Bug and Tree Collection

In February and April we will be studying plants and bugs. At that time, there are not many tree leaves or bugs available. So in order to make the lab time more interesting, I am going to have you collect some bugs and leaves now. This is not exactly a summer assignment since I will not be collecting them the 1st day of class, however when we get to these lessons, I will expect you to have your trees and bugs.

Bugs:

You will learn that bugs are actually a specific kind of organism, but for today we will just use it in terms of any creepy crawly thing. For your collection you can collect pretty much anything that crawls on the ground for example ants, grasshoppers, beetles, spiders, etc. You can also collect things that fly in the air like butterflies, moths, dragonflies, bees, etc.

I hate to put a minimum down because that is what I will get, however you must collect a minimum of 12 different bugs. To collect bugs you will first need to kill them. Fresh bugs are best. You can kill them 2 ways.

Kill Method 1 – Freezing

- You can use either a plastic or glass jar. It does not need to be very big.
- Capture bug and put in the freezer for at least and hour. You can leave them in longer, I have left them in there for days.
- Take the bug out and let thaw for a minute or two (may take longer if it is a big bug)

Kill Method 2 – Killing Jar

- Here is a website that you can go to for instructions http://www.uky.edu/Ag/Entomology/ythfacts/4h/unit1/mkjar.htm
- Or you can just google "Killing jar for insects" and get lots of choices

Mounting and Storing:

Now that you have killed your bugs by whatever method you will need to pin them and display them. There are many different options here, I am going to suggest 1. If you would like to display them another way, feel free to be creative. The only thing I ask is that the student is able to access and look at the bugs.

Obtain a roughly 8X11 piece if Styrofoam and thin pins (I purchased pins for silk fabric at Michaels). You want the pins to be thin because some of the

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specimens may be very small and the larger the pin the more likely it would be to damage it.

Pinning the bugs can be difficult. Do your best to not break off the legs or wings while you are pinning them. Because of potential damage it might be a good idea to get more than one of each specimen. Once pinned, sick the pin's pointy side into the Styrofoam.

Tree Leaves:

Now is a great time to collect leaves from trees. Please do this soon, since in late September and October the leaves are already coming off the trees. You will need to collect a minimum of 10 different kinds of leaves and create a key to identify your collection.

There are 3 steps to the process: Collecting, Pressing and Mounting.

Collecting:

This is the easier part to describe. Take a walk around your yard or neighborhood and collect some leaves. Make sure to get at least 2-3 leaves in your specimen (you can have more). Also make sure you have a bit of the twig so you can see how the leaves are attached. For right now don't worry about how big the specimen is. You can trim it down after it is pressed.

Wrong

Right

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Pressing:

There are all kinds of methods for pressing leaves. I will give you the basic concept and you can determine how to implement it.

1) You will need cardboard. The size of the cardboard can vary, but you will need to stick all your leaves in between pieces of cardboard. So if you decide on cardboard roughly 12X12 you might only be able to get 1 leave on each level and will need 12 pieces: 1 on top, 1 on bottom, and 1 in between each leaf. If you use bigger sheets or have smaller leaves you might be able to get 2 on a layer.

2) Place the leaf as flat as you can on the cardboard. Then place a piece of cardboard on top. Then place heavy books or objects over the entire piece of cardboard or if you have 2 pieces of wood and some straps you can use that to tighten the whole structure down.

3) There is another more sophisticated option which involves getting 2 pieces of wood (one for the top and 1 for the bottom) Drill holes through both pieces on all four corners. Get 4 long bolts, washers, and nuts to fit the holes. Then place the cardboard in between the 2 pieces of wood. Once plants are situated, put the bolt through the hole. Put on washer and wing nut and tighten until you can't go any farther. Here is a website with directions for making a press: http://www.ehow.com/how_2069305_make-flower-press.html

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Mounting:

Look at your specimens and determine the best size piece of cardstock that it will fit on. You can use 8 1/2 X11 or 11X17 or 8 ½ X 14. To fasten them to the paper, you can use several methods. You can spread glue on the back or underside of the leaves and press them down. You can spread the glue on the paper, but you need to make sure that the glue will dry thoroughly and not be sticky once it is dry. Another option is to spray the back of the leaves with an adhesive spray. Do not spray the paper since I have found that most adhesive sprays dry sticky and you do not want the different pages sticking to each other.

Label each specimen as follows. You can do this by hand or type up labels and stick them on. Fill out the collected by and Date. If you want to do research, you can try to fill in the common name and scientific name. If not, place a letter like “A”, “B”, etc. that you can use in your key.

Tree Common Name: _____
Tree Scientific Name: _____
Collected By: _____
Date: _____

We will talk about this more in class and I will show you some examples.

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