Because Sample A

1st Grade Jesus

11-10-08 ☆

I predict the water in the puddle will be Hot.

I think this because Win I put the water Hot

11-14-08

There was 0 sunny day there was 0 FoGGY day There was 1 CLOUDY day There was 3 PartL CLOUDY day There was more PartL CLOUDY din Sunny because PartY CLOUDY Haf 3 and Sunny Hof 0 so PartLy CLOUDY haf more I Thik there be Sunny Nex Week

Because Sample C

1st Grade Mary Margaret

2-24-10

what is the (same) about (good) (bounsers)?

I predict the super pinky will be a beter bounsr. Becases of the mterlr

wooden ball	Super Pinky
1. ~~20~~cm	1. ~~50cm~~
2. ~~30~~cm	2. ~~90~~cm
3. (20cm)	3. (60cm)
4. ~~40~~cm	4. ~~00~~cm
5. ~~20~~cm	5. ~~50~~cm

2-25-10

If I was making a ball I wood macke it with rubber. I thinck this because the rubber ball is bountse beckus wen we bounts it it bounts very hihe.

Because Sample D

1st Grade Ella

3.5 Do seeds and plants need light to grow and be healthy?

4-30-10

I Predict the Seeds in the dark will grow but not to be healthy because I think thay need sun lihgt.

First Grade, Sample A—*Weather* Unit: Jesus

- To begin an investigation, students pour the same amount of water into a pie tin, then observe this "puddle" for a number of days to see what happens to the water. Before they begin their investigation, they write a prediction beginning with "I predict," then adding, "I think this because" to explain their thinking.
- By completing the writing frame, Jesus has to think about his reasoning. The prediction also helps his teacher understand Jesus' current reasoning as well as how it changes after the investigation. He makes a connection between a property of the water he observes at the beginning of the investigation and what he thinks will happen at the end.
- Jesus receives services as an English language learner, but in science and science writing, he is able to work quite independently.

First Grade, Sample B—*Weather* Unit: Jesus

- Students collect data each day about different weather indicators (for example, cloud cover). At the end of the week, the class discusses their class graph, then each student writes about the data for one of the indicators.
- Jesus reports the data for the four days of that week, then makes a qualitative statement: "There was more partl [partly] cloudy din [than] sunny." He supports this statement by using *because*, then providing the quantitative data to support his statement: "because party cloudy haf [have] 3 and sunny hof 0 so partly cloudy haf more." Jesus has learned that he has to provide data to support the statements he makes. His teacher did not provide this structure in a frame, but she has used the structure in talking about the data each week.

First Grade, Sample C—*Balls and Ramps* Unit: Mary Margaret

- Students have been studying properties of different balls. In this investigation, they are going to test two balls to determine how well they bounce (as defined by how high they bounce). Before they make their data table, students make a prediction, including their reasoning. After they conduct the tests and discuss the results as a class (they find the "middle number" of their own data to contribute to the class graph), they then apply their understanding in thinking about what kind of material they would use in designing a ball.
- Mary Margaret predicts that the Super Pinky ball will be a better bouncer "Becases [because] of the mterlr [material]." This is a logical prediction based on the students' prior experiences in the unit. A scientist might ask, "Based on your investigations so far, what kind of material do you think makes balls better bouncers?"

- In her next entry, Mary Margaret applies her understanding of balls to an engineering problem, using the first *because* to note that the rubber ball is bouncy, then using the second *because* to support her claim that the rubber ball is bouncy. To help Mary Margaret develop her ideas, a scientist might ask, "When you design your ball, what do you want it to be able to do? Bounce high? Bounce for a long time? Roll straight? Knock down other balls?"

First Grade, Sample D—*Organisms* Unit: Ella

- Students are going to conduct a controlled investigation to determine if plants need light to grow and be healthy. They are going to put one planted seed in darkness and another planted seed in light.
- Ella makes a sophisticated prediction in that she predicts the seeds in the dark will grow but they will not be healthy because plants need "sun lihgt [light]" to be healthy. Most students predict the seeds in the dark will not grow at all because they need light to grow.