Topic 1 Note Packet NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Lesson: What is Earth Science?

I Can…/Main Ideas Notes

Earth science is \_\_\_\_\_\_\_\_\_\_\_\_\_\_ sciences rolled into one.

* Means "\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”
* Deals with the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of Earth materials, Earth \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and Earth \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* How the planet has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ over time.
* Important because:
  + Geologists search for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_
  + Study \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Work to protect Earth's \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* The study of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and how processes in the atmosphere determine Earth's \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Important because
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ about the \_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + How \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in response to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Critical concern for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Earth's \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* The study of Earth's \_\_\_\_\_\_\_\_\_\_\_\_\_
* their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, organisms and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Important because –
  + The oceans \_\_\_\_\_\_\_\_\_\_\_\_\_ most of our \_\_\_\_\_\_\_\_\_\_\_\_\_ and are important resources for \_\_\_\_\_\_\_\_\_\_ and other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  + Major influence on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and changes in the oceans can drive or moderate \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* The study of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Important because:
  + The moon drives the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ have repeatedly devastated Earth's inhabitants
  + Energy from the sun drives our\_\_\_\_\_\_\_\_\_\_\_\_\_& \_\_\_\_\_\_\_\_\_\_\_

Geology

Meteorology

Oceanography

Astronomy

Lesson: Observation, Inference, & Classification

I Can…/Main Ideas Notes

Something detected by one of more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sight, hearing, touch, taste or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Improve our ability to make \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and take \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

An interpretation of an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Make an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Happened in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

An \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ based on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| Observations | Inferences |
|  |  |

Observations & inferences are than \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Observations

Instruments

Inference

Prediction

When should you

Use them?

Classification

Lesson: Mass, Volume, Density & Measurement

I Can…/Main Ideas Notes

Expressing an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to a known \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Every \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ at least one of these three quantities

Length: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
Time: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mass: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Measurement

Mass

Amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in an object

Measured by using a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

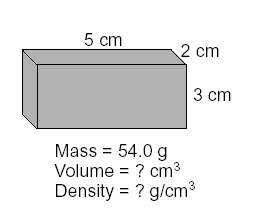
\*\*Not the same as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Mass x Gravity)\*\* Mass never \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The amount of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Volume is measured by using either \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (ruler) or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (graduated cylinder)

**Show your work on the examples below.**

Volume





Is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Or how \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ an object is

The density of a material helps to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ it from other materials

**Fill in the Density Triangle!**

Density =

Density of water =

Volume =

Mass =

Density

Density Triangle/

Formulas

Lesson: The Concept of Density

I Can…/Main Ideas Notes

Relative Density is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ one density to another and finding an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Relative density

For example: Pumice floats in water. What do you think its estimated density is? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Density is a \_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* If you cut an object in ½ you are reducing the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by \_\_\_\_\_\_\_\_\_\_so the density will \_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If an object is heated, molecules move \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Therefore there is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ per unit of \_\_\_\_\_\_\_\_\_\_

If an object is cooled, the molecules move \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and density \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

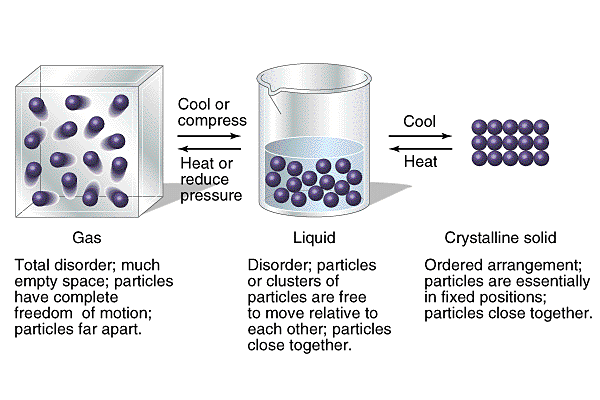
If pressure \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ molecules move \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and mass \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* \_\_\_\_\_\_\_\_\_\_\_ mass per unit volume & a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ density

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ happens if pressure decreases

Density of a substance changes with changes in its \_\_\_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_\_\_\_\_\_\_\_) of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Most substances have a higher density as a \_\_\_\_\_\_\_\_\_\_\_\_\_, because the molecules are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.



The exception to this rule is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Water has its greatest density at \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

This is why ice \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in water.

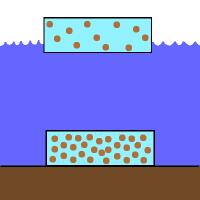
Why density does

not change based on

size or shape.

Temperature affects

density



**Draw picture above!**

Pressure affects

density

Phases of matter

affects density

Lesson: Rate of Change

I Can…/Main Ideas Notes

Independent variable goes on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_\_\_\_\_\_\_\_\_\_/ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

Dependent variable goes on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_\_\_\_\_\_ / \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)

Occur in some orderly fashion in which events constantly **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** & are **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Examples **(Name at least 2)**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

How MUCH a \_\_\_\_\_\_\_\_ is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (or changed) over a given \_\_\_\_\_\_\_\_\_\_

* Changes can be very \_\_\_\_\_\_\_\_\_\_\_ others very \_\_\_\_\_\_\_\_\_\_\_\_\_

Rate of change = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dependent &

independent

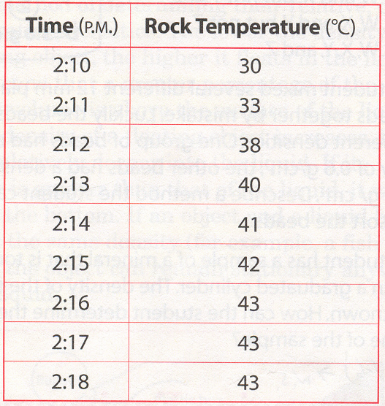
variables

Cyclic change

Rate of Change

Formula

(Pg 1 on ESRT)



Practice

**SHOW YOUR**

**WORK!**

