

Talk Science

Professional Development

Transcript for Grade 4 Classroom Case: The Role of Elicitation Discussions



1. Elicitation Discussions Set the Stage for New Learning

Elicitation Discussions take place prior to instruction. Students are asked to think about what personal experience and knowledge is relevant or connected to new science content – and to share their thinking with their classmates.

The teacher listens carefully. She gains insight into her students' initial ideas, which form the foundation for new learning.

In this Classroom Case, we visit a 4th grade classroom in an elementary school in the heart of a large city. It is early September and the first day of a new science unit. Today's investigation explores the question: What is an earth material?

In the first video clip, the teacher, Candace, leads a discussion in order to elicit or uncover her students' initial ideas about earth materials to use as the basis for further learning. The elicitation discussion question is carefully worded to pique all students' interest and motivate their active engagement in the discussion. She accepts all responses without judgment for now.

In the next clip, students build on their initial ideas through a first-hand exploration of some earth materials. With a common experience with earth materials for students to draw upon and to anchor their discussion, Candace returns to the elicitation discussion.

Based on the scientists' definition of earth materials and their first-hand exploration, students revise the list of ideas elicited earlier. Students have built on their own initial ideas – elicited through discussion – to help them answer the investigation question, What's an earth material?

2. Eliciting Initial Ideas

Teacher: We're going to start off today by thinking of a place on the Earth where we can stand on the Earth's surface. So a place outside where you can stand – take off your shoes, close your eyes – imagine – take off your shoes – you don't have to really – pretend –, I'm taking mine off because they're easy to – and where my feet would be right on the Earth's surface. Zayla, where are you and what are you standing, standing on?

Notes

Zayla: I'm at the beach and I'm standing on sand.

Teacher: OK. [pause while she writes] Gabriel.

Gabriel: I'm in the rain forest and I'm standing on the ground.

Teacher: OK. What's on the ground?

Gabriel: Dirt. Sometimes it's not only dirt.

Teacher: But is there dirt?

Gabriel: Yes, but it's really nice and moist.

Madeny: I'm in a field, a flower field, and I'm stepping on grass.

Sarrah: Where I'm in Cape Cod.

Teacher: And you're touching the ground with your feet, you're standing there, what do you feel under your feet?

Sarrah: I feel wet mud.

Teacher: Nathaniel

Nathaniel: I'm at the outdoor classroom and there's gravel and soil.

Teacher: OK. [pause] Cherie.

Cherie: Logs.

Teacher: Logs. There are fallen logs that have been cut to make seats aren't there? [pause] Anything else? Keanny?

Keanny: I'm at the park and I feel wood chips ...

Teacher: Wood chips.

Keanny: ...and dirt.

Text on Final Screen
Elicitation Discussions

- Begin with an open-ended question focused on key science content
- Encourage full participation – everyone's ideas are welcome
- The teacher helps students share, expand, and clarify their own thoughts and listen carefully to others' ideas

3. Building on an Elicitation Discussion

Teacher: I have a tray and in here there are some materials and I want you to take a look at what they are and what they're made up of.

Notes

[We see students exploring samples of clay, sand, gravel, pebbles, water, mineral oil.]

Text on screen

Firsthand exploration of earth materials

- Extends students' science experience
- Provides a common experience to anchor and deepen discussion

[Students continue to explore earth materials.]

Text on Final Screen

Firsthand experience deepens science discussion by

- Extending students' science experiences so that they have more to talk about
- Giving students an opportunity to write, think, and talk amongst themselves
- Providing a common experience

4. Revising the Initial List

Teacher: I want us to come back to our list [refers to class list of earth materials elicited at the beginning of class] and see if we need to revise or change anything that's up here. Do you have some different ideas about what earth materials are? Are there some things up here that need to come off?

Blerta: Grass

Teacher: Grass. Why?

Blerta: Because it's not an earth material.

Teacher: Why? Can you explain why?

Blerta: Because it's not like something like gravel or soil.

Teacher: What's different about grass?

Blerta: It grows, not like the other four.

Teacher: It grows. What's the difference between plants and these earth materials we've just examined?

Nathaniel: Plants are living.

Teacher: Is gravel alive?

All: No.

Teacher: Is sand alive?

All: No.

Notes

Teacher: Mineral Oil?

All: No.

Teacher: OK. So you've hit upon a very important point. Scientists would describe an earth material as not being alive. So what things up here have to come off our list now?

Keanny: Flowers.

Teacher: Flowers needs to come off.

Zayla: Snails.

Teacher: Snails. Do we have snails up here? Yes, we do. Thank you! Snails needs to come off. Madeny.

Madeny: Trees.

Teacher: Trees need to come off. So let's make a concise list down here of the earth materials. What are the things that can stay, based upon the definitions we've just talked about? What can stay on the list?

Keanny: Dirt

Teacher: Dirt, or soil. And the sticks are sometimes part of the soil.

Student: Rocks

Teacher: Rocks. What do you know about earth materials now that you didn't know a little earlier in the day? What do you know?

Madeny: I learned that living things can be an earth material.

Teacher: That living things can be an earth material. When?

Madeny: When they're dead.

Teacher: When they're dead. That's pretty good. That's concise – when they're dead.

Notes

Final Screen

Revising initial Ideas

- With more experience, students can revise and refine their list.
- The teacher provides information students cannot discover for themselves.
- Students reflect on how their thinking has changed.