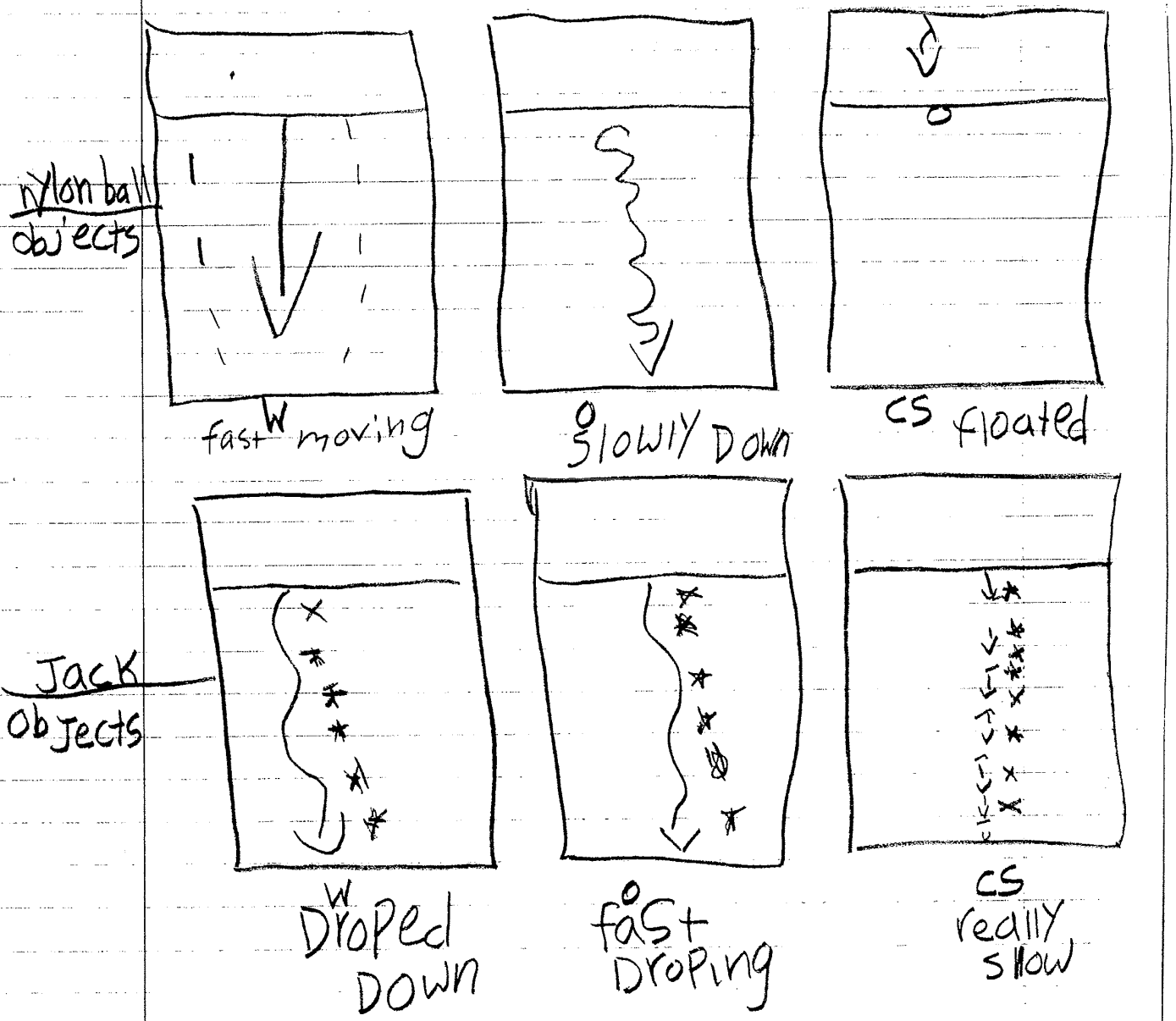
Observations Sample A

2nd Grade Sara

3-15-10

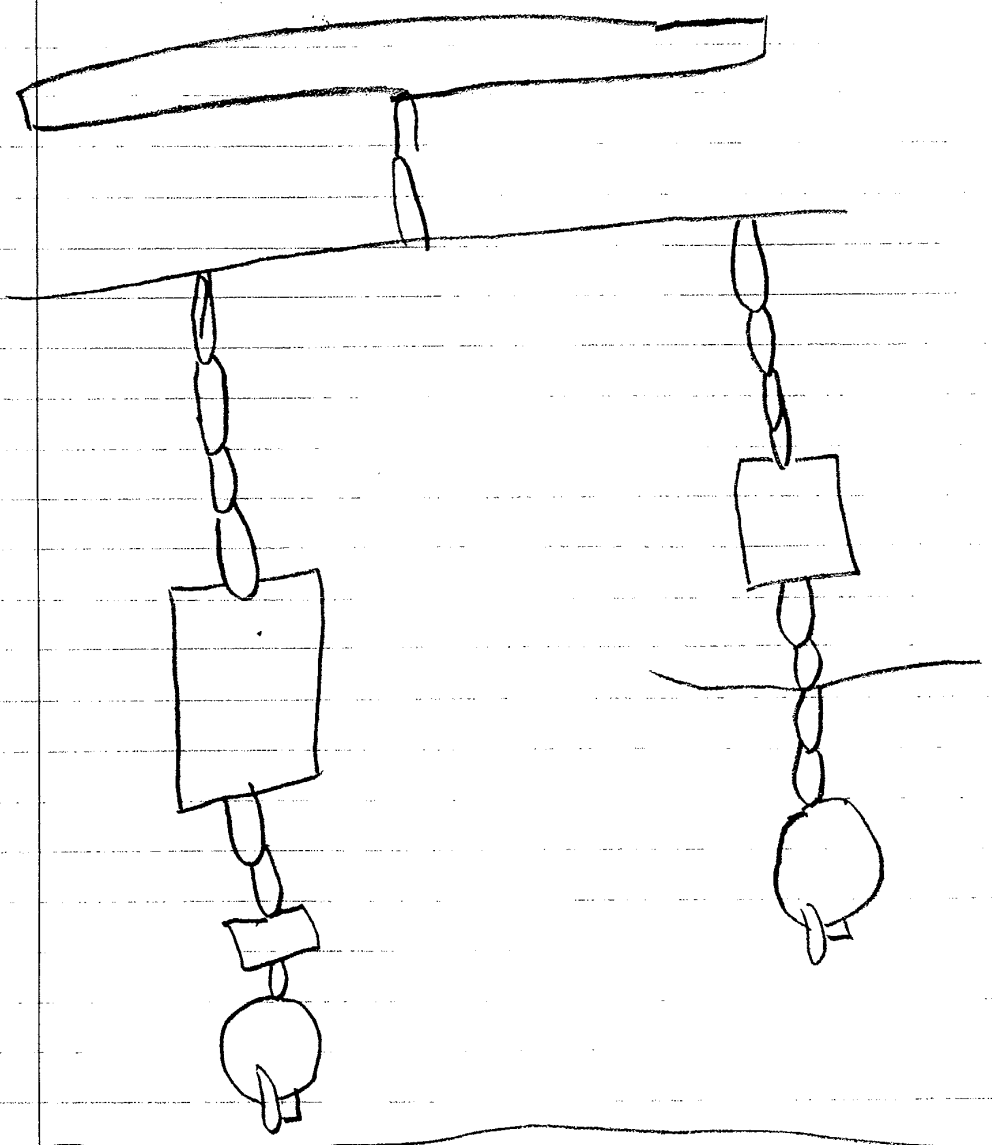
How do objects float or sink in oil and corn syrup?



Observations Sample B

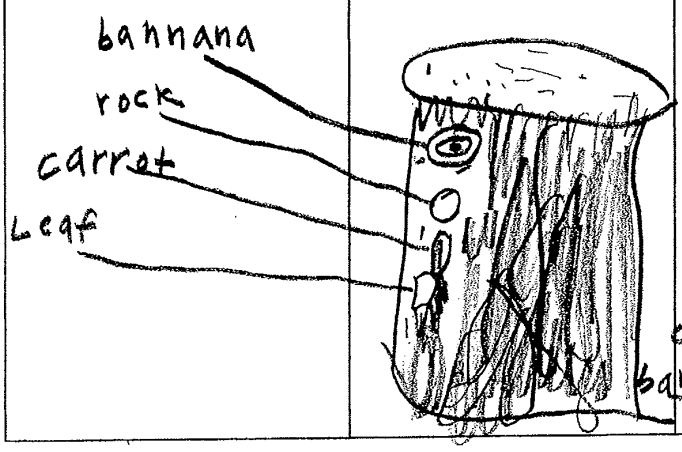
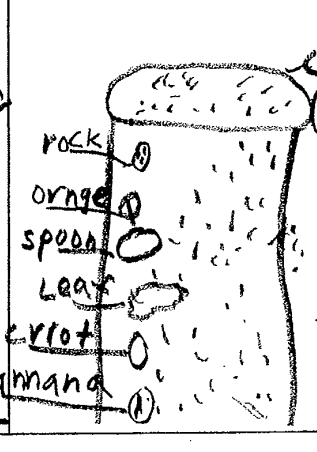
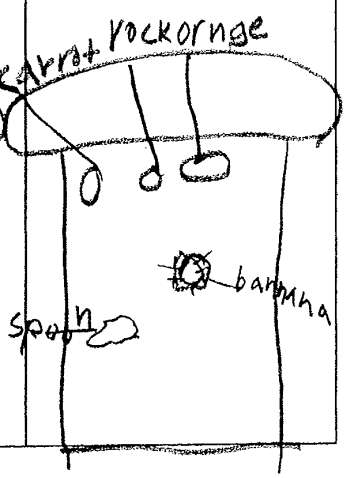
2nd Grade Alina

How do you balance a mobile?



I balanced my mobile by puting the heavier weight close to the fulcrum and the lighter weight on the end of the stow.

Observing Containers without Worms

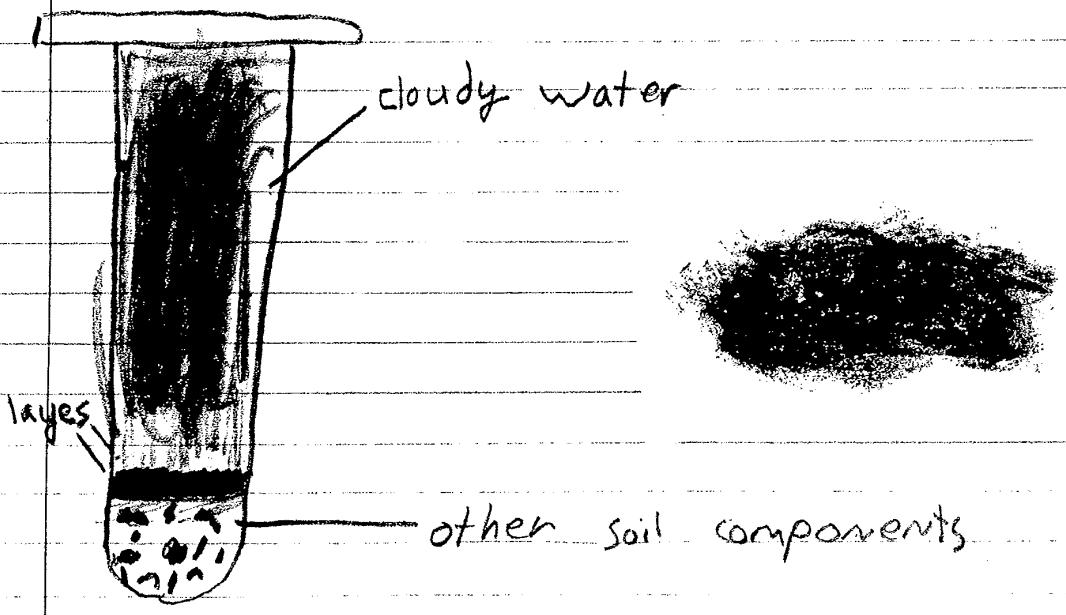
Observations	Date: 1-25-07	Date: 1-31-07	Date: 2/8/07
Size, color, texture, and condition of things you have added	orange is half brocken. bananana has a hole in it. rock the same. spoon the same. carrot the same. Leaf is covered in dirt.	The bannana has mold and has green stof in it and it is black. The carrot is the same. The orange is brocken. The leaf is yellow, The rock is the same. the spoon is the same.	The bannana is molded and green. carrot is the same. The rock is the same. the orng-e is brocken. The spoon is the same
Other observations			
Labeled illustration			

Observations Sample D

2nd Grade Asma

11-17-09

I think the local soil has humus. I think this because it codet roll in a ball that why. it dot'n has no clay. I think it only has a litte of Sand.



Observations Sample E

2nd Grade Grace

How quickly do soils settle in water?

when I shake the sand and water the sand goss up then settles very fast. When I shake the clay and water the clay goss up cldu swrls then settles very slolly and the water trns see throo. When I shake the humus and water the coler of the humus trns blakish Brownish and the humus gss up then settles slowly.

How quickly do soils settle in water?

When I shake the clay it sticks to tube and the water turns orge. ~~the~~ when I shook the sand the water ~~the~~ turns wite the sand stays the same. when I shake the humus the water terns blak the humus ~~th~~ stays the same.

Second Grade, Sample A—*Liquids* Unit: Sara

- Students have been observing the ways that objects move in three liquids. As the class discusses what they observed about the first object they investigated in the liquids, the teacher models how to make diagrams that show the ways the object moves (for example, zigzagging lines indicate that an object moves back and forth in the liquid as it slowly sinks; very short zigzagging lines indicate that the object moves extremely slowly as it drifts down). The teacher also shows how to make notes that add information to the entry. This is an excellent example of how students can use diagrams to communicate their observations or understanding more efficiently than they can with words alone. Diagrams are especially helpful in physical science units.
- Sara's entry clearly shows, both in her diagrams and in her notes, what she has observed. She has used the different arrows effectively, made abbreviated but effective notes, and has communicated accurate information.

Second Grade, Sample B—*Balancing and Weighing* Unit: Alina

- By the time students make their own mobiles in this unit, they have constructed an understanding of some basic ideas about balancing. Having them make a diagram of their mobile first helps them connect with their concrete experiences with the mobile. Then giving them a writing frame (in this case, "I balanced my mobile by . . .") provides some scaffolding to get them started in communicating their understanding about balance. Note that the writing is focused on the *concept of balancing* rather than the *procedure* involved in building the mobile.
- Alina's diagram clearly shows the different objects she has used in her mobile and how she has placed them both vertically and horizontally in her mobile. Her writing shows that she understands the fundamental concept they have been exploring: she has moved the heavier weight (mass) closer to the fulcrum (the hook) and the lighter weight (mass) farther out on the *stow* (*straw*) and away from the fulcrum than the heavier mass is placed.
- Adding labels to the diagram (for example, *fulcrum*, *beam*, *lighter weight*, *heavier weight*) would communicate Alina's strong thinking and understanding even more effectively.

Second Grade, Sample C—*Soils* Unit: Chamos

- In earth and life science units, students need to make scientific illustrations rather than diagrams because it is important to observe and show *details* of what they have investigated. In the *Soils* unit, students observe over a period of time two containers of soil, both of which have biotic and nonliving matter. One of their containers also has worms in it and the other does not. To keep track of their observations, students need to draw each object and write notes about it. The data table, which is made on eleven-by-seventeen-inch paper, is set up so students easily can compare their data going horizontally across the page.

- Chamos makes accurate observations without inferences and includes details about almost every item during the three observation sessions. Listing the six items in the left-hand column of his data table would have helped him make even more organized, detailed, and complete observations. He also could save time and space by making his notes more abbreviated (for example, "banana—mold, green stuff in it, black; carrot—same").

Second Grade, Sample D—*Soils* Unit: Asma

- This entry includes Asma's conclusion to an ongoing investigation students have been conducting to determine which soil components are in their local soil sample. In one of their tests, they drop the soil sample into a test tube filled with water and then observe what happens at first, and then what they see several days later. They also smear some of the soil onto a small piece of white paper (lower right) to determine other properties of the sample.
- Asma, who is learning English, records what happens to the soil sample in the test tube accurately and in detail. The cloudy water and layers of soil components are important indicators of the presence of humus and possibly sand and clay. Making these drawings helps students observe their test results in greater detail than if they just made notes. This also enables English language learners to communicate their observations through drawings and simple labels.

Second Grade, Sample E—*Soils* Unit: Grace

- Samples E and F are examples of cause-and-effect writing that communicates properties that students have been observing about different soil components. The "When I shake" structure reminds students to report their observations about each soil component, which also reminds them of their concrete experiences during the testing. In addition, they learn how to begin sentences with "When clauses," an important part of writing more complex sentences and communicating complex thinking. The teacher also has reminded students to write about both the water and the soil components.
- Grace uses the structure effectively as she reports about each of the three soil components: sand, clay, and humus. Note that in each case, she adds the word *then* to show the contrast between what the soil did at first, and what it did later. Grace reports observations about both the soil and water for the clay and humus (she probably meant to say that the water, rather than the humus, turned "blakish brownish"). After pointing out all the strengths in her entry, you might say, "A scientist might wonder what you observed about the water after you shook the sand and water." Then you could show her how to add her observation below her entry and make an arrow to show where that addition needs to go in her entry.

Second Grade, Sample F—*Soils* Unit: Joshua G.

- In his entry, Joshua has used the teacher's scaffolding effectively, reporting his observations about both the soil component and the water after each "When clause." His observations about the water provide important information about how the soil particles are behaving in the water.
- Joshua does not provide the same detail in his observations about the soil except for the clay. After discussing the strengths of his entry with him, you could say, "A scientist might ask what you mean when you write 'the sand stays the same' or 'the humus stays the same.'" After he shares his observations, then you can show him how to add information to his entry.