Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Homeroom: \_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_ **2.1**

**Defining and Measuring Matter (SPI.9.1)**

|  |  |
| --- | --- |
| ***Key Point*** | ***Notes*** |
| **Matter** | **Matter** is:   * Anything that has \_\_\_\_\_\_\_\_\_\_ and takes up space (has \_\_\_\_\_\_\_\_\_\_\_\_\_\_) * Made up of different kinds of \_\_\_\_\_\_\_\_\_\_\_ * Does not include heat, sound, or light |
| **Mass** | **Mass** is how much matter is in something.  Screen shot 2011-03-18 at 12.08.21 AM.png |
| **Measuring Mass** | * Mass is measured using:   1. A triple-beam balance * The units of measurement for mass:   1. Grams or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Volume** | Volume is how much \_\_\_\_\_\_\_\_\_\_\_ something takes up. |
| Screen shot 2011-03-18 at 12.08.13 AM.png**Measuring Volume** | * You can measure the volume of *regularly shaped solids* (like a cube) using a \_\_\_\_\_\_\_\_\_\_.   Macintosh HD:Users:cjohnson:Desktop:Screen shot 2011-09-06 at 6.41.31 AM.pngScreen shot 2011-03-18 at 12.08.30 AM.png  Guided Example:   * Here volume = length × width × height * Volume = 5 cm × 5 cm × 5 cm = 125 cm3 * The volume of *liquids* can be measured using:   + Graduated cylinder * When measuring the volume of *irregularly shaped solid objects,* you can use a graduated cylinder filled with \_\_\_\_\_\_\_\_\_\_\_\_\_\_:   **Steps to solving:**   1. Measure the \_\_\_\_\_\_\_\_\_\_\_ (starting, beginning) volume of the water. 2. Drop the object in the graduated cylinder. 3. Measure the new (\_\_\_\_\_\_\_\_, ending) volume of the water. 4. Find the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ between the new volume and old volume.   rockvolume.png  Guided Example:   * The units for volume are:   + Cubic centimeters (\_\_\_\_\_) or cubic meters (m3)   + Milliliters (\_\_\_\_) or liters (L) |
| ***atom*Atom** | * Matter is made up of tiny particles called \_\_\_\_\_\_\_\_\_\_. * ***\*\*\*\*ALL MATTER IS MADE OF ATOMS!!!!\*\*\*\****   **The atom:**   * is the \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ of matter. * Without it, we would not exist! * the smallest particle of an element that can be divided and still have the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of that element! * the smallest unit of matter (makes up everything that is matter!) |
| **So What?!** | *Write a summary of what you learned today here:* |

**“I Own This” (Independent Practice):**

1. What are the characteristics of all matter?
2. Calculate the volume of the rectangular block.

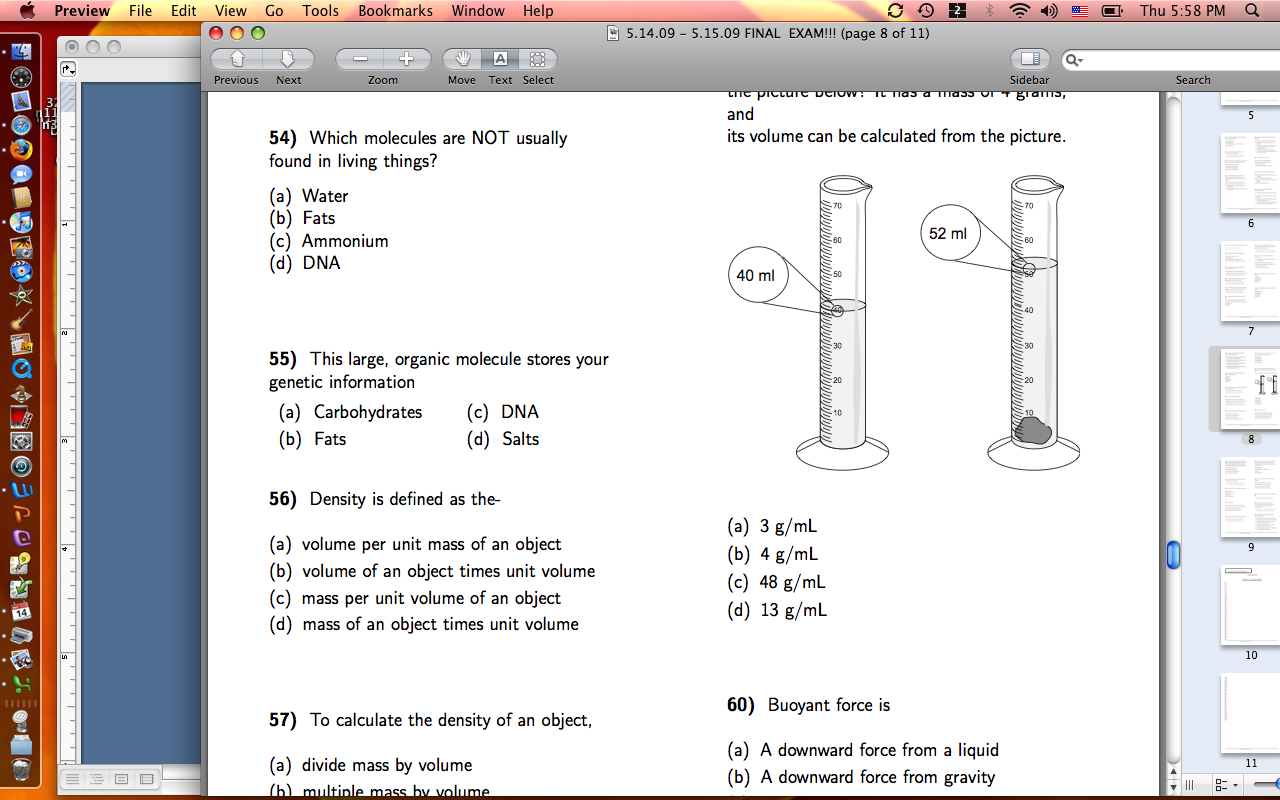
*Volume = Length x Width x Height*

2 ft

Volume of the rectangular block =

5 ft

2 ft



1. Calculate the volume of the rock in the graduated cylinder

to the right.

1. Explain why a speck of dust would be considered matter.
2. What is the building block of all matter?
3. Define the word **atom** in three different ways.