| Name | Monday's Date Hour |
|---|--|
| You MUST copy the question if given on the board | and answer it using complete sentences. |
| Reading Minute Monday Title: HOW TO "TALK TO THE TEXT" (T4 strategy) 1. Look at the title of piece. Respond to it. 2. Look at any illustrations on the page. See if they help you understand the title. 3. Begin to read the article. As you read, interact with the text 4. Write down any questions as they come into your head. 5. Write down any connections you make as you read. To yourself, your world, to something else you have read, to the text you are now reading 6. Clarify your understanding by writing ideas from the text into your own words. 7. Underline or circle words you don't know. Use word | "Chart"ering New Territory Tuesday (Charts and Graphs) Directions: Create a data table and a line graph using the information provided. Smalltown Teens with Cell Phones: Age 12 (229), Age 13 (273), Age 14 (341), Age 15 (430), Age 16 (590) Title: |
| parts or context clues to figure out their meanings as you read. 8. Don't forget you should also <u>Summarize!</u> (at the end of each page to remember what you have read) 9. <u>Predict what will happen next!</u> 10. Visualize! Make movies in your head! STAPLE ARTICLE TO YOUR STARTER | |
| Wacky Wedn | esday Review |
| 1. A piece of tin has a mass of 16.52 g and a volume of 2.26 cm³. What is the density of tin? | 3. Diamonds have a density of 3.5 g/cm ³ . How big is a diamond that has a mass of 0.10 g? |
| 2. A man has a 50 cm ³ bottle completely filled with 163 g of slimy green liquid. What is the density of the liquid? | 4. A graduated cylinder is filled with water to a level of 40.0 mL. When a piece of copper is placed into the cylinder, the water level rises to 63.4 mL. Find the volume of the copper sample. |
| | If the density of the copper is 89 a/cm ³ what is its |

mass?

Testing the Waters

How does density determine whether an object sinks or floats?

The students in Ms. Donahue's class began their experiment by calculating the **density** of water. First, they weighed an empty glass beaker. Then, they poured 0.5 liters of water into it and weighed it again. After subtracting the weight of the empty beaker, they saw that 0.5 liters of water weighs 500 grams, or 0.5 kilograms.

Density is found by dividing mass by volume, or d = m/v. The students used this formula to show that water's density is 1 kilogram per liter.

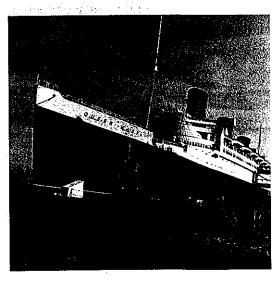
Next, the students filled a large, clear plastic tub with 20 liters of water and marked the water's level on the outside of the tub. Then, they placed a brick into the water. It quickly sank to the bottom and raised the water level. The students carefully removed the water the brick had **displaced** until the level returned to the original mark. The students measured the water they removed and found it had a volume of 960 milliliters, or 0.96 liters.

The students took the brick out of the water and weighed it. Its mass was 7 kilograms. They divided 7 by 0.96 to calculate the brick's density as 7.3 kilograms per liter.

Water was added to the tub to return the level to the 20-liter mark. A basketball was tested next. The students weighed the basketball first. It had a mass of 630 grams, or 0.63 kilograms. When the basketball was placed into the water, it floated, but it also displaced a small amount of water. As they had done before, the students removed water until the level matched the mark. Then, they measured the volume. They removed 630 milliliters, or 0.63 liters, of water.

They lifted the basketball out, added water back to the tub until it reached the mark, and then put the basketball back in. A student carefully pushed on the basketball until it was **submerged** just below the surface. Water was removed to reach the mark, and the volume was measured. The water removed this time had a volume of 7.1 liters.

Dividing 0.63 by 7.1 showed that the basketball's density was 0.09 kilograms per liter. The brick's density was much greater than water's density, while the basketball's was much less. The students concluded that an object denser than water sinks and displaces an amount of water equal to its volume. An object less dense than water floats and displaces an amount of water equal to its weight.



Chapter 2 Lesson 3

