# Transcript of Video Vignette 4: Exploring Sinking and Floating

**Scene: A teacher and a small group of children are investigating sinking and floating. In the first scene, the teacher introduces the investigation to the whole group. In scene 2, they carry out the investigation and talk about what they found.**

## Scene 1

**Teacher:** I would just like to talk a little about this. Does anybody remember doing this?

**Children:** Me! Me!

**Teacher:** Becky, can you tell me a little bit about what happened when you used the different materials? What you did with the tube?

**Becky:** I put it down and the water went up and down, and the toy stuff was coming down.

**Teacher:** So, some things came down or did everything come down?

**Becky:** Not everything.

**Child:** Only one thing.

**Teacher:** The bear stayed up?

**Becky:** Yeah, the bear stayed up and the other stuff went down.

**Teacher:** How did it go down? Did it go right down or did some of them go down?

**Child:** It wasn't that heavy.

**Becky:** Because it wasn't that heavy and it went down to the bottom.

**Teacher:** So, if it wasn't that heavy, how did it go down if it wasn't that heavy? How did it go down the tube?

**Becky:** It went slowly down.

**Teacher:** And if it was heavy what happened?

**Becky:** It wouldn't go down.

**Teacher:** If it was heavy it didn't go down?

**Becky:** *(Shakes head no.)*

**Teacher:** Like if you put a marble in there, what would the marble do? Do you remember what the marble did?

**Becky:** Just go down.

**Teacher:** It just went down.

**Becky:** Went quickly down and then the tube went sideways and the toys went down.

**Teacher:** Oh, so you did it sideways too? You held your tube sideways?

**Becky:** It went in the middle. It stayed in the middle.

**Teacher:** What stayed in the middle? What stayed in the middle?

**Becky:** All of them.

**Teacher:** All of them stayed in the middle when you held it sideways? I have a challenge for you. We have some materials and some tubes and I would like to see if you could make one tube with the materials that you think are going to float and one tube to put the materials in that you think are going to sink.

## Scene 2

**Becky:** I think this is going to go down.

**Teacher:** The marble. You think the marble's going to go down?

**Becky:** Yeah.

**Teacher:** Can you tell me why you think it's going to go down?

**Becky:** This is going to float.

**Teacher:** Going to float. Can you tell me why the marble is going to go all the way down?

**Becky:** Cause it's hard.

**Teacher:** It's hard. Hmm. You got any ideas, Danielle?

**Becky:** This going to stay on top.

**Nick:** Maybe the hard ones go on top and the little ones go down to the bottom.

**Teacher:** Maybe the hard ones . . .

**Nick:** Go up to the top and the little ones go down to the bottom.

**Teacher:** You think? Hey, Nick. Would you like to fill your tube?

**Nick:** Sure.

**Teacher:** What do you think that one's going to do?

**Danielle:** Float down.

**Teacher:** You think it's going to float down. Fast or slow?

**Danielle:** Fast.

**Teacher:** Can you ask your friends what they think?

**Danielle:** *(No response.)*

**Teacher:** Want to ask your friends what they think?

**Danielle:** *(Shakes head no.)*

**Teacher:** Becky, Lindy, and Nick. Nick. Danielle thinks that's going to go down the tube fast. What do you think?

**Michael:** I think it's going to sink.

**Teacher:** That did go fast. Do you have any ideas why that went fast? I wonder why that went fast. See if you hold them like this . . . like this . . . good.

**Nick:** Have you noticed how that part of the water goes up?

**Teacher:** Yeah. Wow. What is that? What's doing that?

**Becky:** I think it's going to go down fast.

**Danielle:** Yeah.

**Teacher:** Let's see if we can guess . . .

**Child:** Look at, Miss Linda—they roll back and forth.

**Teacher:** You've got a lot of marbles in there.

**Child:** I've got four in there. A black one, a blue one, a red one, and a green.

**Teacher:** My question would be what makes something float? Think about that just for a . . .

**Nick:** Pressure.

**Teacher:** Pressure. That's a good answer. Pressure. Can you tell me a little about that? Is there a reason why you told me pressure?

**Nick:** I don't know.

**Teacher:** Pressure—was that pressure inside the tube?

**Nick:** Pressure inside.

**Teacher:** Pressure from the water or pressure from the object?

**Nick:** Pressure from the object.

**Teacher:** Oh, very good observation. Becky . . .

**Becky:** It float on the top.

**Teacher:** Do you know why? Do you have ideas why?

**Becky:** The water was making it go up and the pumpkin stayed up on top, because it was light.

**Teacher:** It was light. That's a good idea. So the pumpkin stayed up on top so the water . . . it was the water that it was floating on?

**Becky:** And the marbles went down.

**Teacher:** Do you have any ideas as to why the marbles went down the way they did?

**Becky:** Because some was going up and some went down because there *(inaudible)* up and down.

**Teacher:** Oh.

**Becky:** And that went down . . . I shaked it up. It went down.

**Teacher:** When you shaked it up that went down . . . like when . . . shake it up as in turned it?

**Becky:** It went down.

**Teacher:** That's interesting.

**Becky:** It went down.

**Teacher:** Thank you, Becky.

**Teacher:** You think it is going to go down fast? What was that?

**Becky:** A marble.

**Teacher:** A marble. Try something that you think might go down slow or float. You can put it right in there—we're just going to keep it in there, then we can compare them.

**Becky:** That floats, Miss Linda!

**Teacher:** It does float. What is that? What did you put in there?

**Becky:** It's a stick and that floats too.

**Teacher:** Why don't you put the cover on, Becky, and then switch it back and forth and see what it does?

**Lindy:** This floats. This floats.

**Teacher:** That does. Yes, it does.

**Lindy:** Look at the dolphin one.

**Teacher:** See what happens?

**Danielle:** It's not going. It's not going.

**Teacher:** It's not going. How come?

**Danielle:** Don't know.

**Teacher:** Good job, Lindy.

**Teacher:** 'Cause that's a floater. Do you want to try something else?