

Lab: Determining Percent mass.

Water is one of the most important molecules to life on Earth. For much of Earth's history, the Oxygen was locked into compounds such as Quartz ( $\text{SiO}_2$ ) and other Carbonate Rocks (eg.  $\text{CaCO}_3$ ).

Question: What event in Earth's history finally 'set Oxygen free' for life to use?

In this space and With Clark's help, we will determine the mass of Oxygen in a sample of water.

List the steps here:

put your math here

Now use that sequence to determine the mass of Oxygen in the sample of Coral at your table.

Mass (grams) of the Coral Sample = \_\_\_\_\_

*Draw a picture of the coral here*

**Examine blue crystals in front of you. These are Copper Sulfate Pentahydrate crystals.**  
Write down the chemical formula here.

Determine the percent mass of Oxygen in these crystals..

**Quartz is one of the most common minerals in Earth's Crust.**

The Chemical formula is  $\text{SiO}_2$ .

We frequently melt quartz and turn it into common Glass.

Measure the mass of the empty Glass beaker at your table. = \_\_\_\_\_

**Determine the Mass of Oxygen in that glass beaker.**



**Bone is made of a mineral called hydroxyapatite**

The Chemical formula is  $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$

Measure the mass of Bone at your table = \_\_\_\_\_

Determine the mass of Oxygen in your sample of bone.

Challenge Question: Wood is primarily made of Cellulose ( $\text{C}_6\text{H}_{12}\text{O}_6$ ). Charcoal is simply wood that has been reduced to Pure Carbon.

When did the worlds Coal layers form? Why?

Mass (grams) of the charcoal = \_\_\_\_\_

Use this space to determine what the piece of wood must have weighed **before it was turned into Carbon.**