

Quiz



1. True or false? Assessment should only take place towards the end of the lesson, so you know whether pupils have met the learning objective.
2. Which response is correct? Effective hinge questions should:
 - a) have answer options which are plausible
 - b) have just one correct answer option if they are multiple choice
 - c) be quick and easy to answer so you don't have to ask follow-up questions
3. According to a recent survey, what percentage of teachers had been surprised by a major misconception/misunderstanding in their most recent lesson?
 - a) 27%
 - b) 18%
 - c) 22%

Quiz answers



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a) 27%

b) 18%

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Structuring questions to anticipate and identify misconceptions



Facilitator Name

 @TeachFirst  @teachfirstuk

Seminar norms

Throughout the seminar, please:



Be present



Be proactive



Critique with kindness

Seminar objectives

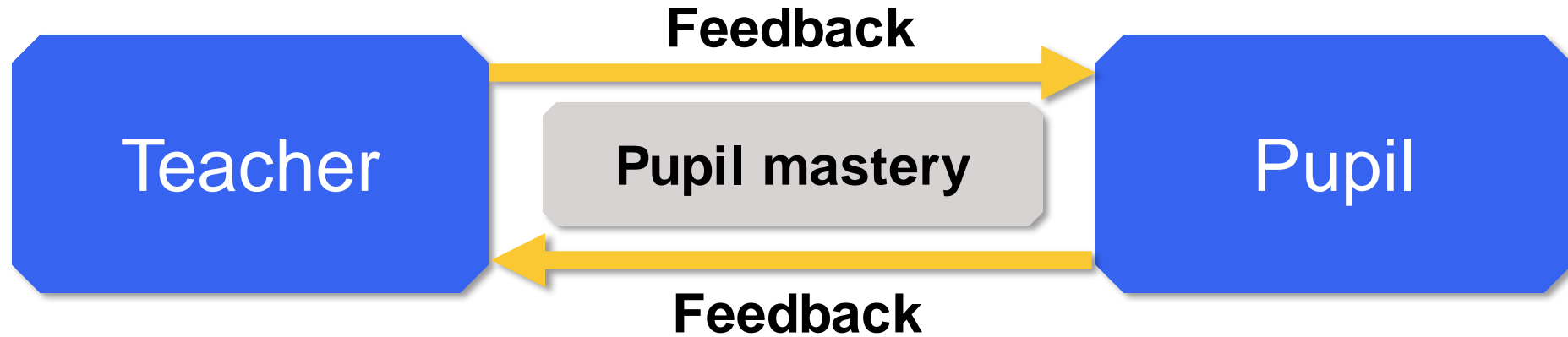
By the end of this seminar, you will:

- understand the purpose and principles of effective formative assessment
- know how to structure diagnostic questions to effectively and efficiently gather information on pupil performance and learning
- know how to use data from formative assessment appropriately to inform teacher decisions.

Related ECF statements

Learn that...	Learn how to...
Assessment (TS 6 – Make accurate and productive use of assessment)	
<p>6.3 Before using any assessment, teachers should be clear about the decision it will be used to support and be able to justify its use.</p> <p>6.4 To be of value, teachers use information from assessments to inform the decisions they make; in turn, pupils must be able to act on feedback for it to have an effect.</p>	<p>Avoid common assessment pitfalls, by:</p> <ul style="list-style-type: none"> • Planning formative assessment tasks linked to lesson objectives and thinking ahead about what would indicate understanding (e.g. by using hinge questions to pinpoint knowledge gaps). • Drawing conclusions about what pupils have learned by looking at patterns of performance over a number of assessments (e.g. appreciating that assessments draw inferences about learning from performance). <p>Check prior knowledge and understanding during lessons, by:</p> <ul style="list-style-type: none"> • Structuring tasks and questions to enable the identification of knowledge gaps and misconceptions (e.g. by using common misconceptions within multiple-choice questions). • Monitoring pupil work during lessons, including checking for misconceptions

Formative assessment



Discuss:

1. What does this graphic tell us about formative assessment?
2. What are the most important aspects of this graphic?

Performance vs learning

“Avoid common assessment pitfalls by ... drawing conclusions about what pupils have learned by looking at patterns of performance over a number of assessments (e.g., appreciating that assessments draw inferences about learning from performance).”

(DfE, 2019)

Performance is short-term evidence of pupil understanding or capabilities.

Learning is a lasting change in pupil capabilities or understanding.

Principles of assessment

Purpose: Whether the assessment meets its need.

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class: to ca
the teache

Validity: How well an assessment meets its purpose.

in
to

Reliability: How well we can trust the assessment data to be accurate.

Fairness: Any judgements made should be accurate and fair for all.

Non-example

Learning objective:

For pupils to know the features of mammals, and categorise animals using these features.

Assessment question:

“Is a bear a mammal?”

Assessment data:

- 19 pupils say ‘yes’
- 11 pupils say ‘no’



Discuss: How well aligned with the principles of assessment is this question?



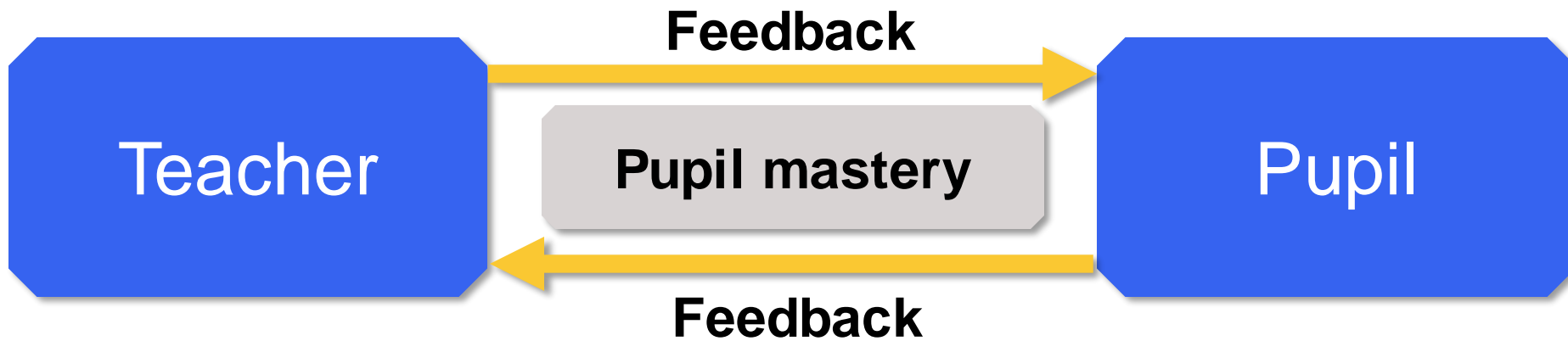
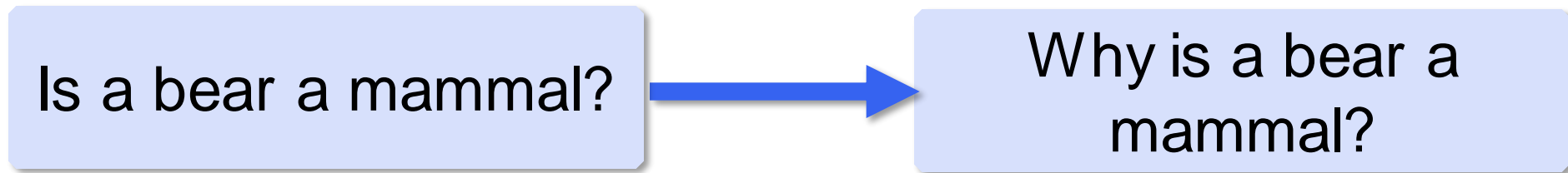
Purpose

Validity

Reliability

Fairness

Reframed questions



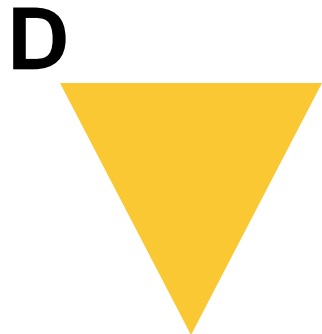
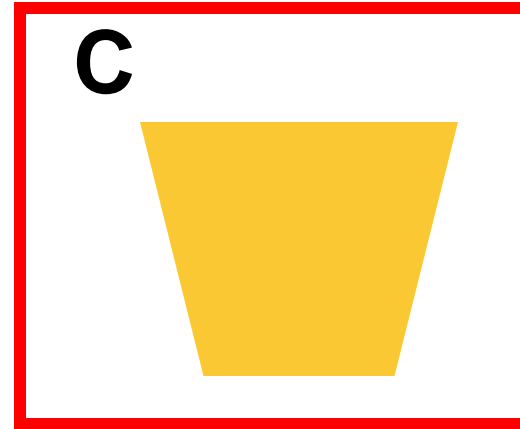
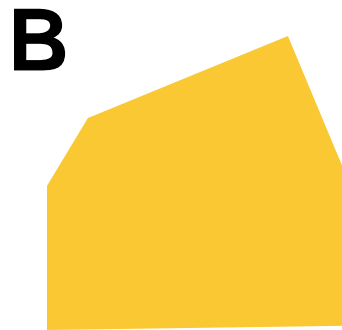
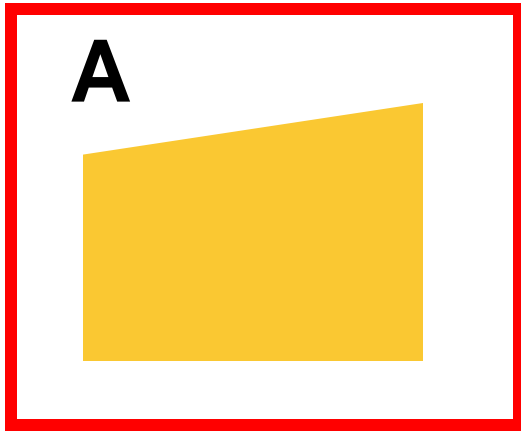
Reframed questions

Question	Reframed question	Contrasting reframed question
Is a square a trapezium?	Why is a square not a trapezium?	Why is this shape a trapezium but this one is not?
Is this picture showing winter?	How do you know this picture is showing winter?	How do we know this picture is showing winter and not autumn?
Is <i>The Merchant of Venice</i> a comedy or a tragedy?	Why is <i>The Merchant of Venice</i> a tragedy?	Why is <i>The Merchant of Venice</i> more of a tragedy than a comedy?

(Adapted from Wiliam, 2011)

Sample strategically; hinge activities

Which of these images shows a trapezium?



Discuss:
Why is this question an effective diagnostic question?

“If the formative assessments are designed without any clear decisions in mind, then there is a good chance that the information from the assessment will be useless.”

(Dylan Wiliam, 2011, p. 45)

Decisions based on inferences

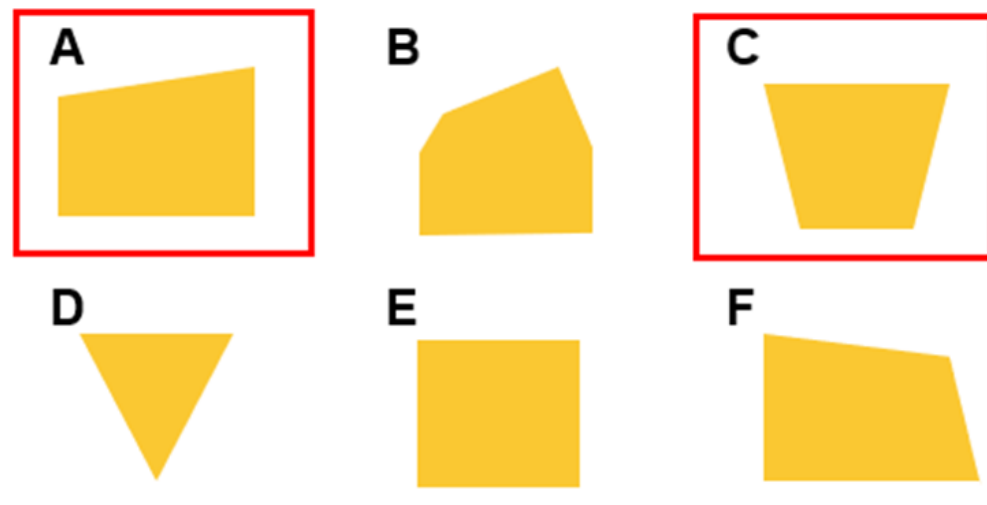
Move on to the next learning task.

Re-teach or re-explain a concept.

Provide additional scaffolding or further practice.

Provide an independent task to consolidate and stretch pupils.

Which of these images shows a trapezium?



Pupil responses:

- 18 pupils show A and C
- 10 pupils show A, C and E
- 1 pupil shows A, C and B
- 1 pupil shows A, C and F

Decisions based on inferences

Identify any adverbs in this sentence:

A deer bolted through the woods, quickly.

↑
A

↑
B

↑
C

↑
D

Pupil data:

- 8 pupils show A and C
- 10 pupils show C
- 10 pupils show A
- 2 pupils show D

Move on to the next learning task.

Re-teach or re-explain a concept.

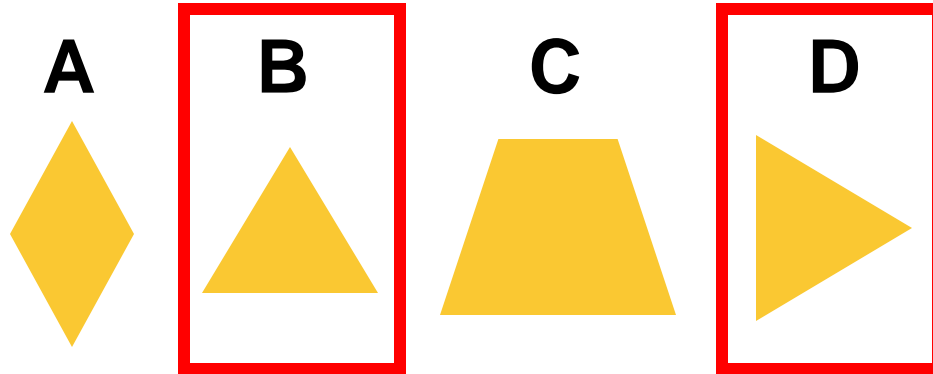
Provide additional scaffolding or further practice.

Provide an independent task to consolidate and stretch pupils.

Discuss: What inferences can be made about pupil understanding, and what are the teacher's next steps?

Decisions based on inferences

Which of the shapes are triangles?



Pupil data:

- 3 pupils show B and D
- 3 pupils show B and C
- 4 pupils show B only

Move on to the next learning task.

Re-teach or re-explain a concept.

Provide additional scaffolding or further practice.

Provide an independent task to consolidate and stretch pupils.

Discuss: What inferences can be made about pupil understanding, and how would these inferences influence your decisions?

Reflection on practice

Reflect: Consider the two questions that you brought to the seminar.

1. How well do they align with the four principles of effective assessment?
2. If possible, restructure one of them as a more effective diagnostic question.
3. Consider the possible decisions you could make depending on the pupil responses to your question.

Assessment principles

Purpose

Validity

Reliability

Fairness

Diagnostic questions

- Quick snapshot of all pupils
- Plausible distractors representing misconceptions
- Multiple correct answers of differing complexity
- Inform teacher decisions

Teacher decisions

Pupils move on

Re-teach or re-explain

Practise or scaffold

Consolidate and stretch

Summary

Formative assessment T

Feedback

Teacher

➤ **Discuss:**
 1. What does assessment mean?
 2. What are the purposes of assessment?

Principles of assessment T

Purpose: Whether the assessment meets its need.

Validity: How well the assessment meets its purpose.

Reliability: How consistent the assessment is.

Reframed questions T

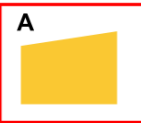
Question	Reframed question	Contrasting reframed question
Is a square a trapezium?	Why is a square not a trapezium?	Why is a square a trapezium?
Is this picture showing winter?	How does this picture show winter?	How does this picture not show winter?
Is <i>The Merchant of Venice</i> a comedy or a tragedy?	Why is <i>The Merchant of Venice</i> a comedy?	Why is <i>The Merchant of Venice</i> a tragedy?

Adapted from William, 2011


Sample strategically; hinge activities T

Which of these images shows a trapezium?


A




B



D



E



Decisions based on inferences T


Move on to next learning task.

Re-teach or re-explain a concept.


Provide additional scaffolding further practise.

Which of these images shows a trapezium?


A




B




C




D



E



F



Reflection on practice T

➤ **Reflect:** Consider the two questions that you brought to the seminar.

- How well do they align with the four principles of effective assessment?
- If possible, restructure one of them as a more effective diagnostic question.
- Consider the possible decisions you could make depending on the pupil responses to your question.

Assessment principles	Diagnostic questions	Teacher decisions
Purpose	<ul style="list-style-type: none"> Quick snapshot of all pupils Plausible distractors representing misconceptions Multiple correct answers of differing complexity Informs teacher decisions 	Pupils move on
Validity		Re-teach or re-explain
Reliability		Practise or scaffold
Fairness		Consolidate and stretch



Thank you.

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References

Black, P., Harrison, C., Lee, C., Marshall, B. & Wiliam, D. (2004) Working inside the Black Box: assessment for learning in the classroom. *Phi Delta Kappan*, 86(1), 8–21. Accessible from: <https://eric.ed.gov/?id=EJ705962>

Department for Education (2019). Early Career Framework. Department for Education.

Lemov, D. & Atkins, N. (2015) *Teach Like A Champion 2.0*. San Francisco: Jossey-Bass.

Soderstrom, N. & Bjork, R. (2015). Learning versus performance: an integrative review.

Perspectives on Psychological Science, 10(2), 176-

179. [https://www.researchgate.net/profile/Robert-Bjork-](https://www.researchgate.net/profile/Robert-Bjork-2/publication/275355435_Learning_Versus_Performance_An_Integrative_Review/links/553e61880cf210c0bdaa538e/Learning-Versus-Performance-An-Integrative-Review.pdf)

[2/publication/275355435_Learning_Versus_Performance_An_Integrative_Review/links/553e61880cf210c0bdaa538e/Learning-Versus-Performance-An-Integrative-Review.pdf](https://www.researchgate.net/profile/Robert-Bjork-2/publication/275355435_Learning_Versus_Performance_An_Integrative_Review/links/553e61880cf210c0bdaa538e/Learning-Versus-Performance-An-Integrative-Review.pdf)

[Wiliam, D. \(2015\) Designing great hinge questions. *Questioning for Learning*, 73\(1\).](#)

Wiliam, D. (2011) *Embedded Formative Assessment*. Solution Tree Press.