**Term 1 Exam Review**

* 1. **Fill in the blanks below about the states of matter:**

All substances are made of \_\_particles\_\_\_\_\_\_\_ which cannot be \_\_\_\_seen\_\_\_\_\_\_ by the naked eye because they are \_too small\_\_\_\_\_\_\_\_\_\_\_.

* 1. Name the three states of matter:\_\_solid\_\_\_ \_\_\_liquid\_\_ \_\_\_gas\_\_\_\_\_\_

* 1. Fill in the following table summarizing the 6 changes of state

|  |  |  |
| --- | --- | --- |
| **Start Phase** | **End Phase** | **Change of State** |
| **Gas (G)** | **Liquid** | **Condensation (6)** |
| L | G | Evaporation (1) |
| L | S | Freezing (2) |
| S | L | Melting (3) |
| G | S | Deposition (4) |
| S | G | Sublimation (5) |



* 1. Fill in the diagram below

6.

4.

5.

1.

2.

3.

* 1. Complete the following table

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Solid** | **Liquid** | **Gas** |
| Shape(definite or not?)   |  Definite  |  Not definite |  Not definite |
| Volume (definite or not?)  |  Definite  |  Definite  |  Not definite |
| Forces/bonds  (strong or weak?)  |  Strong  |  Medium |  Weak |
| Movement    |  Small vibrations (can’t really move) |  Medium vibrations (can flow) |  Lots of movement(spreads wide) |
| Drawing  (Particle model)    |  See your notes |  See your notes |  See your notes |

1. Give the definition for the following terms:
	* 1. Mass: how much matter is in something
		2. Volume: how much space it takes up
		3. Density: amount of mass in a given volume
		4. Temperature: agitation level of the particles
		5. Solubility: ability to dissolve a solute (powder) into a solvent (water)

1. Fill in the table below for Mass, Volume and Density

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Regular Solid** | **Irregular****Solid** | **Liquid** | **Equipment** | **Unit** |
| **Method to determine****Mass** |  **Weigh on scale/balance** | **Weigh on scale/balance** |  **Place in graduated cylinder(gc.) on scale, add water to gc., subtract numbers** | **Scale (balance)** **and gc.** | **g** |
| **Method to determine****Volume** | **Ruler****LxWxH** | **Water displacement** | **Place in graduated in cylinder** | **Balance****And gc.** | **Cm3 or mL** |
| **Method to determine****Density** | **Mass****Volume** | **Mass****Volume** | **Mass****Volume** | **None (need to calculate)** | **g/mL or** **g/cm3** |

1. Define characteristic (CP) and non-characteristic properties (NCP).

  CP definition:

 Unique or individual feature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 NCP definition: \_\_\_\_\_not unique or special \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. List examples of characteristic properties (CP) and non-characteristic properties (NCP).

CP: \_\_\_\_\_\_\_density, melting point, freezing point, boiling point \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

NCP:
\_\_\_\_\_\_mass, volume, shape, colour, hieght, temperature, malleable \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Jade wants to measure the volume of a piece of quartz from her mineral collection. She pours 20 mL of water in a graduated cylinder. She gently slides in her piece of quartz. The figure below shows the results obtained. What is the volume of quartz? Show your work. (Don’t forget units!)

27-20 = 7mL = volume



1. Solve the density of the marble with a weight of 14 g and 28mL. Show your calculations below. (Don’t forget units!)

D=m/v

 = 14g/28mL

D= 0.5g/mL

1. How does the volume of an object affect the density if the mass stays the same?

A larger volume creates a smaller density.

Ex: 1/5 = 0.2 but 1/10 = 0.1 so it is a small answer.

**The Earth’s Internal Structure**

We can divide the Earth’s internal structure into three distinct layers:

* \_\_core\_\_\_\_\_\_\_\_
* \_\_mantle\_\_\_\_\_\_\_
* \_\_crust\_\_\_\_\_\_

**The Earth’s Internal Layers**

|  |  |
| --- | --- |
| **Crust**  | The Earth’s crust is \_\_\_solid\_\_\_\_\_\_\_\_\_. Its thickness varies:  |
| **Mantle**  | Upper Mantle  | * Can be up to 670 km thick.
* Is a \_\_semi liquid\_\_\_\_\_\_\_\_\_\_. Composed of partially melted rock.
* Causes \_continental drifts\_\_ (plate tectonics) due to \_moving layers of earth under the crust\_
* Convection:\_inner heat of the earth\_\_\_
 |
| Lower Mantle  | * This layer is \_\_\_solid\_\_\_\_ despite its high temperature because the \_pressure\_\_\_\_\_\_ is very high.
* It is composed mainly of \_silica\_, \_\_oxygen\_, \_iron\_\_, \_\_magnesium\_\_\_.
 |
| **Core**  | Outer Core  | * The outer core is \_liquid\_\_\_\_
* This layer gives is responsible for the Earth’s magnetic field
 |
| Inner Core  | Despite its VERY \_\_\_\_high temperatures\_\_\_, the inner part of the core is \_solid\_\_ because of the enormous \_pressure\_\_\_ holding the core’s particles together.  |

**Relief & Soil**

* + 1. What factors affect relief?

**Winds, water, and glaciers** that combine to....  **alter the landscape**

**Erosion** that works on rocks and the Earth’s relief by... **rounding summits of mountains and digging & filling valleys**

* + 1. The Earth’s relief is constantly changing because of underground forces.

True or False (circle the correct answer)

3. How can humans contribute to the transformation of relief? (give 3 examples)

-walking on the ground (ex: hiking trails)

-They construct roads and airports

- dig mines

- Build cities and towns

- Build farms

4. What are the 3 components that make up soil?

- silt

-sand

- clay