Comprehensible Input

Comprehensible Input makes content instruction understandable making expectations clear to promote student success.

Final Questions: 10-12

Comprehensible Input
Feature Components

10. Speech

11. Clear Explanation

12. A Variety of Techniques

The Lesson

Unit: Buoyancy (Ninth Grade)

The following lesson takes place in an urban high school where English learners make up *35* percent of the school population. In the classroom described, all the students are beginning to advanced-beginning speakers of English, and they have varying levels of literacy in their native languages.

Ninth-grade teacher Mr. Dillon is teaching a unit on *buoyancy,* the ability to float. The science standard requires that students understand why some objects float while others sink. In addition, they review the concepts of *mass,* which is a quantity of matter of nonspecific shape, and *volume,* which is the capacity of a three-dimensional object. The goal is for students to understand that an object will float as long as the mass doesn't exceed the object's capacity, or volume. Students have calculated mass/volume ratios prior to this unit, although the application of these concepts to buoyancy is new.

You will see in the scenario that this teacher has his own way of helping students understand that an object's ability to float is based on its

Teaching Scenario

Mr. Dillon

began the lesson by having students open their science texts to the chapter on buoyancy. He told them that in this unit they would learn what makes objects buoyant. He gave a five-minute oral introduction to the concepts behind buoyancy, discussing the fact that if the object's mass exceeds its volume, then it will sink. Mr. Dillon used his normal somewhat rapid manner, the same speaking style he used with all his classes. He then directed the students' attention to 13 vocabulary terms written on the board and told the class to copy each word, look up the definition in the glossary, and copy the definition onto their papers. After students looked up vocabulary words in the glossary, Mr. Dillon asked them to put the papers in their homework folders. He told them that they needed to take the words home, and their homework assignment was to use each word in a sentence. He emphasized that students needed to complete their homework since he had been frustrated by low homework response rates in this class.

Then Mr. Dillon turned to the science text, telling students to open their books to the beginning of the chapter. He proceeded to lecture from the text, asking students questions to stimulate a class discussion. Most students were reluctant to speak up. After lecturing on the material in the first five pages of the text, Mr. Dillon gave students a worksheet about buoyancy. He told them they could work in pairs or alone, calculating the mass/volume ratio of the objects shown on the worksheet. He said, "You remember how to calculate mass/volume ratios? First you determine the volume of the object, and then you take the mass and divide it by the volume. Okay, just calculate the ratios for each object shown on the worksheet, and when you finish, you may begin doing your homework."

After the class completed the worksheet for calculating mass/volume ratios, Mr. Dillon went over the answers with the whole group. He began by demonstrating how to calculate the first problem. He wrote the numbers on the overhead and went through the process. When he finished he said, "If you got the same answer as I did, raise your hand." About half of the students raised their hands. Mr. Dillon determined that he needed to demonstrate a few more problems so that more students would understand the process. He continued with the next three problems, asking students what they did differently.

Finally, he told the class to work in pairs to review their work, checking the final problems against the process he demonstrated.