**EARTHLABS: Climate and the Carbon Cycle**

**LAB: 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.**

**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 (Use the Tree Diameter Allometry Doc in the Lab space on the Deforestation and Carbon Cycle page on our classroom website):**

***“a” coefficient “b” coefficient***

**Biomass(M): (kg)** Use formula *M = aDb*  Mass = “a” coefficient x diameter

**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 (Exemplary for Lab):**

**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:**