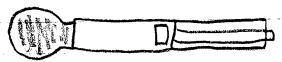
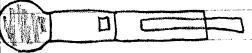
		3rd Grade Paymeon 9-14-09 We observe The bean seed bean Je size, I huse it will soake
	Dry Beanse	ed Soaked beanserd
color	litetan	lite Gold
Shape	trapuzod	trapuzod
Texture	COŁ	Smooth
7060	No en	Inoen
5/20	1 cm.	1/2 Jmn

Sten

5-6-10 What do you think causes as lide whistle to make different Piches?



I Predict when the slide is all
The way in. The Pitch will be
low because the trampet is the
same way and when the slides
in on a trumpet it makes ahigh Pitch



I predict when the slide is halfway in the Pitch will be medium because on a

Because

Sample B

3rd Grade

continued

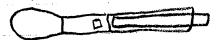
5-6-10	garan same		Y	en e g
5-6-10 Frumpet	when	it is	halt	way
in it mak				

3rd Grade

Anthony

5-6-10

What do you think causes a slide whistle to make different pitches?



I predict when the slide is all the way in, the pitch will be high because smaller things that we used were higher.



I predict when the slide is half way in the pitch will be nedwium becase things we used that were meduliem the sound was meduliem.

## Third Grade, Sample A—Plant Growth and Development Unit: Daymeon

Daymeon writes a prediction about what he thinks will happen when he soaks a bean seed overnight. The phrase "I think this because" prompts him to provide his reasoning, which is thoughtful and more sophisticated than the reasoning that many of his classmates include in their predictions. Daymeon has a difficult time focusing on tasks, but he likes working as a scientist. The writing frame helps him stay focused and communicate his strong scientific thinking.

## Third Grade, Sample B—Sound Unit: Sten

- Students have been investigating tuning forks, nails, xylophones, and rulers to discover the effect of length on pitch. Next, they are going to investigate slide whistles. Before they begin their investigation, their teacher gives them this frame: "I predict when the slide is all the way in, the pitch \_\_\_\_\_\_\_ because \_\_\_\_\_\_." They are to write a prediction for when the slide is halfway in as well. The teacher also asks them to make a diagram of the two positions of the slide in the slide whistle. This may help them think about the length of the air column in the whistle and its effect on pitch.
- Sten makes an accurate diagram of the slide in each position. In making his predictions, he clearly explains his reasoning in terms of what he knows about trumpets (he probably means trombones), which accurately relates to the whistle.

## Third Grade, Sample C—Sound Unit: Anthony

Anthony also makes accurate diagrams. He accurately bases his predictions on what he has learned from his other investigations of the length of objects and pitch. His reasoning would be even clearer if he used the word shorter instead of smaller because he is talking about the length rather than the size of an object. (This is a common misuse of terms in this unit.)