

## Step 8: 15 Minute Discussion

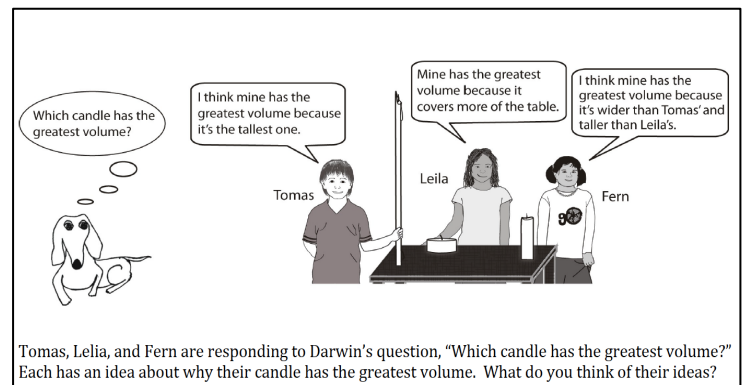
### Return to the Candle Volume Concept Cartoon Discussion

Time: 30 minutes with introduction and written reflection

You and your students began this pathway study with a 15-minute discussion about the Candle concept cartoon. Now, as you come to the end of the *Talk Science Pathway*, return to the cartoon and have the same 15-minute discussion.

**Rationale:** This is an opportunity to “take stock.” Comparing the second discussion to your first discussion will help you answer the following questions:

- In what ways has the culture of science discussion changed in my classroom?
- In what ways have students’ science ideas changed?
- What strategies am I using now to support discussion?
- What do I want to continue working on?



**How to conduct and audio record the discussion:** Conduct the concept cartoon discussion as you did in Step 1. The full experience should take about 30 minutes—a few minutes to introduce the cartoon, 10-15 minutes for discussion, and 5-10 minutes for writing. **You'll recall that** in this cartoon, the characters consider which candle has the greatest volume. Each has a conjecture and a reason for his or her belief. Darwin (the dog) is pondering each student's idea.

#### Before the discussion:

1. Have an audio recorder on hand to use during the discussion.
2. Turn on the recorder to make sure it is working. If not, check the batteries, the most likely cause of a problem. If necessary, switch to fresh batteries.
3. Make sure you have a copy of the cartoon for each student. (Page 3 of this file.)
4. Have one copy of *Goals and Talk Moves Tool* and the *Reflection Tool*

#### During the discussion:

1. Have the students sit in a circle. (This configuration will produce better audio.)
2. Explain that they'll be revisiting the discussion they had at the beginning of the science unit to see how their science ideas have changed.
3. Give each student a copy of the cartoon.
4. Put the audio tape recorder in the center of the circle and press the RECORD button.

5. **Important:** At the beginning of the recording, **state your class identifying information**, for example: “*This is Ms. \_\_\_\_\_’s fourth grade class recording on May 18, 2013 with 20 students discussing Darwin and the Candles.*”
6. Present the dilemma that the characters face, and then ask students to explain what they think of each character’s ideas. What might they say to each character about his or her idea?
7. Engage and support students during the discussion.
8. When the discussion is finished, press **STOP** and then turn off the recorder.

Following the discussion:

1. Ask students to write a brief reflection on the back of the cartoon saying what they thought before the discussion and what they think now and why.
2. As the students write, reflect on the discussion yourself. Use the *Goals and Talk Moves Tool* and the *Reflection Tool* to guide your reflection.
3. Save the audiotape file, your reflection, and the student reflections for “Reflect and Document” coming next.



Tomas, Leila, and Fern are responding to Darwin's question, "Which candle has the greatest volume?" Each has an idea about why their candle has the greatest volume. What do you think of their ideas?