Code each teacher question or response as one of the following:

a. Observation question
b. Explanation question
c. Accepting response
d. Extending response
e. Probing response

Answers are provided on pages 145–146.

_____ 1. *Teacher: What were some of the things you noticed in the film, Brad?*
Brad: (Pause . . .) What did you say?

_____ 2. *Teacher: Tell me some things you saw in the film.*
Brad: There were two glasses of water. He put an ice cube in each glass.

_____ 3. *Teacher: Good, Brad.*

_____ 4. *Teacher: Can you add anything, Sarah?*
Sarah: The ice cube sank to the bottom in the glass on the right, but it floated in the other one. Maybe the ice cubes were different.

_____ 5. *Teacher: OK, Sarah has an idea about why it happened—why one floated and the other one sank.*

_____ 6. *Teacher: But before we work on the "why," let's talk about what else you observed.*

_____ 7. *Teacher: What else did you notice in the film, Deion?*
Deion: He poured the water out of different glasses.

_____ 8. *Teacher: Good observing.*

_____ 9. *Teacher: But are you sure it is water?*
Deion: Well it was clear; it was a clear . . . liquid. Maybe it was not water.

_____ 10. *Teacher: OK.*

_____ 11. *Teacher: Let's go ahead and talk about why it happened.*

_____ 12. *Teacher: What needs explaining here? What do you wonder about, Chan?*
Chan: I thought that ice always floats. Why did the ice cube sink?
Linda: Were the liquids the same?
Erin: Were the ice cubes the same? Maybe one was larger.

_____ 13. *Teacher: Good. We have several questions to deal with.*

_____ 14. *Teacher: Actually, both cubes were plain ice cubes.*

_____ 15. *Teacher: What would happen if one cube were larger than the other one?*
Maria: I don't think it would matter. Even icebergs float—like in Titanic.

_____ 16. *Teacher: Good point, Maria.*

_____ 17. *Teacher: Big ice cubes and little ice cubes still float in water. Remember, we talked about density when we did the clay boats investigation. Big and little ice cubes have the same density and both float. Ice cubes get heavier as they get larger, but their volume—their size, the space they take up—also increases. That means they don't get too heavy for their size and sink.*

_____ 18. *Teacher: Why did one of the ice cubes float and the other one sink? Does anyone have an idea? Deion?*
Deion: Maybe one of the liquids is not water.

_____ 19. *Teacher: All right.*

_____ 20. *Teacher: Suppose one of the clear liquids is something other than water.*

_____ 21. *Teacher: What would that have to do with the ice cubes, Jennie?*
Jennie: Maybe ice cubes don't float in all liquids. The egg floated in salty water but not in regular water.

_____ 22. *Teacher: Perhaps. Would you like to investigate to find out?*

At this point in the lesson, the students wanted to experiment with different clear liquids to see if ice would float in each of them. The teacher had prepared for this particular investigation. With children helping her, she tried ice in tap water, salt water, bottled water, and Sprite, and it floated in each case. She also tried ice in rubbing alcohol, but the ice sank. The children excitedly said that the second liquid in the film was rubbing alcohol. The teacher confirmed this conclusion.