First lab instructions:

* You must sign the form that certifies you have been informed about safety procedures before leaving the laboratory.
* You are to pick a computer on which to maintain your journal. If after starting the computers, there is a folder for your lab section, use it. If not, follow your TA instructions on how to make one.
* This is your capture or destination folder. This is where your journal will reside while you are in the lab. **Follow your lab instructor’s directions as to which subfolders in which to put text and pics, versus films, and how to create and label your own subfolders.**
	+ - * + To create a folder click on new folder under file



* + To name the new folder, click on the old name (untitled folder \_\_\_). It should turn light blue and allow you to type in new name.
* **The objective of the first lab is become acquainted with the stereo scopes and software you will be using this term. After reading these instructions, you should use download from the website, instructions for using iMovie. IMovie is a software package that will interpret the camera’s signals into live video of specimens under the microscope and enable you with one click to obtain photographs or turn the live video in movies.**

**Your laboratory instructor will probably start you off with some safety information and then some instructions about handling and working with the stereoscopes. Pay particular attention to the instructions regarding how to control lighting and that the stereo is in the proper mode for filming. After that demonstration, you should be ready to start filming after reading the rest of these instructions, and then downloading iMovie from the web site. Happy filming!**

**Lab protocols:**

**To convince us that you have accomplished this objective at lab’s end, there should be some short movies in your folder, and photos that has been edited in Preview. Photo files need to have arrows and text added to the photo**.

**Working with animals from different habitats.**

We work with both salt water and fresh water critters. They will die if returned to the wrong containers or placed in the wrong salinity for viewing.

Please make sure dishes are rinsed under the faucet before and after each use. Before transferring a specimen to a small dish for viewing, rinse it (few drops of proper solution or solution matching salinity of specimen’s water) and then transfer the specimen into the dish.

At the end of lab, do your best to remove salt water spills onto the table, chair and onto the microscope. Salt water can destroy clothing and often the holes do not appear until after the clothing is washed and dried. Different labs meet in that room on Friday and we do not want those students to encounter spills that will get on their books, clothes, etc.

**Activity**

1. Every pair of students obtains a photograph (tiff file) of **1.. A *Daphnia and a Brine shrimp* (place a ruler in the photograph) and 2. Make a short movie of *Daphnia and brine shrimp locomotion***. Brine shrimp may be mating, if so, try to capture a 2nd movie showing how males clasp females during mating. Use the instructions on how to capture images and video found on the schedule.
2. **Edit your photographs in Preview**. Instructions for using Preview can be found on the website.
3. **You should label two structures (one of which should be the heart in Daphnia) in *Daphnia and Brine shrimp* using the diagram in the PDF entitled Working with *Daphnia or the Doc on the life cycle of brine shrimp.*** Be careful, many students have mistaken the moving gills as the moving heart. You should be able to comment on and distinguish males and females brine shrimp. Do not spend a lot of time trying to distinguish the sexes in *Daphnia magnum.* Males in this species are only produced at certain times of the year and you may not have males in your culture. Can you tell whether “winter or summer” eggs are present?
4. **Trim your movie to one or two short 1-2 minute video clearly showing how *Daphnia or one of the shrimps* uses their appendages in locomotion.** To do so use the instructions for Quicktime 10 player and/or iMovie. In any case do not record for more than about 2 minutes at any one time. Movies more than 2 minutes long are difficult to work with and you will spend an enormous amount of time trying to trim them. It is easier to edit and then combine several short movies later if you wish to produce a longer clip.
5. **A word file, clearly titled with your last name, should accompany these documents. The word file documents what you contributed to the joint effort and details your observations.** Your thumb drive will allow you to keep a copy of your Word docs and photos so you can edit at home.

**Always receive your instructor’s permission to leave the laboratory at the end of the period. If you are not officially excused, you can be counted as absent.**

 **Before leaving lab, you should experiment with all three software editing packages.**

Again, iMovie is the software to be used to capture photographs and videos. You will be using Preview to edit stills and Quicktime or iMovie to trim videos. All three manuals are available on the course website for download as Word docx files.

Do not ever be tempted to simply download photos and videos from the web. Do not “borrow” movies from prior term folders. They are time stamped, and there in case this semester some specimens are not available for you to film. **You will get a 0 for the lab because you essentially did not complete the lab activities.** You will be pleasantly surprised that at the end of the course some of your videos will be better than what is available on YouTube, at least in showing the desired behavior or function. Students in this class took many of the short clips that I show in lecture.

**A word of caution**. Keep your desktops clean. Always trash by dragging, any unwanted photographs and movies into the trash. **Check your folders before leaving, are all the photographs and movies you wish to keep there.** You may keep as many photographs and movies as you wish, but it will be easier on you when you have to turn in your journals to pick the best one or two out of five to submit for grading, instead of the best one or two out of 20. Remember to work on the accompanying text file at laboratory’s end. If you do not record your observations as you go, you will forget exactly what you did and have to spend extra time trying to re-create your experience at grading time.

Please clean up also after yourself before you leave the lab. Clean up the lab table and check with Bradley before leaving.