



Getting Started with AFL in Science

Transcription: Video 3

Interviewee

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What are concept cartoons and how can they support AFL in Science lessons?

What is a concept cartoon? At the heart of it, it's a multiple choice question. The question will be about a common conceptual idea that children need to know about in a science lesson, and as well as the correct answer, the incorrect answers will articulate some of the most commonly held alternative conceptions that students might have in response to that question. Ideas that they may hold that have a sort of sense and logic to them, but don't match up with the correct idea.

The design of the concept cartoon is as a cartoon, often with speech bubbles, where one student, one child, might ask a question and then other students might say, well, I think this and I think this and I think that. So you've got a picture with a question and a number of spoken responses from individual students. If a student answers correctly, that's great. They've got it right. The power in the planning stage is to know what the likely difficulties that students might have might be, so that you can think about what you would do if they said that.

For the student, some of the strengths are in its formatting and its construction. Rather than having to hold their hand up to a whole class and say, 'Oh, I think this is right or wrong', they look at someone else's answer and go, 'Oh, I think Julie might be right. I'm not sure about John' and so it allows them in a less threatening way to show their understanding. The other thing that it helps students with is they don't have to construct a beautifully articulate, well-sequenced sentence in response to a question. They can hear the question, they can see the question written down and they can look at the answers on the page and go, 'Oh they think that, they think that' and then have a discussion about it.

It's important the students understand the question so you might want to articulate and talk about the question in a little bit more detail with the full class. But what you would then do is hand over that concept cartoon with the question, the answers to students, generally working in groups, and you might ask them to talk through the answers and to decide what they think is right or wrong but allow them to have a sort of confidence level. 'I'm quite sure about that.'

I would suggest it's important to get students to engage with *all* of those responses on the page. It's very easy for students to go, 'That's the right one', and then sort of move on. But because the other answers are articulations of things that commonly students struggle with, the process of explaining why that's the wrong answer can be just as powerful, maybe even more powerful than the student saying, 'Oh, that's the right one. I know the answer.'

The whole purpose of this is to elicit what the children know. So you've got a choice. You could do it on a group level and ask that group, you know, what do you think? the power of that, as in the power of discussion, is no individual student feels threatened or possibly embarrassed by offering an answer to the whole class and that fear of being wrong. Another way to get the responses back is to actually, at the end of that discussion, through maybe mini whiteboards or some kind of signalling, or however you do your kind of feedback of answers to questions in the class is then say, okay, you've all discussed this, now I'm going to ask you all what you think the answers is. Do you think it's A, B, C, D or E? And then as a teacher you can see the entire class and what their answers are.

And then and this is the key bit, back to the planning, decide what to do. Because there's no point in asking a question of students unless you're going to do something with the answer. But because at the planning stage you've thought about well if they think B, I'm going to show them this, and if they think A, I'm going to show them that you can look at your class and go, oh, okay, right. Quite a few of them think this and that, and then you can kind of work on how you're going to support these individual students.

The benefit of a concept cartoon, of course, is you know what the most likely answers are going to be. So you've got a response prepared to help to shift the students, shift the children from what they are thinking to where you want them to go. So there we are, concept cartoons, a powerful tool, a question, an answer and a number of common wrong answers. Planning helps me as a teacher think about what they might say, what they might do. In the lesson, it's less threatening because I don't have to publicly declare their understanding, but I find a way to know what they know and then I, as a teacher, respond. Think before the lesson. Find something out in the lesson about what the children know and then do something about it, which is at the heart of the ideas around assessment for learning and formative assessment.