

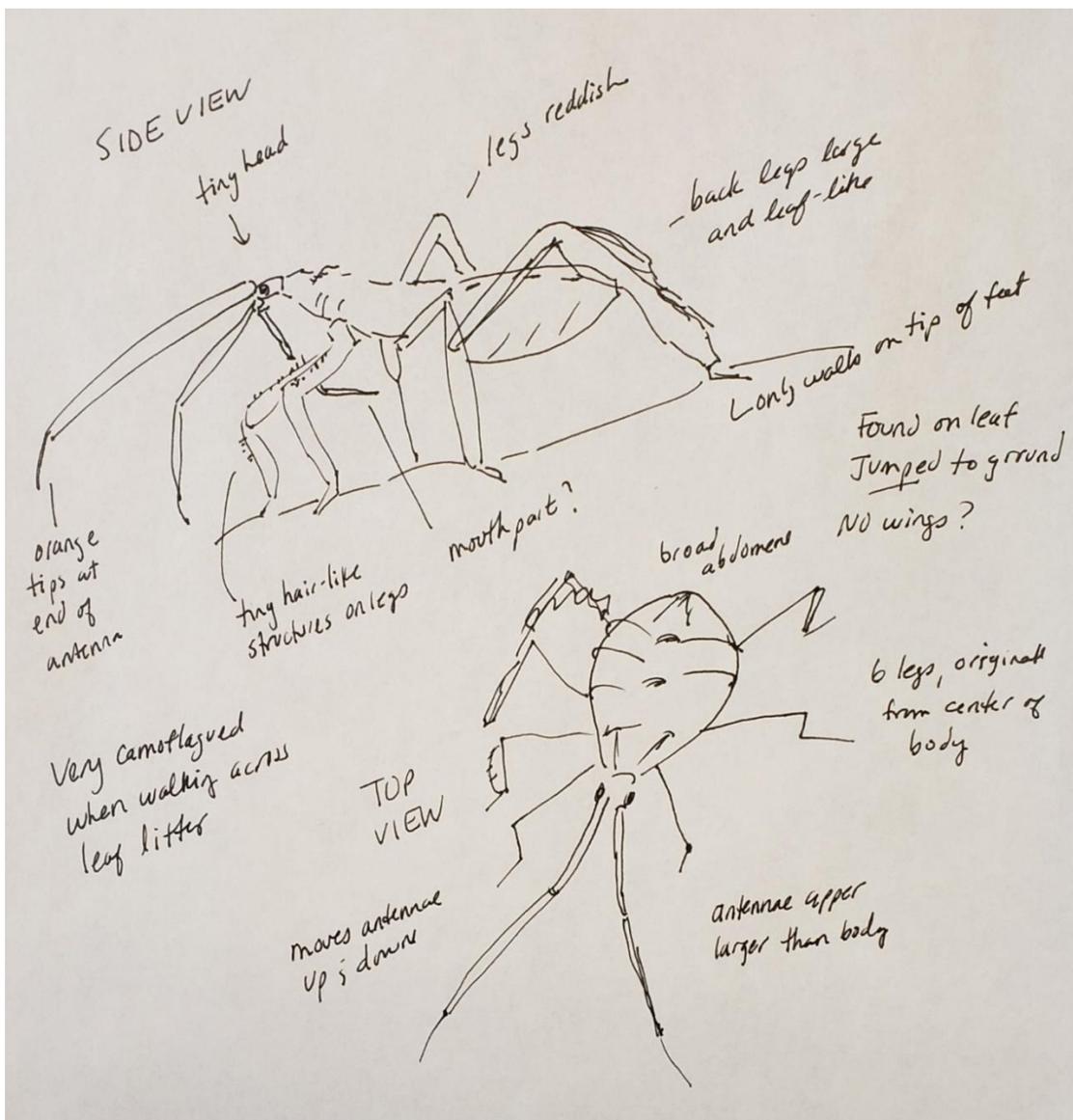
Observation Lab  
Warner Park Nature Center  
Teacher Guide

**Observe Organism**

It is highly recommended that students take the time to draw what they are observing. By trying to be as accurate as possible while drawing, students should notice more details that will inspire more questions and ultimately allow for identification and research of those questions. To help structure this section, consider specifying a minimum number of accurate observations required, or perhaps suggest that they should spend at least 10min or so drawing.

Another option is to have students post one thing they observed in a discussion thread. Students cannot duplicate observations, so would need to add unique answers. This might help those that are struggling to “see”.

Example of drawing below (for teacher information only)



## **Question**

Be sure that students are asking testable, researchable questions. As stated above, it might help to have students post one unique question on a discussion thread if they are struggling.

## **Explain**

### 1) Identification

Most students will not have access to a field guide to identify this organism, so they will most likely have to rely on the internet, which is fine. If they made enough observations, they should be able to get pretty close. For instance, if you type “large bug in Tennessee with large abdomen and leaf like legs” you get a leaf-footed bug in the adult stage.

Regardless, the intent is not to 100% correctly identify this organism. It is to attempt to identify it, based on the evidence they gathered while observing/drawing it. They may decide it is a wheel bug, or a stink bug and that is fine as long as they provide evidence for their identification (wheel bugs also have a long, jointed mouthpart like the leaf bugs).

Again, opening up a discussion thread could be a good way for students to compare ideas based on their observations.

### 2) Research

As before, the intention is not to get this 100% correct. The goal is that students attempt to answer a researchable question they posed. Questions might be “what do they eat, what is the life cycle, why do the front legs have hair-like structures, are they mimicking leaves to camouflage, etc”. As always, students should cite their observations as evidence, plus cite the source of their research.

### **FYI Background on organism:**

This insect was found in the WPNC garden, so it exists in Tennessee naturally. It is a species of leaf-footed bug, but it is in the late nymph stage - not quite an adult, because it doesn't have wings yet. (So are the little bumps on the top wing buds???).

Students may notice the long, jointed mouthpart – this is a piercing/sucking mouthpart that is used to suck plant juices (yes, it can pierce your skin too, so be careful when handling one). Another type of insect, the Wheel Bug, has a similar mouthpart, but it is a predator and feeds on other insects. The thickened, “thighs” that look like leaves may be used in courtship or combat over females.

There are many species of leaf-footed bugs in North America and more study is needed to fully understand differences in life cycle, behaviors, etc.

### **OPTIONAL activity**

Have students practice making observations and asking questions with another organism or something relevant to your next unit. Or you can encourage them to go outside, take a picture of a living thing and post.