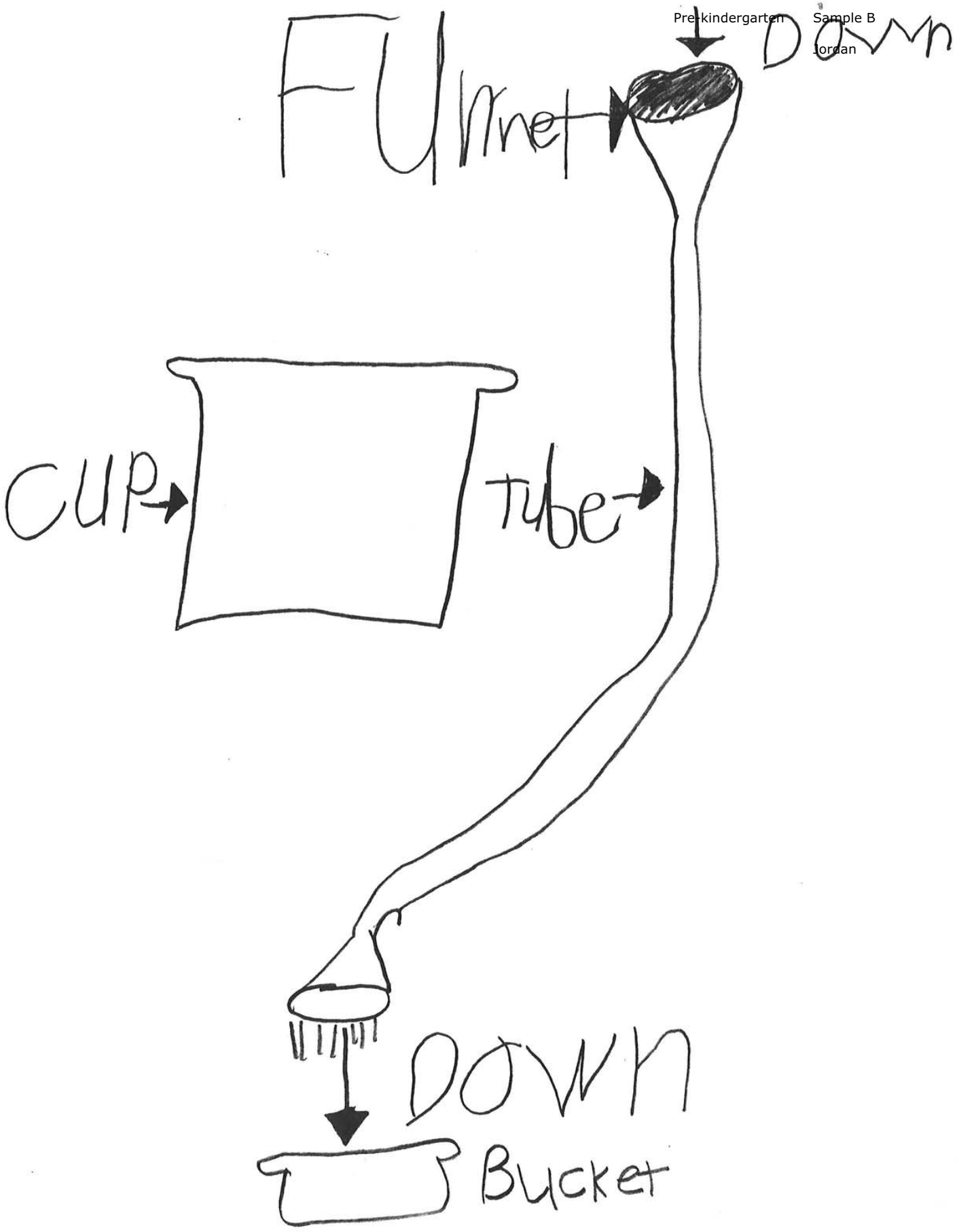
Pre-kindergarten Sample A

Dylan

Pre-kindergarten Sample B

Jordan



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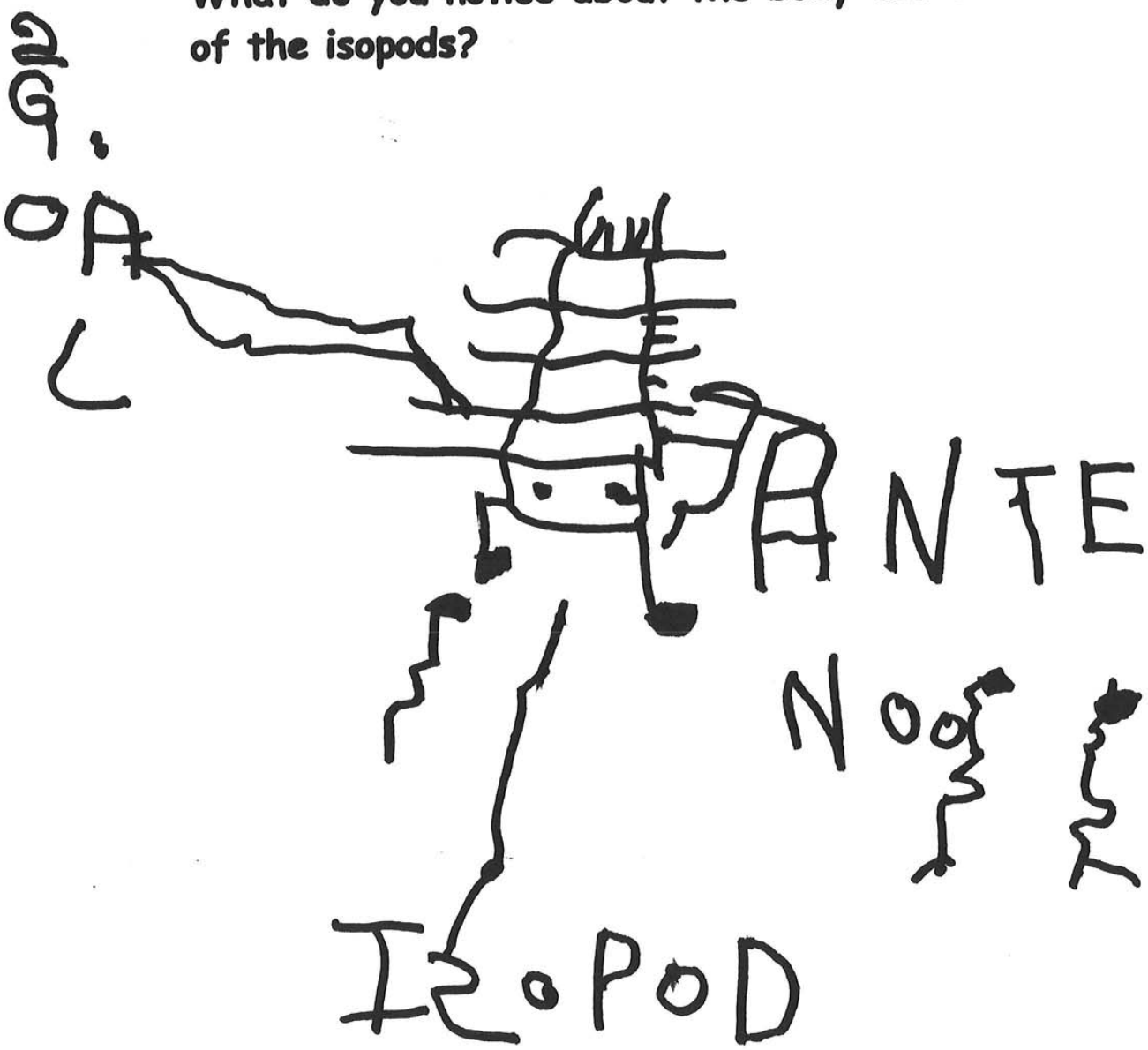
What do you notice about the body and behavior of the isopods?



Student Notebook Entries: Pre-kindergarten

In Chantel Anderson's pre-kindergarten classroom in Seattle Public Schools, students begin using science notebooks on the first day of school. Her four- and five-year-old students fit the general demographics of the school: 58 percent free or reduced-price lunch; 14 percent English language learners; primarily African American (47 percent) and Asian (34 percent). Most of her students have not attended pre-school.

Beginning with their first inquiry science unit, Chantel engages her students in rich inquiry experiences and "science talks." During these discussions, Chantel models the language that students need to use as young scientists. She starts creating a word bank right away, introducing new words after students have had a concrete experience and have a need to know the new term. As she writes a word on a word card, she sounds it out with her students' help, then adds an icon or drawing. Although she does not expect her young students to use letters in the fall, her students love to use them. Some begin, early in the year, to take a word they need from the word bank so they can copy the word in their notebook. She also draws as they talk, making simple illustrations or diagrams of what they have been observing, and labeling the drawings with the students' help. She uses this drawing process to develop students' abilities to think, talk, and write like scientists.

Chantel also models how to make entries in a science notebook. In their first unit, students are building structures. The first few times they draw their own entry in their notebook, they try to draw at least one or two of the shapes that Chantel has modeled and that they see in their structure. Some students just make scribbles, others trace the blocks, and some are able to draw the shapes independently. Chantel also introduces a T-chart fairly early in the year so students begin to understand how to make data tables and other kinds of charts.

Through modeling and scaffolding (for example, talking, drawing, writing, and adding words to the word bank), Chantel helps her students develop their language and writing skills without overemphasizing these literacy skills at the expense of scientific inquiry. When supported in this way, even young students can draw and write meaningful entries with the same excitement they feel when they engage in scientific inquiry.

The students who wrote the following samples A through C were investigating their third science unit of the year. Their spring unit is *Exploring Water with Young Children* (Ingrid Chalufour and Karen Worth. St. Paul, MN: Redleaf Press, 2005). By this time of the year, some students just make drawings, but many students are adding writing to their entries.

For more information about science writing with pre-kindergartners, read "Inquiry-Based Science in Seattle Preschools" (http://ecrp.uiuc.edu/beyond/seed/nesholm.html) by Chantel Anderson and Kirsten Nesholm, a science coach in Seattle Public Schools who also wrote one of the Stories from Schools on this website.

Pre-kindergarten, Sample A—*Exploring Water* Unit: Dylan

- In this unit, students explore different properties of water. In Dylan's drawing, he is showing that water from his bucket (on the left) went up the tube, then down into his neighbor's bucket (on the right). He used a turkey baster, which he does not include in his drawing, to move the water.
- Dylan uses the arrows and the words *up* and *down* accurately in showing the direction of the water flow.

Pre-kindergarten, Sample B—*Exploring Water* Unit: Jordan

- Jordan poured a cup of water into a funnel at the top of his tube. He accurately labels the direction the water moves.
- Note that he includes the detail of dripping water at the bottom of the tube. His teacher has modeled adding details to scientific drawings.

Pre-kindergarten, Sample C—*Exploring Water* Unit: Inci

- Inci, who is learning English, has made a T-chart as her teacher modeled how to make the table and record the results of their investigation of sinking and floating.
- To record her results, Inci draws the objects in the appropriate column. To write her entries, she sounds out the words with her teacher. The rock, screw, and fish sank. The toothpick, cork, bear, and cube floated. This recording of the test results also serves as a kind of conclusion for emergent writers.

Pre-kindergarten, Sample D—Open Exploration: James

- James is in another pre-kindergarten classroom where they have been studying isopods and other organisms. His teacher has read the focus question to him and pointed out the word *isopod*, which he copies in capital letters.
- James practices drawing the isopod's antennae before he adds them to his illustration. His teacher reminds him to draw the segments of the isopod. As he observes the isopod, he does the rest of the illustration on his own.
- To write *legs* ("LAOGS") and *antenna* ("ANTENOO"), he sounds out the words on his own as his teacher has modeled throughout the year as they labeled drawings.