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.pngGuided 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.pngGuided 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.