Module 4 | Questioning

#### Module 4

## Questioning

#### **Objectives**

- To develop teachers' self-awareness and analysis of their own questioning techniques
- · To identify key features of good questioning
- To enhance the planning for, and use of, questions
- To identify relevant skills and plans for professional development (related to questioning) which teachers can then pursue

#### Resources

- OHTs 4.1–4.7
- Handouts 4.1–4.7 (Handout 4.3 is OHT 4.5. Cut up handout 4.4 into separate questions prior to the session.)
- Appendix 4.1, Questions for learning
- Video sequence for this module
- Flipchart and pens

Ses	ssion outline	75 minutes
4.1	Introduction	5 minutes
4.2	Analysis of questions from pre-course task	5 minutes
4.3	Purposes of questions	7 minutes
4.4	Questioning: pitfalls and alternatives	6 minutes
4.5	Using questions to promote thinking	20 minutes
4.6	Classroom tactics for effective questioning	25 minutes
4.7	Questioning – an overview	4 minutes
4.8	Ready for more?	3 minutes

#### Notes for presenters

In this module, presenters should seek to model good practice in their own questions and responses to participants. Prompts to help to achieve this have been written into various sections. It may aid the understanding and learning of participants if presenters 'think aloud' as they ask questions (for example, 'Now I'm going to pause and provide thinking time').

Appendix 4.1, Questions for learning, contains further ideas and suggestions for developing effective questioning and is to be distributed to participants at the end of the session.

#### Pre-course task

At least two weeks before the session, inform participants that they should bring with them to the session a selection of 12 questions they have asked in recent lessons. They may choose questions that they have asked in whole-class sessions or those used with groups or individuals. Encourage them to select questions that represent the normal range and type of questions they ask.

#### 4.1 Introduction

5 minutes

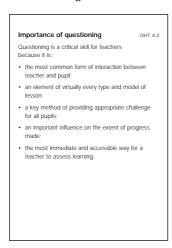
#### Show OHT 4.1.



#### Make these points:

- This is an area characterised by a good deal of 'instinctive' practice. State that
  after this session, participants will be increasingly able to reflect on and analyse
  what they do currently.
- They will also be able to identify specific ways of developing questioning techniques that will enhance pupils' learning.

Show **OHT 4.2**, which identifies five reasons why questions are central to teaching and learning.

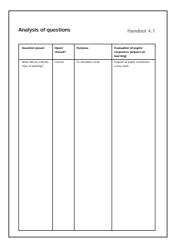


# 4.2 Analysis of questions from pre-course task

5 minutes

Explain that this activity is designed to help participants to reflect on their current practice by looking at the types of questions they often ask.

Distribute handout 4.1.



Ask participants to spend 5 minutes analysing the questions they have brought with them, using the handout. (One example has been provided on the handout to clarify the nature of the task.)

#### 4.3 Purposes of questions

7 minutes

Organise participants into groups of three or four and ask them to:

- compare their notes from the completed handout 4.1;
- generate a list of three key purposes of asking questions in lessons.

In order to draw out important purposes when generating this list, participants should focus upon the outcomes of questioning when it is done well and what their goals are when they question pupils.

Take brief feedback from the group, and use **OHT 4.3** to summarise. This feedback session presents an opportunity to **model** effective questioning techniques, particularly:

- distributing questions carefully to include a mix of 'conscripts' and 'volunteers';
- probing for explanation and justification.

# Purposes of questioning To interest, engage and challenge pupils To check on prior knowledge To stimulate recall and use of existing knowledge and experience in order to create new understanding and meaning To focus thinking on key concepts and issues To extend pupils: thinking from the concrete and factual to the analytical and evaluative To lead pupils through a planned sequence which progressively establishes key understandings To promote reasoning, problem solving, evaluation and the formulation of hypotheses To promote pupils' thinking about the way they

#### 4.4 Questioning: pitfalls and alternatives 6 minutes

Rearrange participants into new groups of three or four to discuss common pitfalls that they have encountered in asking pupils questions. Show the first two bullets points of **OHT 4.4** to prompt discussion.



Take brief feedback, logging ideas on a **flipchart**. This presents a further opportunity to **model** effective questioning, particularly to:

- provide wait time / tolerate thinking time;
- use the 'no hands up' rule;
- build up fuller, more sophisticated answers by layering one answer upon another.

As you do this you should attempt to reflect upon the effectiveness of your practice so that you can adjust it for the later parts of the session.

Continue with OHT 4.4 to summarise common pitfalls.

Make these points:

- Avoiding these pitfalls can have two key outcomes: greater pupil participation in lessons and greater depth in teaching and learning.
- Questions such as 'Can you ...?' or 'Are you ...?' may be unhelpful for pupils
  with special educational needs as they may interpret the question literally and
  the response will be 'yes' or 'no'.

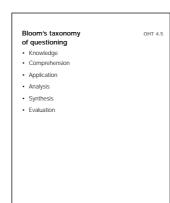
- Some pupils on the autistic spectrum often need to know why a question is being asked. Questions that demand specific information will often yield a positive response, for example 'Can you tell me the way to the station?'. However, questions such as 'Can you tell me how you worked that out?' may yield a 'yes' response, but no more. The pupil with autistic spectrum disorders may not be able to understand why the question has been asked as they got the answer right. As an alternative, try 'Explain to the class how you worked that out on the whiteboard because we might like to try the same strategy'. Pupils are more likely to respond positively as clear direction and purpose is given.
- Teachers may need to consider how to use a range of questions sensitively in order to maintain the self-esteem of individual pupils.

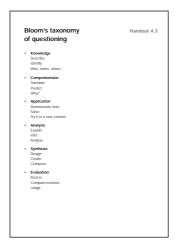
Draw attention to handout 4.2, which identifies a variety of alternatives to questioning. Ask participants to consider the examples and if possible add more ideas or examples of alternative strategies.



#### Using questions to promote thinking 20 minutes 4.5

Show **OHT 4.5** and distribute **handout 4.3**.





Make the following points. Take about 5 minutes.

- Bloom researched thousands of questions that teachers asked, and categorised them.
- Research has consistently shown that the large majority of questions asked by teachers come from the first two categories, which relate to factual recall and comprehension.
- Few questions come from the other key categories, which relate to higher-order thinking skills.
- Research has shown that pupils' levels of achievement can be increased by regular practice of higher-order thinking.
- Achievement at levels 5+ against the National Curriculum level descriptors almost invariably requires thinking in Bloom's higher-order categories of application, analysis, synthesis and evaluation.

Activity 10 minutes

Distribute the 18 questions cut from **handout 4.4**. In groups of three or four, participants should categorise the 18 questions, according to the different levels of Bloom's taxonomy (handout 4.3). Acknowledge at the outset that prior knowledge and context may have a significant influence on the 'order' of thinking required by each question.



Take brief feedback.

There are deliberate subtleties built into the list of questions, especially questions 3 and 4. These are designed to provoke deeper thought about the detail of wording. The main point to be drawn from these two questions is that **teachers can significantly enhance their questioning by attention to their wording**. Changes can readily be made which improve the engagement/involvement of pupils and at the same time encourage more higher-order thinking.

This feedback session provides opportunities to **model** effective questioning techniques, particularly:

- the use of wait time;
- the use of supplementary questions to require justification and extend thinking –
  it would be particularly useful to ask how a question might have been posed to
  ensure a higher-order of thinking by pupils;

referring one participant's answer to another participant to generate discussion not dependent upon 'the teacher'.

The list below provides an 'answer sheet', although it is possible to argue that some of the questions could be categorised differently.

Bloom's taxonomy	Questions
Knowledge	2, 3, 11
Comprehension	10, 15
Application	5, 9, 13, 16, 18
Analysis	4, 14, 17
Synthesis	6, 12
Evaluation	1, 7, 8

#### 4.6 Classroom tactics for effective 25 minutes questioning

Explain that effective questioning is not just a matter of planning **which** questions to ask but also planning to stage or sequence those questions so that they guide pupils towards key lesson objectives. Effective questioning also depends on how questions are asked.

The video illustrates some tactics and strategies used by one teacher in her questioning. Distribute handout 4.5 and invite participants to log the tactics that are used, while watching the video.



The video was filmed at Eastbury School, which is a mixed comprehensive in Barking and Dagenham. Sadie Huddleston is teaching history to a Year 7 mixedability class.

#### Show the video sequence.

After watching the video take responses from participants. Record ideas on a flipchart, to build a list of those tactics that made the questioning successful.

A wide range of responses is possible. The following notes are provided not as 'answers' but to support discussion and to help to identify positive features.

The questioning in the sequence could help to stimulate and promote:

#### **Thinking**

- The pace of questioning is unhurried.
- Wait time allows pupils to think through their answers.
- Pupils are required to formulate their own questions.
- · A range of open-ended questions is asked.
- 'Why' is frequently used as the opening to questions.
- Higher-order questions which require analysis, evaluation and justification are regularly employed.
- Speculative, 'what if' questions requiring reasoning are used.
- Pupils are asked to discern which are the 'big questions'.

#### **Extended/sustained responses**

- Explanations of answers are routinely required.
- Questions which engage emotions or require opinions are set.
- Challenging 'why' questions are posed.
- Pupils' answers are valued by the teacher.
- The teacher's positive eye-contact and body language encourage pupils to continue.

#### **Active listening**

- Questions are posed to conscripts as well as volunteers.
- Variety is built into the questions.
- Pupils are required to generate their own questions.

#### Interaction between pupils

- Carefully structured 'think, pair, share' sessions foster detailed, paired discussions.
- Pupils are encouraged to ask each other questions.
- Pupils are requested to add to and challenge the answers provided by others.

Distribute **handout 4.6**. Explain that it lists a number of other very useful techniques that teachers, at times instinctively, use to make their questioning more productive. Ask participants, in pairs, to:

- complete the grid, identifying possible benefits and contexts for using each tactic;
- identify those tactics they use regularly.

Tactic or device	Benefits/gains	Example/context	In regular use?
Consciously waiting for a pupil to think through an answer (before you break the stence)			
Using a planned mix of 'conscripts' and 'volunteers'			
Phone a friend			
1fot-seating'			
Previewing a question in advance			
Pair rehearsal (of an answer or a question)			
Eavesdropping and deploying specific targeted questions			
You are not allowed to answer this in less than 15 words'			
Deliberately asking a child whom you know sell provide only a parity formed answer (when asking difficult whole- class questions)			
Staging or sequencing questions with increasing levels of challenge			
Using the 'no hands up' rule			
Providing signals to pupils about the kind of answer that would best fit the question being asked			

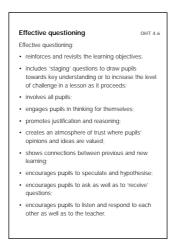
Take feedback as a 'whole class' by asking participants for quick examples from their own National Curriculum subject. As a presenter, **model** some of the devices/techniques listed in order to provide further exemplification. Provide copies of **handout 4.7**, which gives examples of some gains, as a basis for further discussion by participants.



#### 4.7 Questioning – an overview

4 minutes

Show **OHT 4.6** to summarise the key characteristics of effective questioning.



Illustrate these generalisations by referring back to examples seen in the video or discussed in the group or 'whole-class' activities.

#### 4.8 Ready for more?

3 minutes

Distribute **appendix 4.1**, **Questions for learning** and draw attention to the last section. Show **OHT 4.7**. Emphasise that this module has been designed to increase awareness of effective questioning techniques in order to encourage participants to enhance their own practice.

#### Ready for more?

OHT 4.

- Use a tape or video recorder to record a whole-class question-and-answer session. Replay the tape to help you to evaluate the different aspects of your own questioning. You may find it useful to focus upon whether.
- you asked too many questions
- you had a balance of open and closed, high- and low-order questions;
- you encouraged opinion, informed speculation and tentative answers;
- you handled incorrect answers effectively;
- you provided thinking time.
- Begin to build key questions into your lesson planning.
- In a departmental meeting discuss how you might plan sequences of questions that build up pupils' understanding of important concepts.

### **Questions for learning**

#### Why is questioning important?

- Questions are the most common form of interaction between teachers and pupils in whole-class lessons as well as in group and individual work.
- Questioning is a key method of altering the level of challenge provided and determining the progress made in lessons.
- It is an immediate way for the teacher to check the effectiveness of teaching.

#### The purposes of questioning

- Questions prompt pupils to inspect their existing knowledge and experience to create new understandings.
- Questions can help pupils to develop thinking from the concrete and factual to the analytical and the evaluative.
- Questions focus pupils on the key issues.
- Questioning models for pupils how experienced learners seek meaning.
- Closed questions are useful in recap sessions and during explanations to check understanding.
- Open questions are useful during class discussions and debriefings.

#### What is effective questioning?

- It is closely linked to the learning objectives in the lesson.
- It is staged so that the level of challenge in the lesson increases as the lesson proceeds.
- Group and paired work can allow questions to be matched to the level of challenge needed to move different pupils forward.
- · Closed questions check pupils' knowledge and understanding.
- Open questions have more than one possible answer. A well-designed set of questions leads pupils from unsorted knowledge to organised understanding. It models how learning evolves.
- Effective questioning provides opportunities for pupils to ask their own questions, seek their own answers and provide feedback to each other.
- Effective questioning makes space for pupils to listen to each other's questions and answers as well as to the teacher's.
- Effective questioning requires an atmosphere where pupils feel secure enough to take risks or be tentative.

#### Risks of questioning

- Sometimes, questioning is used in situations where explanation would be a more appropriate teaching strategy.
- It is easy to fall into the trap of asking bogus questions 'Guess my answer'.
- A period of interrogation takes place until the 'right' answer is reached.
- Teachers retain control over the process so that pupils do not have opportunities to initiate questions or provide feedback.
- Sometimes, oral comprehension exercises predominate.
- There can be too many closed questions and one-word answers.
- Teachers can be diverted by the pursuit of red herrings.
- There can be problems of fielding incorrect, wayward, glib and unexpected answers.

#### Improving questioning

#### Whole school

- Include guidance on questioning in the school's teaching and learning policy.
- Instigate whole-school training, using good practice from within the school.
- Use Bloom's taxonomy in training sessions to develop understanding of the way questions can trigger higher-order thinking skills.

#### A Knowledge

Describe

Identify

Who, when, where

#### **B** Comprehension

Translate

Predict

Why?

#### **C** Application

Demonstrate how

Solve

Try it in a new context

#### **D** Analysis

**Explain** 

Infer

Analyse

#### E Synthesis

Design

Create

Compose

#### F Evaluation

Assess

Compare/contrast

Judge

#### Departments

- Include work on subject-specific questioning at department meetings.
- Use Bloom's taxonomy to analyse the different types of question being asked and to determine the extent to which these questions are developing skills of application, analysis, synthesis and evaluation.
- Ensure that examples of effective questioning are included in schemes of work.
- Try different techniques and seek feedback from colleagues.
- Arrange peer observation of lessons to share and improve practice in questioning.
- Teachers record and evaluate examples of their questioning techniques to improve their own practice.

#### Tips for effective questioning

#### 1 Planning for questioning

- Ensure that examples of effective questions are included in schemes of work.
- Use Bloom's taxonomy to ensure that you are asking questions which demand more than recall of knowledge and a demonstration of understanding.
- Share key questions at the start of a lesson a different way of sharing learning objectives. 'These are the questions we will be trying to answer in this lesson.'
- Ensure that these key questions are answered by the lesson. The plenary can then be based on these questions.
- Forewarn pupils about some key questions: 'Later in this lesson I am going to ask you a question about ....'
- Stop during the lesson to check whether these key questions have been answered. 'Have we answered this? Discuss with your partner. What else do you need to know?'
- Ensure that there is a balance between asking and telling.

#### 2 Asking open questions

- Make sure the question has more than one possible answer.
- Don't have a single 'right' answer in your head that pupils have to get to!
- Follow up answers with words and phrases like 'Explain', 'Why?', 'What makes you think that?' and 'Tell me more', to provide greater challenge, encourage speaking at greater length and get pupils thinking around the question in greater depth.
- As part of the development of their enquiry skills, encourage pupils to ask their own questions.
- Use techniques such as 'What do you already know about ...? What do you want to know? What questions will help you to find out? How will you find out?'

#### 3 Using questioning to develop collaborative work

- Begin a lesson by giving pairs of pupils a question to answer from the last lesson.
- Ask pairs to discuss a question for a minute before they answer it.
- Set up 'Who wants to be a millionaire?' structures for groups and individuals ask a friend, ask a group, ask the class to seek discussion and support for answers.
- Make questions a normal part of the lesson. 'Earlier this lesson I asked you two questions. Turn to your partner and see if you're ready to answer them yet.'
- Get one group or pair to set questions for another group or pair to answer.

#### 4 Treat questions seriously

- Give pupils time to answer: count a few seconds in your head to allow slower pupils to form a response and put their hands up.
- Allow pupils time to research answers to more complex questions, either individually or collaboratively.
- Provide structures to enable pupils to find answers and to form their own questions. Sorting and matching exercises are useful for this.
- Encourage pupils to seek answers to their own questions.
- Treat answers with respect and give pupils credit for trying.

#### Improving your own questioning

Try this evaluation exercise to check your current questioning techniques, and then see whether your practice improves.

Tape-record a 5-minute question-and-answer session. Fill in the grid when you play the tape back. Then try the same activity again, having planned to include a wider range of questioning activities.

Questioning activity	Number of occurrences in 5-minute session (first sample)	Number of occurrences in 5-minute session (second sample)	Number of occurrences in 5-minute session (third sample)
Closed – factual information and comprehension			
Open – prompting more than one answer			
Time for reflection before answer required			
Further prompts to elicit extended answer			
Opportunities for pupils to explain why they have offered that response			
Opportunities for pupils to confer before answering			
Teacher initiates, pupils respond, teacher provides feedback			
Pupils initiate their own questions			

- Did your questioning improve as you became more conscious of the techniques you were using?
- Were the questions used to drive the learning objectives forward?
- · Did your questions have increasing levels of challenge?
- Were the questions helping to develop the kinds of thinking described in Bloom's taxonomy in categories C, D, E and F?

Objectives OHT 4.1

 To develop teachers' self-awareness and analysis of their own questioning techniques

- To identify key features of good questioning
- To enhance the planning for, and use of, questions
- To identify relevant skills and plans for professional development (related to questioning) which teachers can then pursue

# Importance of questioning

**OHT 4.2** 

Questioning is a critical skill for teachers because it is:

- the most common form of interaction between teacher and pupil;
- an element of virtually every type and model of lesson;
- a key method of providing appropriate challenge for all pupils;
- an important influence on the extent of progress made;
- the most immediate and accessible way for a teacher to assess learning.

## **Purposes of questioning**

**OHT 4.3** 

- To interest, engage and challenge pupils
- To check on prior knowledge
- To stimulate recall and use of existing knowledge and experience in order to create new understanding and meaning
- To focus thinking on key concepts and issues
- To extend pupils' thinking from the concrete and factual to the analytical and evaluative
- To lead pupils through a planned sequence which progressively establishes key understandings
- To promote reasoning, problem solving, evaluation and the formulation of hypotheses
- To promote pupils' thinking about the way they have learned

It is easy to fall into the trap of:

- asking too many closed questions;
- asking pupils questions to which they can respond with a simple yes or no answer;
- asking too many short-answer, recall-based questions;
- asking bogus 'guess what I'm thinking' questions;
- starting all questions with the same stem;
- pursuing red herrings;
- dealing ineffectively with incorrect answers or misconceptions;
- focusing on a small number of pupils and not involving the whole class;
- making the sequence of questions too rigid;
- not giving pupils time to reflect, or to pose their own questions;
- asking questions when another strategy might be more appropriate.

# Bloom's taxonomy of questioning

**OHT 4.5** 

- Knowledge
- Comprehension
- Application
- Analysis
- Synthesis
- Evaluation

Effective questioning:

- reinforces and revisits the learning objectives;
- includes 'staging' questions to draw pupils towards key understanding or to increase the level of challenge in a lesson as it proceeds;
- involves all pupils;
- engages pupils in thinking for themselves;
- promotes justification and reasoning;
- creates an atmosphere of trust where pupils' opinions and ideas are valued;
- shows connections between previous and new learning;
- encourages pupils to speculate and hypothesise;
- encourages pupils to ask as well as to 'receive' questions;
- encourages pupils to listen and respond to each other as well as to the teacher.

- Use a tape or video recorder to record a whole-class question-and-answer session.
   Replay the tape to help you to evaluate the different aspects of your own questioning. You may find it useful to focus upon whether:
  - you asked too many questions;
  - you had a balance of open and closed,
     high- and low-order questions;
  - you encouraged opinion, informed speculation and tentative answers;
  - you handled incorrect answers effectively;
  - you provided thinking time.
- Begin to build key questions into your lesson planning.
- In a departmental meeting discuss how you might plan sequences of questions that build up pupils' understanding of important concepts.

Question posed	Open/ closed?	Purpose	Evaluation of pupils' responses (impact on learning)
What did we call this style of painting?	closed?  Closed	To stimulate recall	responses (impact on learning)  Helped all pupils remember a key word

Alternative strategy	Example
Invite pupils to elaborate	'Would you say a little more about that.'
	'I am not sure I'm certain I know what you mean by that.'
Speculate about the subject under discussion	'I wonder what might happen if'
Make a suggestion	'You could try'
Reflect on the topic	'Perhaps we now have a way of tackling this next time you'
	'Let's bring this all together'
Offer extra information	'It might be useful to know also that'
	'I think that I have read that'
Reinforce useful suggestions	'I especially liked because'
Clarify ideas	'We can tell this is the case by'
Correct me if I'm wrong	'But I thought we had agreed that'
	'So now perhaps we all believe'
Echo comments /	'So, you think'
summarise	'Jane seems to be saying'
Non-verbal interventions	Eye contact, a nod or raised eyebrows to encourage extended responses, to challenge or even to express surprise

#### Handout 4.3

# Bloom's taxonomy of questioning

#### Knowledge

Describe Identify Who, when, where

#### Comprehension

Translate
Predict
Why?

#### Application

Demonstrate how Solve Try it in a new context

#### Analysis

Explain Infer Analyse

#### Synthesis

Design Create Compose

#### Evaluation

Assess Compare/contrast Judge

# Analysing questions using Bloom's taxonomy

#### Handout 4.4

- 1 Which of these three tools would do that most effectively and why?
- 2 What name did we give to ...?
- 3 Why did the South American Indians have no word for 'season'?
- 4 Why do you think the South American Indians might have no word for 'season' in their language?
- 5 What does this style of painting remind you of?
- What do you think is the main point the writer is making in the second paragraph?
- 7 Which of these four sources might be most reliable in helping us to ...?
- 8 Now, the difficult bit. Given all the conflicting arguments, where would you build the new refinery?
- 9 What would happen if you mixed ...?
- 10 What choices did Harold have when faced with that situation?
- 11 Which words do you already know in this sentence?
- Given all of the sources we have looked at, where would you now expect these people to have moved to?
- 13 If we are unsure, how could we set about translating ...?
- 14 Why did the Normans invade ...?
- 15 What similarities can you spot between the two ...?
- 16 If this verb looks like this when it follows 'il' what would you expect of these verbs?
- 17 What repeating pattern can you see in the events ...?
- 18 How will you set about remembering what you have learned?

## Tactics for effective questions

Handout 4.5

In the video extract how does the teacher:

· stimulate thinking?

• promote reasoning?

• promote extended/sustained responses?

• promote active listening?

• stimulate interaction between pupils?

Tactic or device	Benefits/gains	Example/context	In regular use?
Consciously waiting for a pupil to think through an answer (before you break the silence)			
Using a planned mix of 'conscripts' and 'volunteers'			
'Phone a friend'			
'Hot-seating'			
Previewing a question in advance			
Pair rehearsal (of an answer or a question)			
Eavesdropping and deploying specific targeted questions			
'You are not allowed to answer this in less than 15 words'			
Deliberately asking a child whom you know will provide only a partly formed answer (when asking difficult whole- class questions)			
Staging or sequencing questions with increasing levels of challenge			
Using the 'no hands up' rule			
Providing signals to pupils about the kind of answer that would best fit the question being asked			

Tactic or device	Benefits/gains	Example/context	In regular use?
Consciously waiting for a pupil to think through an answer (before you break the silence)	Prompts depth of thought and increases levels of challenge		
Using a planned mix of 'conscripts' and 'volunteers'	Enhances engagement and challenge for all		
'Phone a friend'	Encourages whole-class listening		
'Hot-seating'	Encourages listening for detail and provides challenge		
Previewing a question in advance	Signals the big concepts and learning of the lesson		
Pair rehearsal (of an answer or a question)	Encourages interaction, engagement and depth		
Eavesdropping and deploying specific targeted questions	Facilitates informed differentiation		
'You are not allowed to answer this in less than 15 words'	Develops speaking and reasoning skills		
Deliberately asking a child whom you know will provide only a partly formed answer (when asking difficult whole- class questions)	Excellent for building understanding from pupil-based language		
Staging or sequencing questions with increasing levels of challenge	The essence of purposeful questioning, moving pupils from existing knowledge or experience (often unsorted or unordered knowledge) to organised understanding, where patterns and meaning have been established		
Using the 'no hands up' rule	Improves engagement and challenges all pupils to think		
Providing signals to pupils about the kind of answer that would best fit the question being asked	Helps pupils to recognise the range of possible responses and to select appropriately		