Learning With Visual Features About The Water Cycle

Group A: Your visual feature is the chart on page 27. Your reading is the last paragraph on page 26.

Group B: Your visual feature is the drawing of a beaker on page 27. Your reading is the two paragraphs on page 27.

Group C: Your visual feature is the drawing of the water cycle on page 31. Your reading is the first paragraph on page 30.

Group D: Your visual feature is the chart on page 30. Your reading starts right under the chart and continues through the next paragraph on page 31.

Your Group Letter: _____

Your Group Members: _____

1) **Before you read any text about it**, what question(s) do you have about your assigned visual feature?

After reading the text about the visual feature:

2) What is the main idea or ideas that the visual feature is supposed to be explaining?

3) What questions do you have now about the visual feature?

4) What would be hard for RMI students in Grades 6-9 to understand about the visual feature?

Water Cycle Visual Images: Hints for Instructor

Group A: Chart on page 27.
Main idea is that each of the reservoirs has very different amounts of water. The ocean has almost all of the water. Less than 3% is in freshwater, and most of that is frozen in ice.

Teachers and students may not be used to working with the kinds of very large numbers and of very small numbers that are in the chart. Also percentages ranging from 97.25% to 0.00004% may be difficult for them. They may have little or no understanding of what a cubic kilometer is. Finally, they may need help in reading this kind of chart, going along a row from one column to the next, and comparing rows with each other.

Group B: Drawing of beaker on page 27.
Main idea is that each of the reservoirs has very different amounts of water. The ocean has almost all of the water. Less than 3% is in freshwater, and most of that is frozen in ice (20.5 milliliters out of a thousand ml.

Teachers and students may not be used to working with the metric system and comparing milliliters and liters. They may not know what and how big a domed stadium is. A range of numbers from 972.5 to 0.01 may be difficult for them. They may have little or no understanding of what a cubic kilometer is. Finally, they may need help in reading this kind of visual, understanding that the colors represent all the water on planet Earth, the blue-green represents the amount in the ocean, the red the amount in ice, the dark blue the amount in groundwater, and the drop being a magnification of the amount in lakes and rivers.

Group C: Drawing of water cycle on page 31.
Main idea is that the amount of water that leaves each reservoir over the course of a year is equal to the amount of water that enters the reservoir during the year. So the amount of water in each reservoir stays more or less the same even though water is always going and going out.

Teachers and students are not used to seeing math on a drawing. They may not be comfortable with adding these numbers. The colors of the numbers may be confusing. Each of the numbers represents "units" that may be hard to understand. Each unit is 1,000 cubic kilometers. For example, the number 434 means that 434,000 cubic kilometers of water evaporate from the ocean each year.

Group D: Chart on page 30.
Main idea is that the average amount of time that a molecule of water stays in the reservoir is very different for the different reservoirs. A molecule of water that has evaporated into the atmosphere is probably going to precipitate out of the atmosphere within **nine days**. A molecule of water that has precipitated into the ocean is probably going to remain in the ocean for **more than three thousand years**. The reason for this difference is that the

ocean is so big that a lot of other water molecules are going to evaporate before the one that just precipitated into the ocean.

Teachers and students are not used to seeing math on a chart. They may not understand why the numbers are being divided and with doing the division of these numbers. They may have little or no understanding of what a cubic kilometer is. Finally, they may need help in reading this kind of chart, going along a row from one column to the next, and comparing rows with each other.