

Effective Questioning

The WHY & the WHAT

Dr Chris Baker

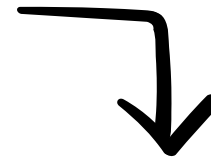
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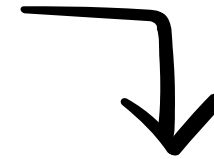
Cabot
Learning
Federation

Session Flow

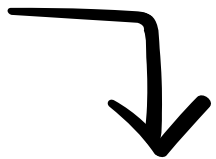
The Research



The Why



The What



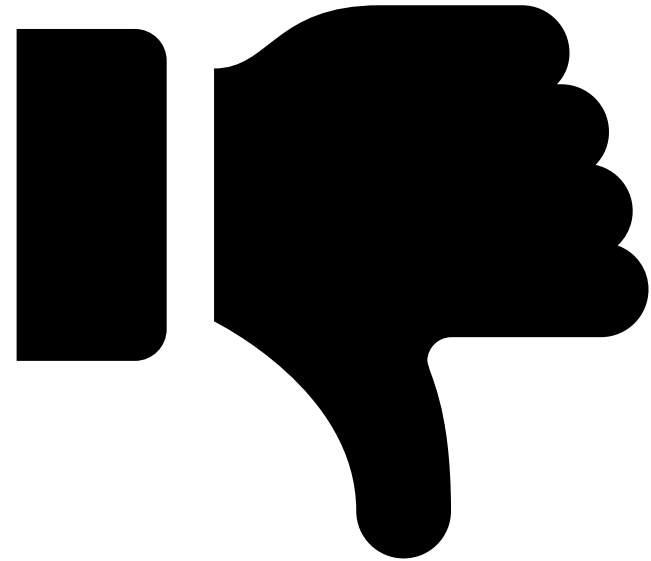
Sustainable Success

Activating Prior Knowledge



Good Practice?

Bad Practice?



Session Flow

The Research

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graph TD; A[The Research] --> B[The Why]; B --> C[The What]; C --> D[Sustainable Success];
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The Why

The What

Sustainable Success

The Research

Importance of questioning - Degarmo (1908), Kerry (1982)

Pivotal to the role of the teacher and the success of their teaching

'To question well is to teach well'
'The skilful use of question above anything else, lies the art of teaching'

Majority of a teachers actions are questions

'80% of a teacher's day is spent questioning'
'on average teachers ask over 300 questions per day'

Purpose of questioning – Wrag (2001), Morgan & Saxton (1991)

Not to find out new information but to find out what they already know

'only through knowing what they know can we teach effectively'

Compilation of purposes

Evaluate, motivate, develop thinking skills, summarise learning, allow expression of thoughts and ideas.

The Research

Types of questioning – Brualdi (1998), Willen (1991), Ellis (1993)

High level questions allow students to develop a wide range of skills

‘High cognitive questions require students to use their reasoning skills to problem solve, analyse and evaluate’

low cognitive level questioning are most prevalent

‘Teachers spend most of their time asking low cognitive level questions’
‘60% of questions are of a low cognitive level’

Wait Time – Cotton (1991), Rowe (1986)

Teachers do not give enough wait-time

‘The average wait time allowed after posing a question is one sec or less’

‘Pupils perceived as poor learners are given less wait-time’

Teacher are not providing an optimal level of wait-time

‘Students typically are not given enough time to think about an intelligent response to a teacher’s question’

The Research

Probing / Redirection – Gall (1970), Cotton (1991)

Probing allows a deeper understanding of the subject matter

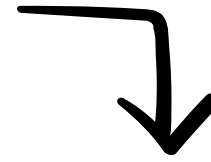
‘probing a student’s response requires them to reflect on, qualify and refine their understanding’

Redirection facilitates engagement of other students

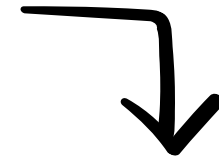
‘Re-direction serves to assess the understanding and listening skills of the surrounding students’

Session Flow

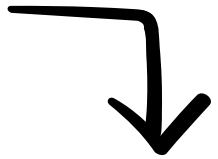
The Research



The Why

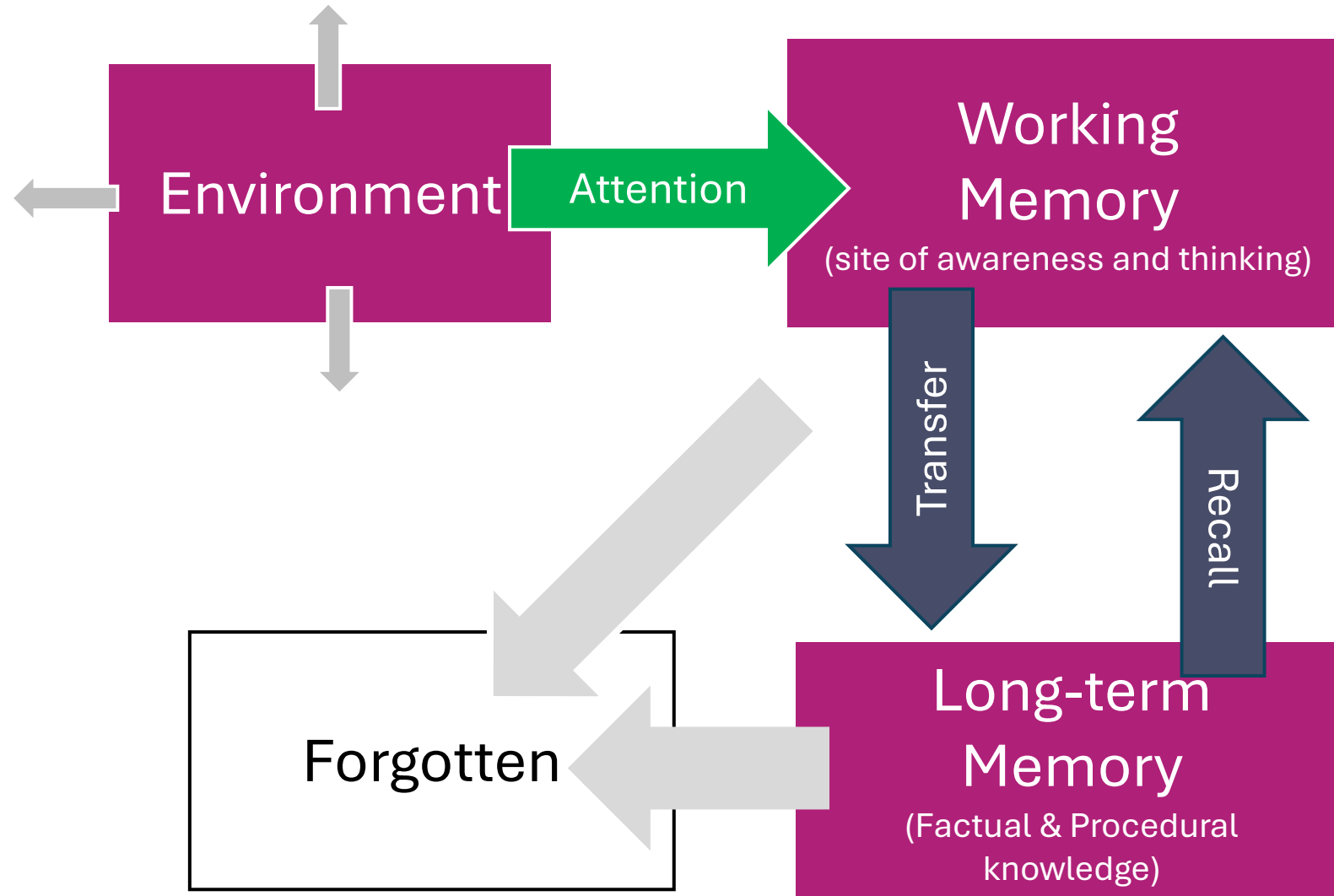


The What

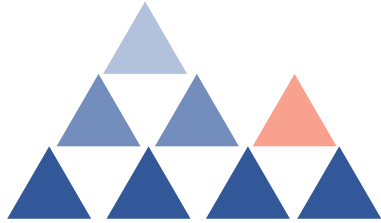


Sustainable Success

The Why – Memory Loss

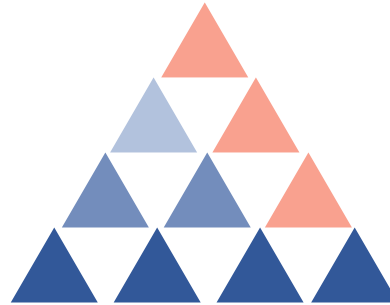


The Why - Misconceptions



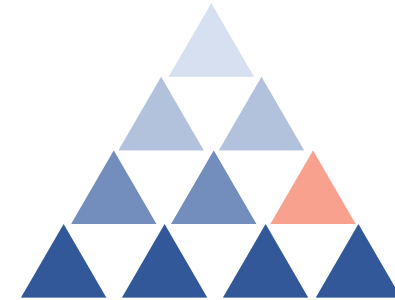
Barrier

Misconceptions can hamper or block further learning



Amplifier

Misconceptions can create further misunderstanding and errors



Root

Misconceptions can remain undiscovered but continue to cause issues

LOCATE

The first step is to find the misconception



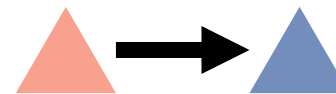
ISOLATE

Then check if it's alone by exploring surrounding knowledge



CORRECT

Then refine, remove or replace to strengthen understanding

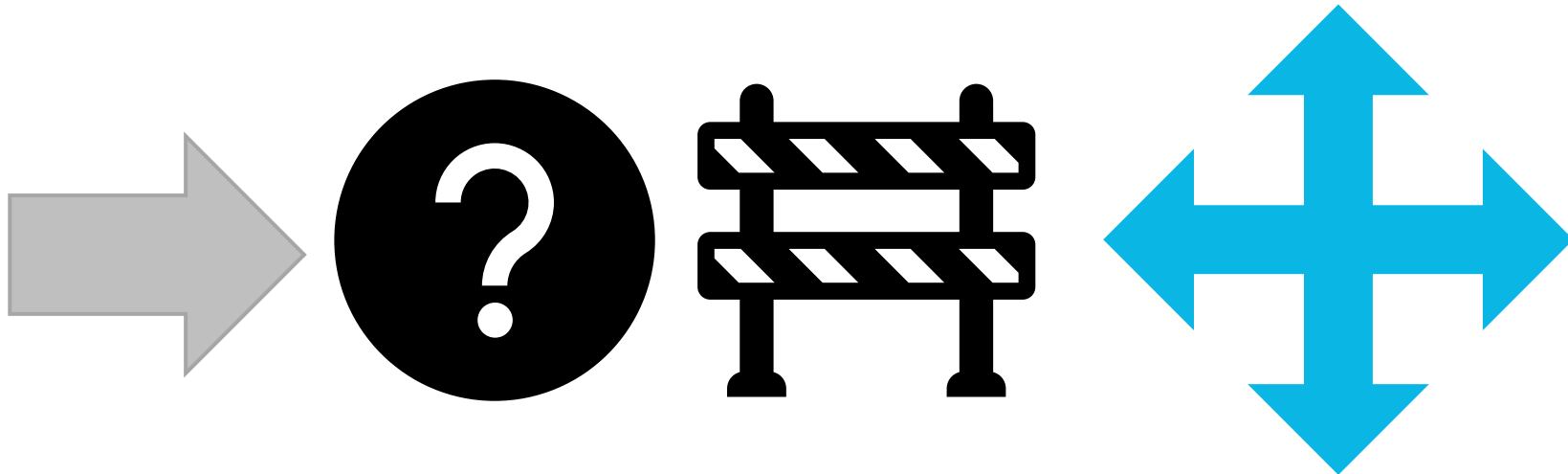
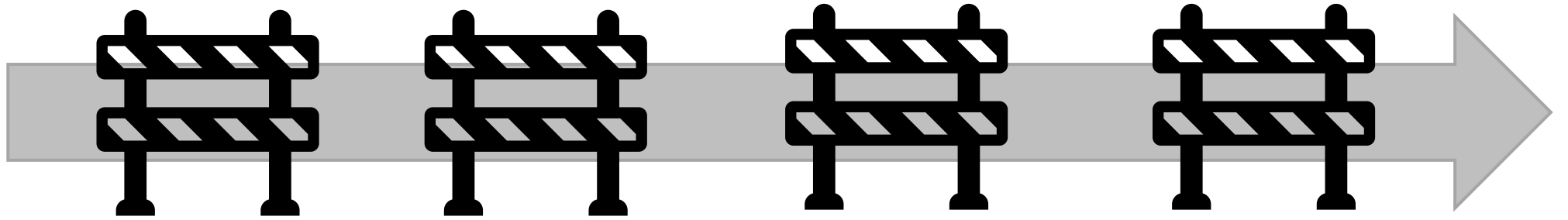


RE-BUILD

And then re-construct the surrounding knowledge

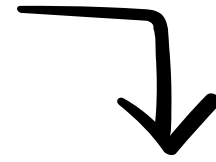


The Why – Adaptive Teaching

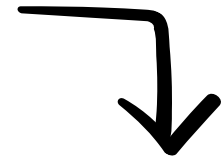


Session Flow

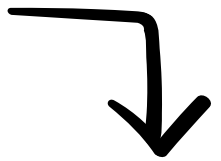
The Research



The Why



The What



Sustainable Success

OPEN Questions

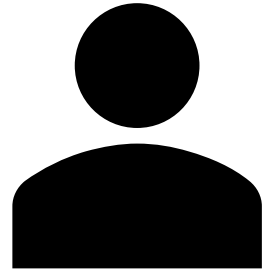
- ✓ Higher Psych Safety
- ✓ Explores understanding
- ✓ Harder to guess

CLOSED Questions

- ✓ Quicker
- ✓ Easier to compare
- ✓ Good for clarification / recall



The What – Cold Call Vs Volunteer



Targeted Participation



Requires Engagement



Anxiety Producing



Shallow responses



Increased Participation



Rewards engagement

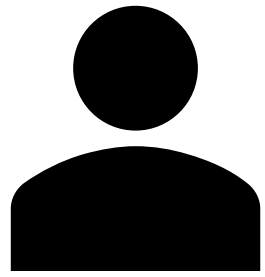


Limited responders



Fastest thinkers

The What - ABC



What?
Why?
How?



Increased Participation



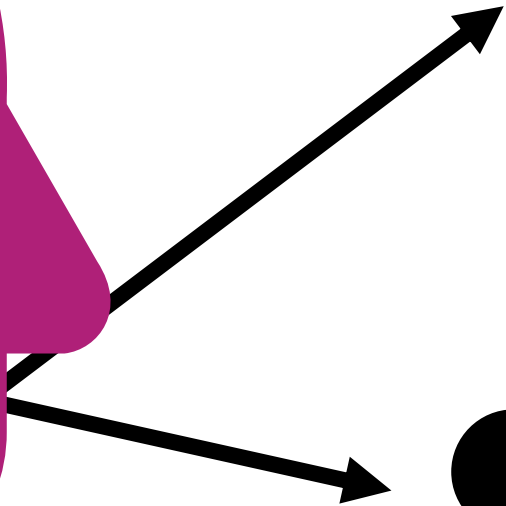
Deeper Thinking



Element of choice



Normalising Challenge



Do you want Agree, Build or Challenge what ... said?

The What – Socratic Questioning

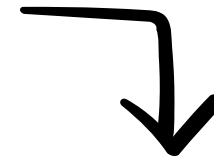
In this technique, the teacher professes **ignorance** of the topic to engage in dialogue with the students.

- **Promote clarification of a response:** “Why do you say that?” or “Could you explain that further?”
- **Interrogate assumptions:** “Is that always the case?” or “How valid are your reasons for thinking this?”
- **Explore a variety of viewpoints and perspectives:** “Is that the only way to see this?” or “Would _____ agree with you?”
- **Encourage investigation into implications and consequences:** “What would be the knock-on effect?” or “Would that be the best outcome?”
- **Question the original question:** “Why do you think I asked that question?” or “What was the real question we were answering?”

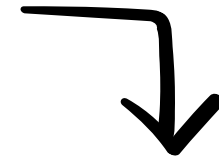


Session Flow

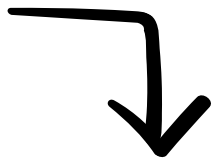
The Research



The Why



The What



Sustainable Success

Sustainable Success – Retrieval Quizzing

Last Lesson

Question 1

Answer 1

Question 2

Answer 2

Question 3

Answer 3

Last Term

Question 4

Answer 4

Question 5

Answer 5

Today's Topic

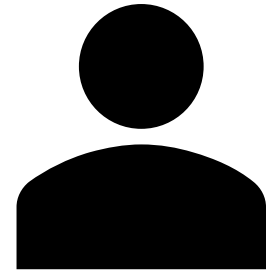
Question 6

Answer 6

Question 7

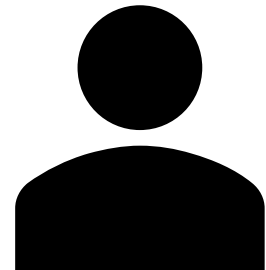
Answer 6

Sustainable Success – What, Why, How



What?
Why?
How?

What?



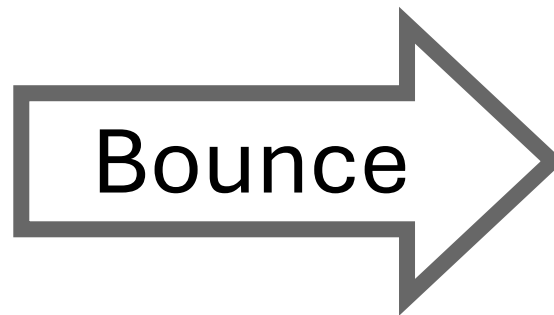
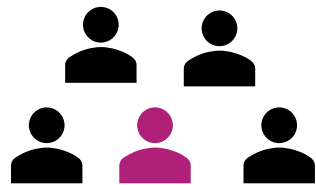
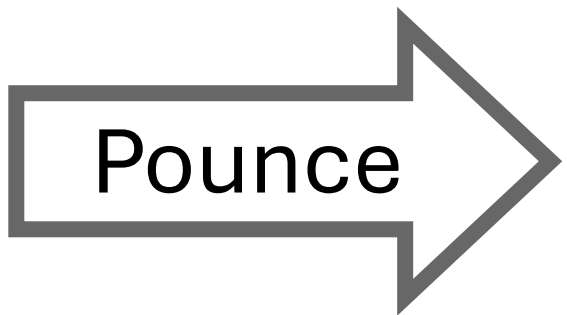
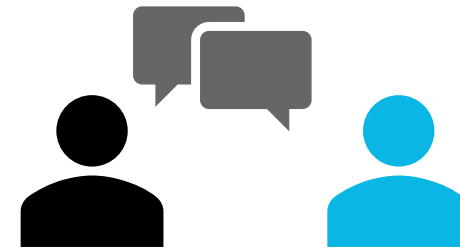
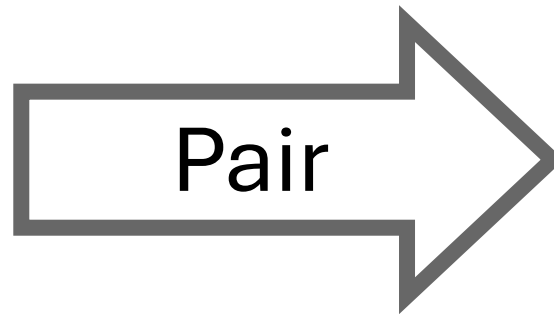
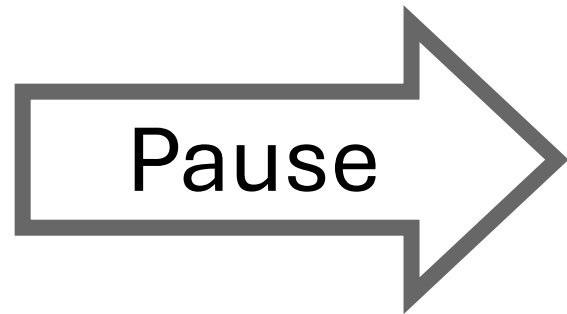
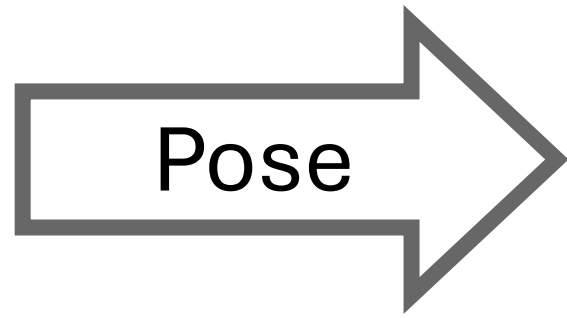
Why?



How?



Sustainable Success - PPPPB



Agree

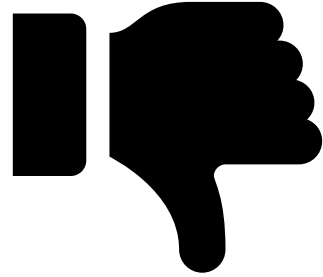


Build

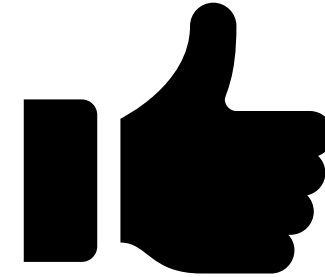
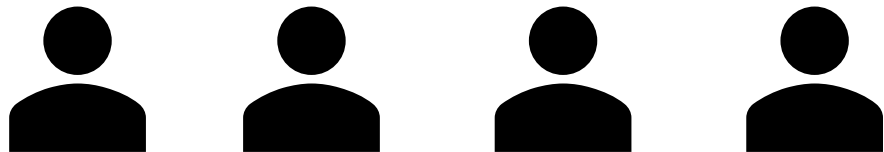


Challenge

Sustainable Success – Mini Whiteboards



Non-whiteboard questioning limits a teachers awareness of whole class thinking and understanding leading to a skewed view of reality and weaker adaptation.



Increased Participation



Oracy Opportunity



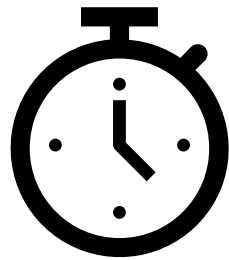
Improved Accuracy



The What – Metacognitive Questioning



TASK



Task **P**lanning

P

What strategies could you use?
What do you need to do first?

Progress **M**onitoring

M

How well are you doing?
Do you need to try something different?

Outcome **E**valuation

E

What went well?
What didn't go so well?

Sustainable Success– Hinge Questions

Question text

A

Answer 1

B

Answer 2

C

Answer 3



Question text

A

Answer 1

B

Answer 2

C

Answer 3



Question text

A

Answer 1

B

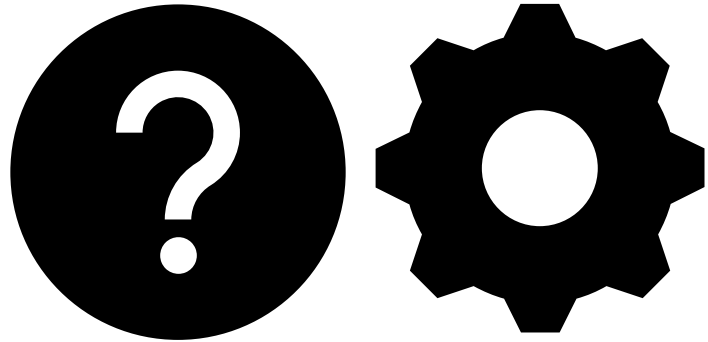
Answer 2

C

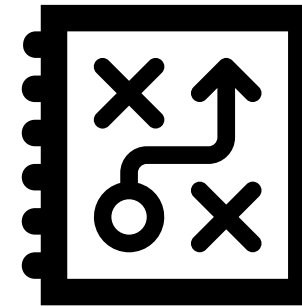
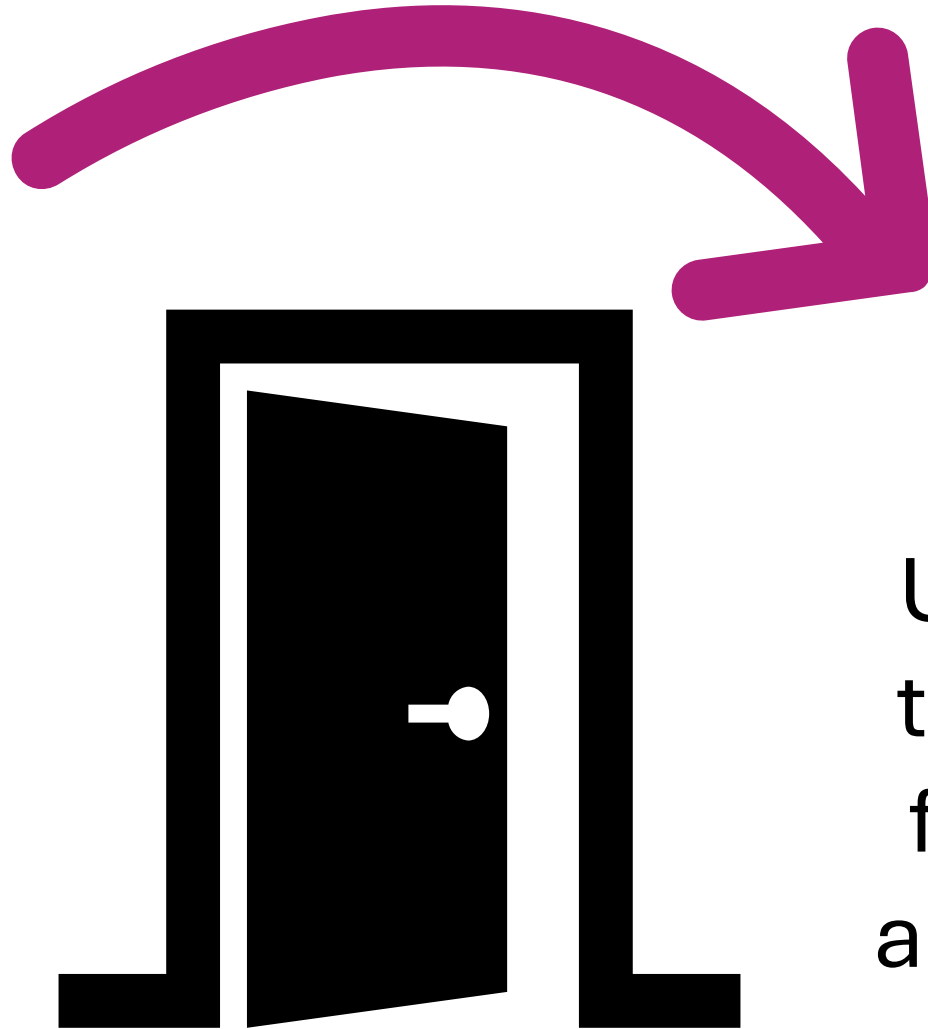
Answer 3



Sustainable Success– Exit Ticket



A question or task to assess learning from the whole session



Used to inform the planning of future lessons and pupil needs