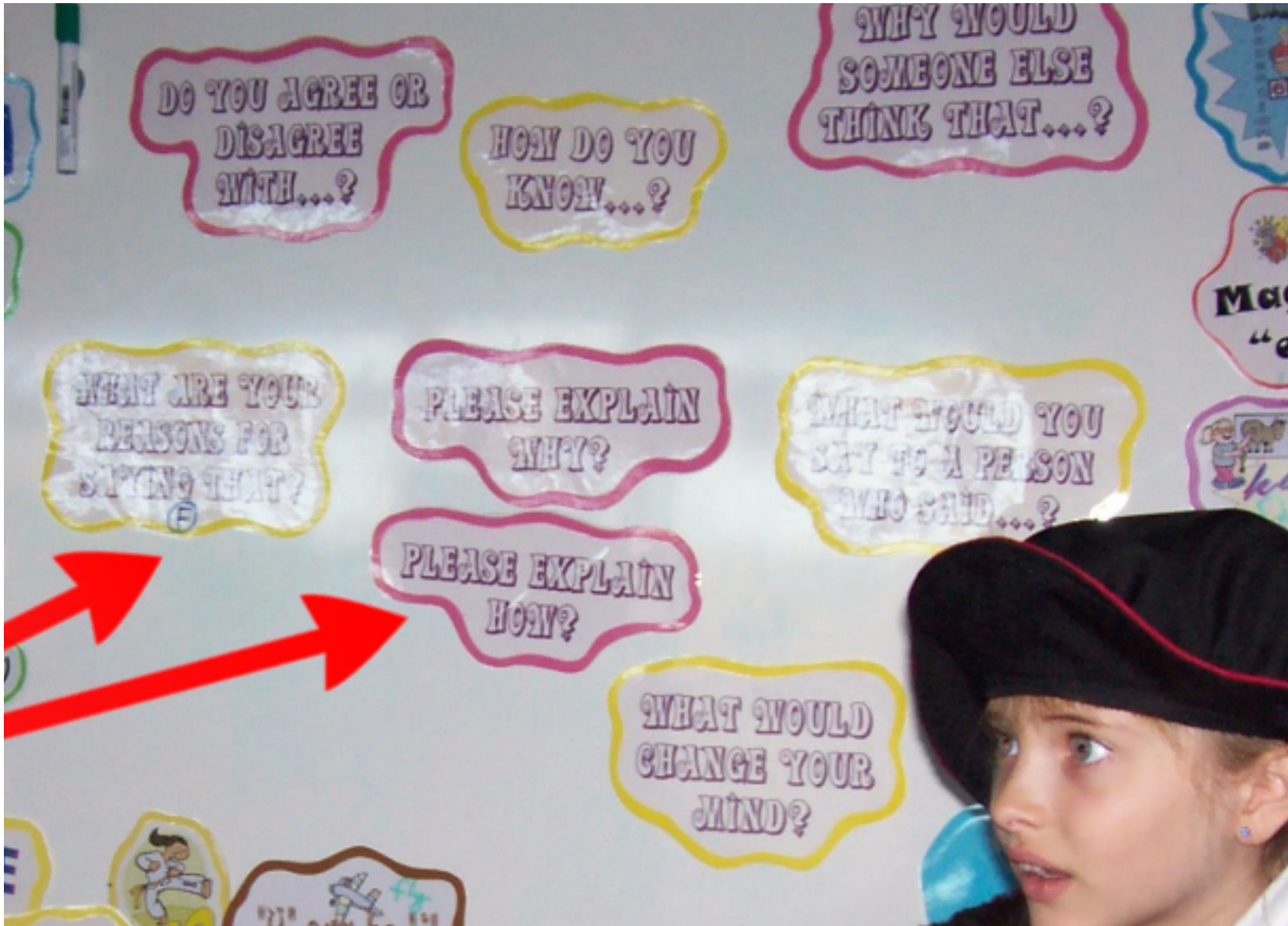
Physical character lines

Decision alley

TC



Socratic question
structures can help



Do you agree with...?

How do you know?

Why would someone else think that?

What are your reasons for saying that?

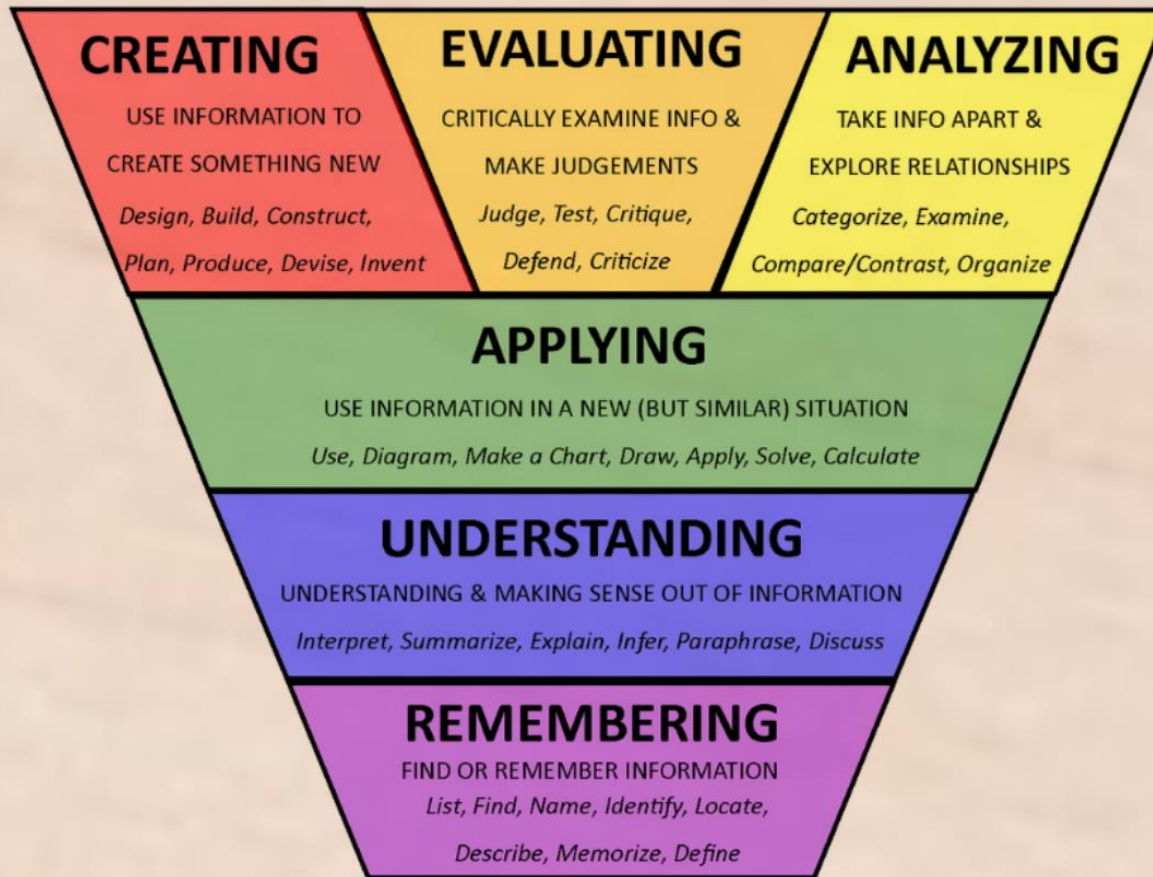
Please explain why?

Please explain how?

What would you say to a person who said...?

What would change your mind?

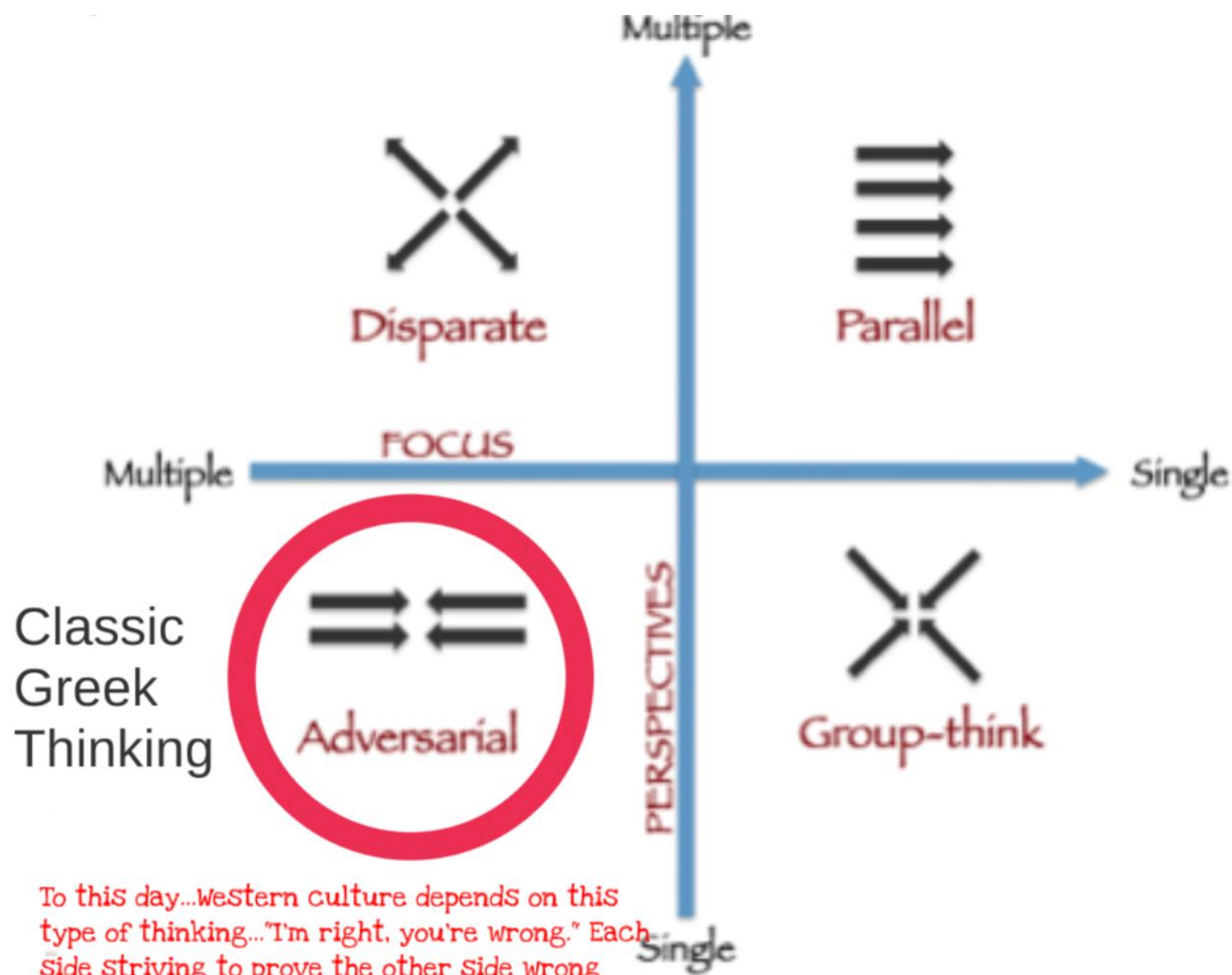




Bloom's revised Taxonomy



Should marriage be
a five year
renewable contract?



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



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.

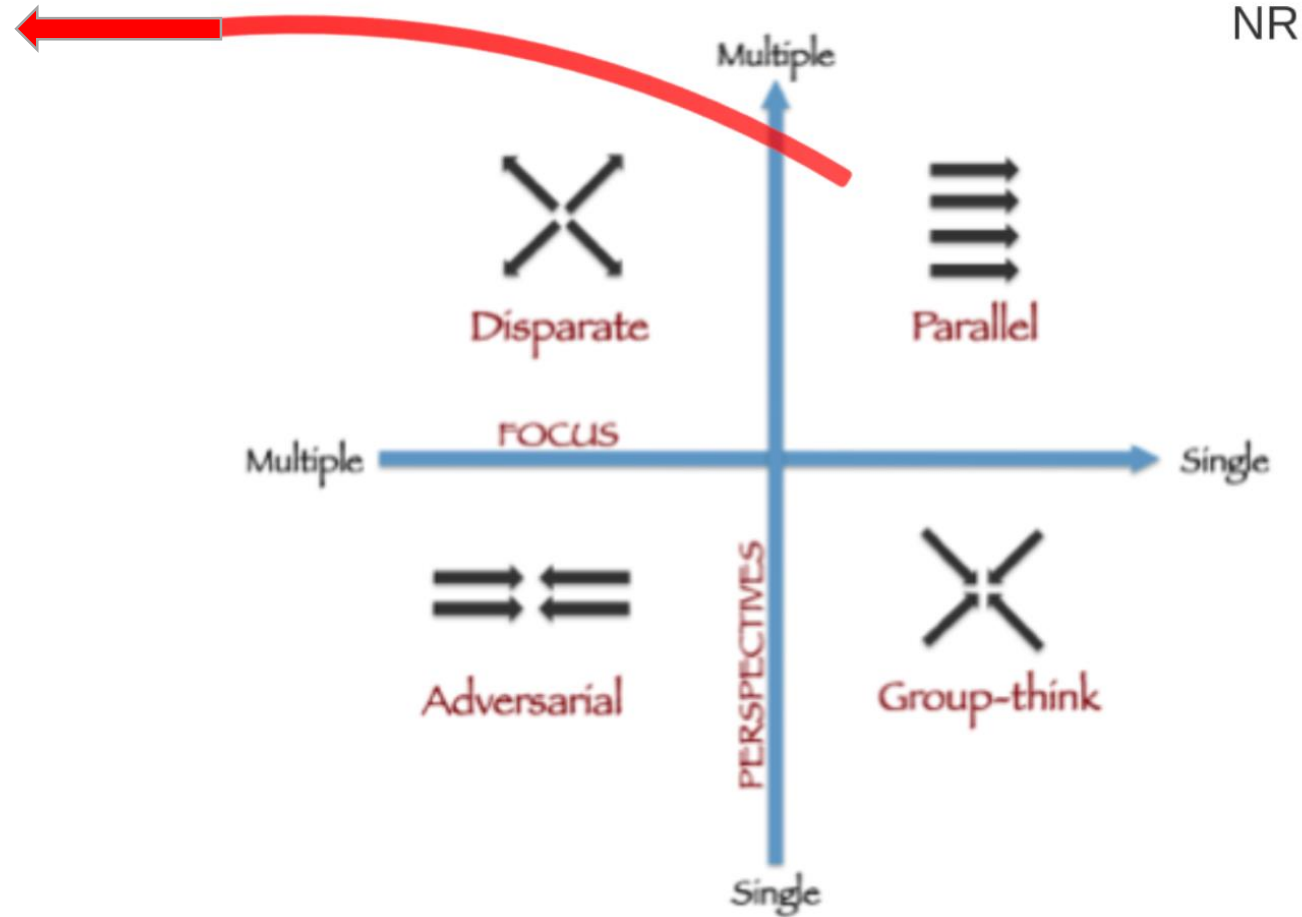
CAUTIONS



Black Hat - Cautions

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

Parallel Thinking





What are your nine
top strategies?

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.