Standard I
Element C

Level 3 Practices
The Teacher:

7 ***Anticipates student misconceptions related to learning and addresses those misconceptions during instruction***

- Uses scaffolding techniques to breakdown concepts and uncover the misconception
- Plans for questions to address potential misconceptions
- Notes misconceptions and identifies how and when they will be addressed : same day or in later lessons depending on content.
- When one technique does not deliver results, try scaffolding another way
- Anticipate the misunderstandings and respond without disrupting the lesson flow or without losing the engagement of students that have the understanding.
- Do regular checks for understanding
- Provide clear and consistent feedback for students

8 ***Implements challenging tasks and opportunities that encourage students to ask questions and construct new meaning.***

How do questions engage pupils and promote responses?

It doesn't matter how good and well-structured your questions are if your pupils do not respond. This can be a problem with shy pupils or older pupils who are not used to highly interactive teaching. It can also be a problem with pupils who are not very interested in school or engaged with learning.

Pupil response is enhanced where

- there is a classroom climate in which pupils feel safe and know they will not be criticized or ridiculed if they give a wrong answer;
- prompts are provided to give pupils confidence to try an answer;
- there is a 'no-hands' approach to answering, where you choose the respondent rather than have them volunteer;
- 'wait time' is provided before an answer is required. The research suggests that 3 seconds is about right for most questions, with the proviso that more complex questions may need a longer wait time. Research shows that the average wait time in classrooms is about 1 second (Rowe 1986; Borich 1996).

How do questions develop pupils' cognitive abilities?

Lower-level questions usually demand factual, descriptive answers that are relatively easy to give. Higher-level questions require more sophisticated thinking from pupils; they are more complex and more difficult to answer. Higher-level questions are central to pupils' cognitive development, and

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research evidence suggests that pupils' levels of achievement can be increased by regular access to higher-order thinking.

When you are planning higher-level questions, you will find it useful to use Bloom's taxonomy of educational objectives (Bloom and Krathwohl 1956) to help structure questions which will require higher-level thinking. Bloom's taxonomy is a classification of levels of intellectual behaviour important in learning. The taxonomy classifies cognitive learning into six levels of complexity and abstraction

1. Knowledge – pupils should: describe; identify; recall.
2. Comprehension – pupils should: translate; review; report; restate.
3. Application – pupils should: interpret; predict; show how; solve; try in a new context.
4. Analysis – pupils should: explain; infer; analyse; question; test; criticise.
5. Synthesis – pupils should: design; create; arrange; organise; construct.
6. Evaluation – pupils should: assess; compare and contrast; appraise; argue; select.
   Website: http://oer.educ.cam.ac.uk/wiki/Teaching_Approaches/Questioning

Planning/Coaching Questions

- How did you scaffold questions, concepts, and skills to support student learning of the content?
- How will you select accurate and appropriate instructional strategies and materials for each lesson?
- How will you plan for and implement review of previously learned concepts or skills in my lessons?
- How will you ensure the instruction and student activities align to the learning objective(s) and criteria for student mastery?
- How will you provide multiple models and delivery methods to explain concepts accurately?
- What are the likely student misconceptions that will arise during this lesson? How can I address those misconceptions during instruction?
- How will I engage ensure tasks are challenging and provide opportunities for students to ask questions and construct new meaning?
- How will I utilize questioning techniques to engage students in disciplinary inquiry?

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