

# International Approaches to Learning and Teaching: Science

Active talk: Active learning

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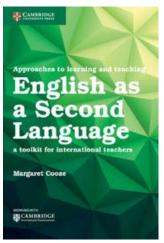


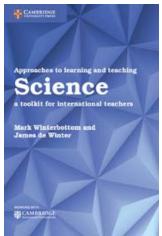


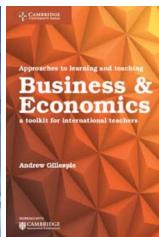
#### Approaches to learning and teaching

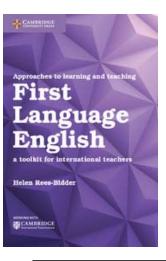
A toolkit for international teachers

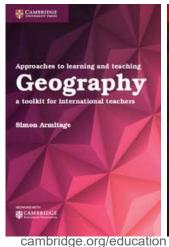
#### Launching this year

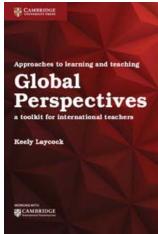


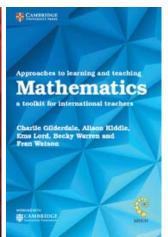












#### Plus 5 more titles next year!

Literature in English
History
Art & Design
MFL
Primary

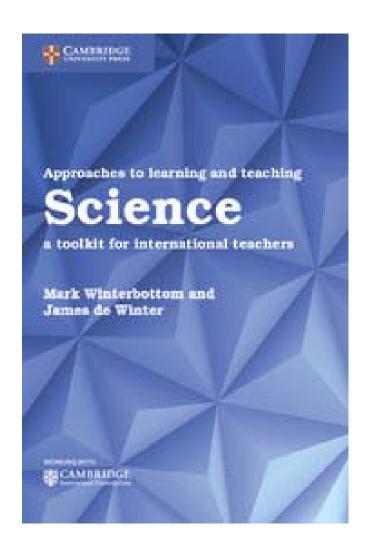


- On your own...
- Take a piece of paper, and tear it into 6 pieces. Write down a short phrase on each piece, which describes what you want from a book about teaching and learning.
- Put the pieces of paper together on your table, and arrange them into clusters if they match up. Write down the name of each cluster next to each pile of papers.



## 'Approaches to Learning and Teaching' Series Purpose of the series

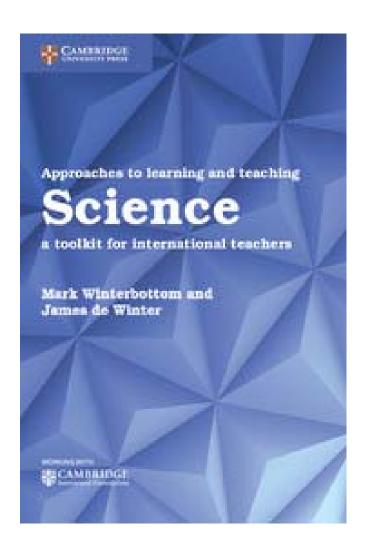
- ▶ To update the 'Teaching and Assessing Skills' series published in 2003
- To offer practical resources for teachers worldwide
- ▶ To put theory into context 'know how and know why'
- To provide a companion to teaching and to enhance teacher CPD
- ▶ To support Cambridge International Examinations' "enrichment" workshops which aim to transform classroom practice





## 'Approaches to Learning and Teaching' Series Objectives of the series

- ▶ To support teachers in their professional development
- To offer a shared vision of professional learning in schools
- ▶ To present a clear construct of what we believe to be the key principles and practices of teaching and learning
- To provide practical ideas backed by research evidence
- ▶ To explore different techniques and provide tips for how to use them





#### 'Approaches to Learning and Teaching' Series

#### Core chapters:

- Active Learning
- Assessment for Learning
- Metacognition
- Language Awareness
- Inclusive Education
- ▶ Teaching with Digital Technologies
- Global Thinking



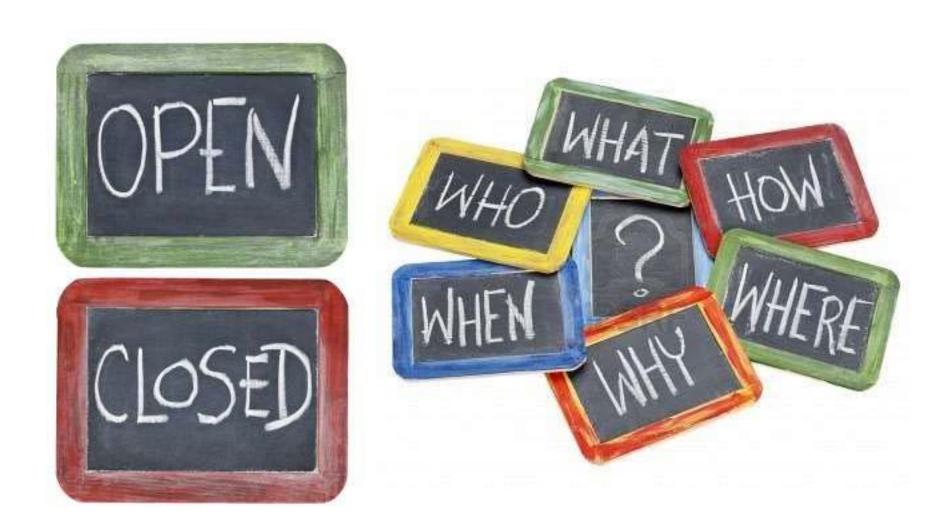
## Questioning and talk

'This is the teacher's great skill: to bring all students in a class into a question and answer exchange... adjusting the level of questioning to the student in a subtle way'

'Children, we now know, need to experience a rich diet of spoken language in order to think and to learn'



## **Types of questions**





## Who, what, when, why, where, how?

Take four minutes as a group to write down as many questions as you can about the object below, using the question words above.





#### **Photocopier**

- Work in groups of four
- Identify runner 1, runner 2, the drawer, and the holder
- When I say, runner number 1 should run to look at the picture, run back and describe it to the drawer. The drawer may not ask questions, but must draw what they are told.
- After a few minutes, I will ask runner number 2 to look at the picture, run back and tell the drawer how to improve the drawing. The drawer may ask questions.



What happened to the quality of the drawing after runner 2?

Choosing the appropriate language is important in your teaching.

Enabling children to ask questions is important in their learning.



#### **Build a tower**

- In groups, you have 10 minutes to build a structure out of paper.
- The structure must be as tall as possible.





- After 5 minutes (I will tell you when), you must send an envoy to the next table.
- The envoy must tell the next table the the best design feature in your structure.
- The envoy will also return with the next group's 'best feature'





- When I say, tour the structures, and decide which you think is the best. The best one is not necessarily the tallest one.
- Return to your table, and explain which you think is best to the rest of the group and why.





- On separate sheets of paper, write down all the criteria which the group members used to judge the structures.
- Together put the criteria in rank order according to the order of importance.





## Let's discuss the chapters

Go and find a new table (don't sit with anyone you were with before).

Look at the list of chapters on the board

As a group, think about how the process and outcome of what you have done aligns with putting into practice the priorities of those chapters.



#### **Plenary**

#### 'Approaches to Learning and Teaching' Series

#### Core chapters:

- Assessment for Learning
- Active Learning
- Metacognition
- Language Awareness
- Inclusive Education
- ▶ Teaching with Digital Technologies
- Global Thinking

How do the activities we have done today link to the core chapter titles?



#### **Dialogic Teaching**

Dialogic teaching harnesses the power of talk to engage children, stimulate and extend their thinking, and advance their learning and understanding.

Dialogic teaching is:

- Collective: teachers and children address learning tasks together, whether as a group or as a whole class
- Reciprocal: teachers and children listen to each other, share ideas and consider alternative viewpoints
- Supportive: children articulate their ideas freely, without fear of embarrassment over 'wrong' answers; and they help each other to re ach common understandings
- Cumulative; teachers and children build on their own and each others' ideas and chain them into coherent lines of thinking and enquiry

International Education

Purposeful: teachers plan and steer classroom talk with specific educational goals in view
Cambridge Assessment

## Your favourite activity

- Take any of the chapters, and write down one learning activity which you think could be included in that chapter.
- Tour the tables, and look at each other's activities.
- Decide which is your favourite and why.

- Assessment for Learning
- Active Learning
- Metacognition
- Language Awareness
- Inclusive Education
- ▶ Teaching with Digital Technologies
- Global Thinking









# THANK YOU



What do you think is happening in this picture?

What questions does this picture make you ask?

How could you use this picture in an English lesson?

