

## Sample Collection



1

### Prepare

Request and receive your kit in the mail or in person! A good scientist looks at all their materials before experimenting



1

## Experimentation

### Prepare

Locate the *Kolling Lab Tardigrade* sample in your kit. If you don't plan on experimenting right away, store in the refrigerator for up to 2 weeks.



2

### Collect

Go to your backyard and gather some moss into one of the *Collection Tubes* using a coffee stirrer.



2

### Observe

Use a pipette to mix up the sample and place a small amount on a microscope slide. Try to find a tardigrade.



3

### Identify

Mix a little bit of water with your sample. Using the pipette, put a few drops on a microscope slide and use the provided scope to look for tardigrades!



3

### Experiment

*With parental supervision:*

Once you find some tardigrades, try adding small amounts of household chemicals to them using the pipettes.

Recommended Experiments:

- Salt water
- Hydrogen peroxide
- Sugar water



4

### Return

Use the pipette to carefully place any tardigrades in the *Return Sample Tube* and sent it back to use in the pre-labeled mailer.



5

### Document

At Marshall University, real chemists will work to identify *your* tardigrades! Include your name and email with your sample so we can update you on your data!



4

### Document

A good scientist shares their results with the world! Post your results on the forum on our website to share your awesome science!

## Tardigrade Reference Guide



### Healthy Tardigrade

This is a happy healthy tardigrade! Its limbs are moving and there may be some food in its tummy!



### Tun

We call this curled up ball of a tardigrade a *tun*. This is how tardigrades deal with stress!



### Dead Tardigrade

Typically, dead tardigrades will look stiff. This is a sign your bear didn't survive experimentation.



### Cuticle with Eggs

Tardigrades shed their cuticle (like snakes shed their skin) and leave behind baby bear eggs inside! The cuticle is normally clear.



### Not a Tardigrade

Look closely! You may collect a sample that does not have bears. It's easy to think debris is a tun!

If you need additional help with your tardigrade wrangling, visit our website where you can find additional information and ask us questions: [mupagesmarshalledusiteskollinglaboratory.wordpress.com](http://mupagesmarshalledusiteskollinglaboratory.wordpress.com)  
Happy tardigrade hunting!