Name: Period:

10

***EARTHLABS: Climate and the Carbon Cycle***

**LAB 1B: Carbon Storage in Local Trees**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Student Data Sheet: How Much Carbon is Stored in a Local Tree?**

**Team members**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**TREE species name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**TREE common name**:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Hardwood or Softwood:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Observations of your tree and its environment (write and draw)**

**1.**

**2.**

**3.**

**DATA and CALCULATIONS:**

**Circumference of tree: \_\_\_\_\_\_\_\_\_\_\_\_\_\_(cm)**

**Diameter(D) of tree: \_\_\_\_\_\_\_\_\_\_\_\_\_(cm)** *To calculate diameter, divide the circumference by 3.14(Pi)*

**Allometric coefficients for your species of tree:**

***“a” coefficient \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ “b” coefficient \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

**Biomass(M): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(kg)** Use formula *M = aDb*

**Mass of carbon stored**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(kg)

*Multiply total tree biomass (M) \* 0.521 for mass of carbon in hardwood trees: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(kg)*

*Or:*

*Multiply total tree biomass (M) \* 0.498 for mass of carbon in softwood trees: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(kg)*

**Amount of carbon dioxide (CO2) absorbed from air to create the mass of carbon stored in tree \_\_\_\_\_\_\_\_\_\_\_\_\_\_kg** *Multiply mass of carbon stored(kg) by 3.67*

**Optional:**

**Amount of tree carbon(kg) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_metric tons (***1 metric ton = 1000 kg)*

**This is equivalent to \_\_\_\_\_\_\_\_\_\_\_\_\_ (lbs) of carbon** *(1 metric ton = 2,205 lbs)*

**NOTES:**