

Talk Science

Professional Development

Transcript for Grade 5 Classroom Case: The Role of Elicitation Discussions



1. Why Hold an Elicitation Discussion?

Elicitation Discussions take place prior to instruction. These discussions often introduce a new topic and give students a chance to ponder what they already know or wonder about that might be relevant.

All students have beginning ideas that are shaped by their personal experiences and prior knowledge, and the uniqueness of an elicitation discussion is its focus on a person's initial ideas. The preliminary ideas that surface through elicitation can be revisited later on and refined in light of firsthand investigations and new information.

Elicitation discussion questions are carefully crafted to pique students' interest in a new unit or topic or investigation and are posed in a way that encourages each person's ideas rather than right answers.

In this Classroom Case, the elicitation discussion kicks off a new unit called Transformation of Water. Based on a set of images of large ships sitting on land with no water in sight, the discussion question is *Why Are These Ships in a Field?* Well, accustomed to seeing ships on the water, not on land, students speculate about possible explanations. The teacher, Colleen, sets a tone that encourages everyone to join the conversation. She does not ask the class to weigh the pros and cons of these ideas right now.

Colleen keeps a record of the ideas elicited in the opening Discussion. She will revisit this list at the end of the unit as a way to help students recognize how their ideas about transformations of water have changed and grown.

2. What Are Students' Initial Ideas?

Teacher: Okay, so we're just about to have a productive discussion because we're just about to start a science unit, and it's about water transformation. So I'm going to pass you this book, but I'm just reading the title. It's about water transformations, what changes and what stays the same. And our big question for this unit – I love this question – is *Why are these ships in a field?* Anybody curious what I'm going to be talking about?

Aisha: You're going to talk about tides.

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Teacher: You'll see. I'm going to pass everybody a notebook, and what I want you to do, I'm going to show you, is flip - it's in the very beginning - to the very first page, to look at these pictures in order to begin our productive discussion. And take a second to examine these pictures, because we're about to have a little discussion about these pictures.

Stephanie: Is it what about ... water?

Teacher: Well, I don't know; we'll see where our discussion takes us. The big question is why are these ships - I realize this isn't in color - why are these ships in a field?

Okay, I'm going to give people a chance to think. We're going to do our productive discussion, we're going to follow our norms, correct? And I was going to record some of the things we thought, whether they're right, whether they're wrong. They're our thinkings so we're going to put them up there. Can you guys maybe practice kind of following each other without me calling on you? Try it.

Do you want to start, Michael, with your thoughts? Why are these ships in a field?

Michael: Maybe before they were sailing in water, but the water dried up.

Teacher: So you're thinking these ships are in a field because the water dried up?

Michael: Or, um -

Teacher: No, no. I just want to get it right.

Michael: Yeah.

Teacher: Is that what I should write, okay. Now keep going. Somebody go after him.

Students decide among themselves how to proceed:

... Should we go in a circle?

... Just start talking.

... We don't have to go in a circle.

... Just talk

... Go

Javan: Maybe, um, the water was too strong, that it pushed it out onto the beach.

Lucas: Maybe the water tide came low?

Teacher: Say that one more time.

- Lucas: Maybe the water tide was lower.
- Julia: Like a bad storm came and it made the waves, it made the waves very high, and they just ended up going too high and it pushed the boats onto shore.
- Teacher: Okay.
- Lucas: Maybe where the ships are is in a basin, so all the water got drained out into the river?
- Teacher: Oh. [pause] Can anybody repeat what he just said? If you can't repeat what he just said, are we practicing our norms?
- Kayla: Can you repeat what you just said, Lucas?
- Tavon: Lucas, can you repeat what you said?
- Lucas: Maybe that the ships right now were in a basin, so all the water got drained out into another river.
- Teacher: What do you ... maybe you should say a little more about a basin.
- Lucas: Like a basin is like - once there was water in there, right? Maybe, and there could be rivers connected to that basin, and the rivers are flowing the opposite direction from the basin, so maybe the water is getting drained out.
- Teacher: Wow. I don't know if I can even add all that. Kyle
- Kyle: I think it was so hot one day that the sun just evaporated all the water.

Final Screen:

In an Elicitation Discussion, the teacher

- Encourages broad participation
- Helps students share, expand and clarify their ideas
- Encourages careful listening

3. Exploring How Ideas Have Changed

The Transformation of Water unit began with a set of puzzling photographs of ships that appear high and dry, and a tantalizing question: why are the ships in a field? The Elicitation discussion that followed unearthed students' initial ideas and possible explanations.

Since that discussion, the class has carried out 16 investigations of transformations of water over a 2 ½ month period. Today's class is a wrap-up of the entire unit.

Colleen has hung onto the list of ideas elicited at the beginning of the unit, so students can revisit them at the end as a way to reflect on their learning.

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First, Colleen provides some background information to help students decide whether an idea is reasonable. The location, she tells the class, is the Aral Sea, in a hot and dry part of the world. About 50 years ago water from rivers that fed the Aral Sea was diverted to grow crops. Without the input of water from rivers to replenish water lost from evaporation, the Aral Sea has largely dried up.

Let's see how Colleen reintroduces students' ideas from the original Elicitation Discussion.

Teacher: Ok. So I'm not stopping our conversation. I want us to keep going, but I am reintroducing the ideas we came out with originally.

So the first thing was, we thought, something caused the water to disappear and the ships were stranded. Either the water dried up, there was a drought like a heat wave, or it was hot one day and the sun evaporated all the water, or maybe the river was draining the water from the basin - I remember that was Lucas'. The ships sank and the water evaporated around it so now you can see the ships.

Okay. Then we've got another big idea that something pushed the ships on shore. Somebody said, oh a bad storm came and made waves that pushed the boats on shore. Somebody said the water was too strong that it pushed the ship out on to the beach. Somebody said a whale or a large fish, bumped the ship. The ships were not working so people pushed them onto shore.

So let's think about this.

[Pause, to acknowledge a bit of laughter]

These are the ideas we started with. How have our ideas either stayed the same or changed? Has anybody kept with their same idea and really feels this is what happened - I have data to back it up, I can make this claim still. Or does somebody want to revise the claim that they made?

Aisha: I would consider .. you know the whale thing, it's kind of impossible like really impossible but another thing I was about to say was that because like .. since the two rivers are like you know blocked by the dam, by two dams, I was going to say like the water dried up like on the sheet, the water dried up. But it could happen ... like the sea actually dried up because there was no water like you know filling it in.

[other students raise their hands]

Teacher: What do we think, John?

John: Because there was no more water sources, and it dried up.

Mirasol: When we produce ... people made dams because the lake was attached to a river, and they made a dam, and then the river in the lake wasn't attached any more, and there probably was a drought. So, no the rain didn't come and the water probably just evaporated.

Lorie: I think that we all agree that about what you just said about the dams and that all the water dried up because the dams ... 'cause the river is not flowing into the sea, so all the water dried up because it all evaporated so that's why the ships are probably in the field.

Colleen feels the class has reached consensus around an explanation for why ships that once floated on the Aral Sea now sit on dry land. The ability to return to their ideas elicited in their very first discussion and compare them with their ideas at the end of the unit allows students to assess their learning.

Final Screen:

Elicitation Discussions are opportunities to

- Uncover students' initial ideas
- Learn and practice discussion skills
- Create a benchmark for seeing how ideas can grow and change