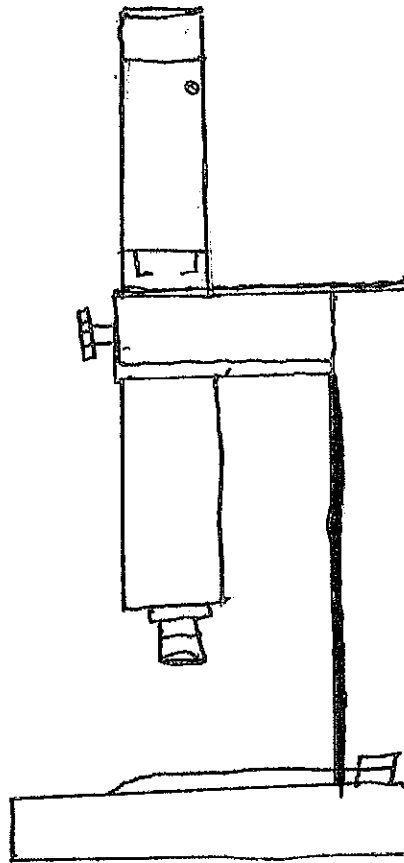


**Instruction Manual  
for the  
GH Monoscope  
(microscope)**



**Fourth Grade Students in Mr. Costello's Class  
June 2006**

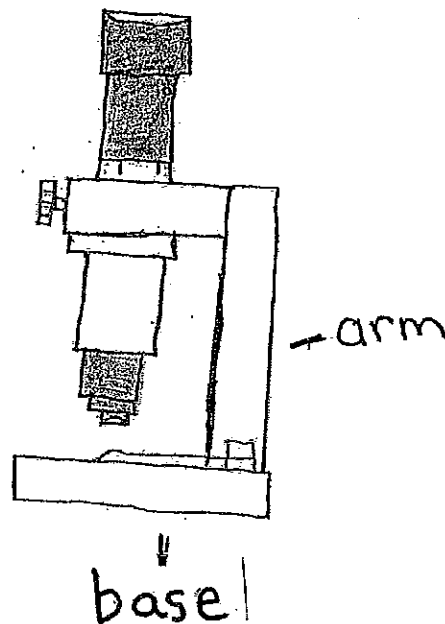
**Alice B. Beal School**

# How to Use Your Monoscope

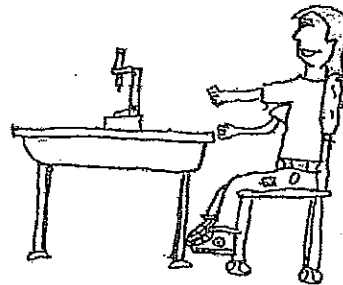
## How to Set Up With Your Monoscope

The monoscope is a delicate and expensive (\$100 each!) instrument.

You must carry it carefully to your work space by holding it a certain way. With one hand hold the arm and with your other hand support the base.



Once back in your chair remove the dust cover. Adjust your chair so you can look into the monoscope comfortably. You can turn your chair sideways and kneel on it. The arm of the monoscope faces your chest at all times. If it is not facing you, a shadow will be on the specimen (the object you are looking at).

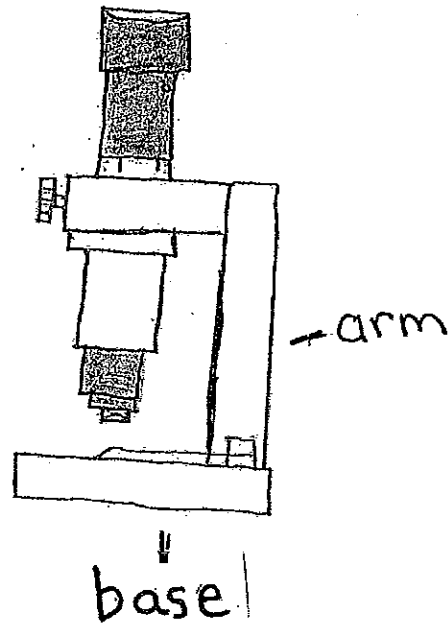


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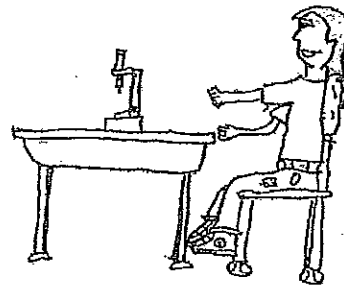
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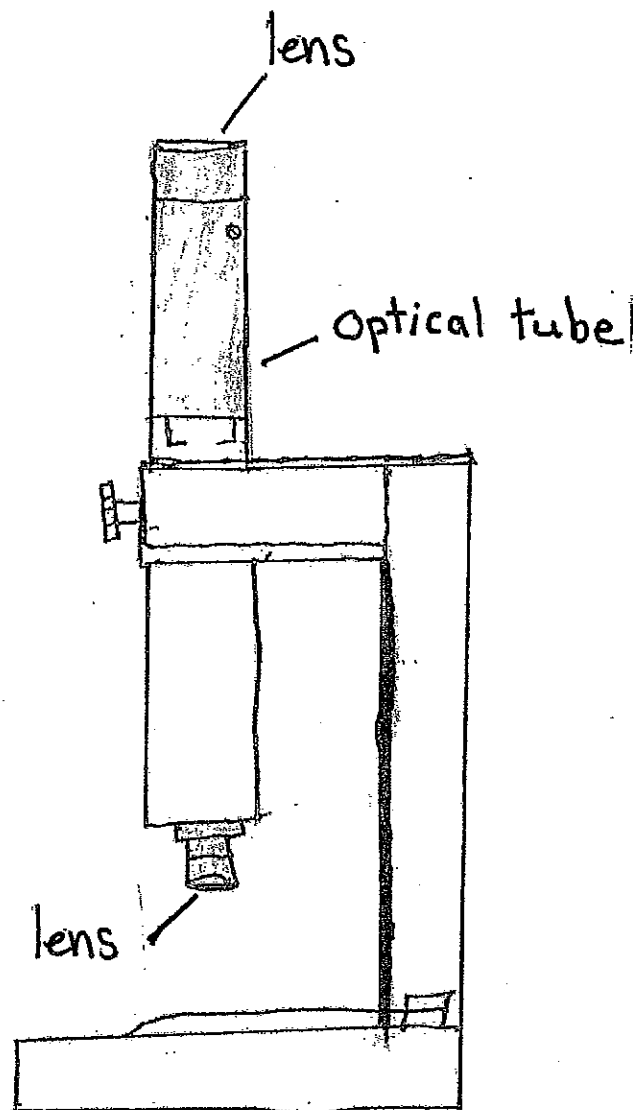


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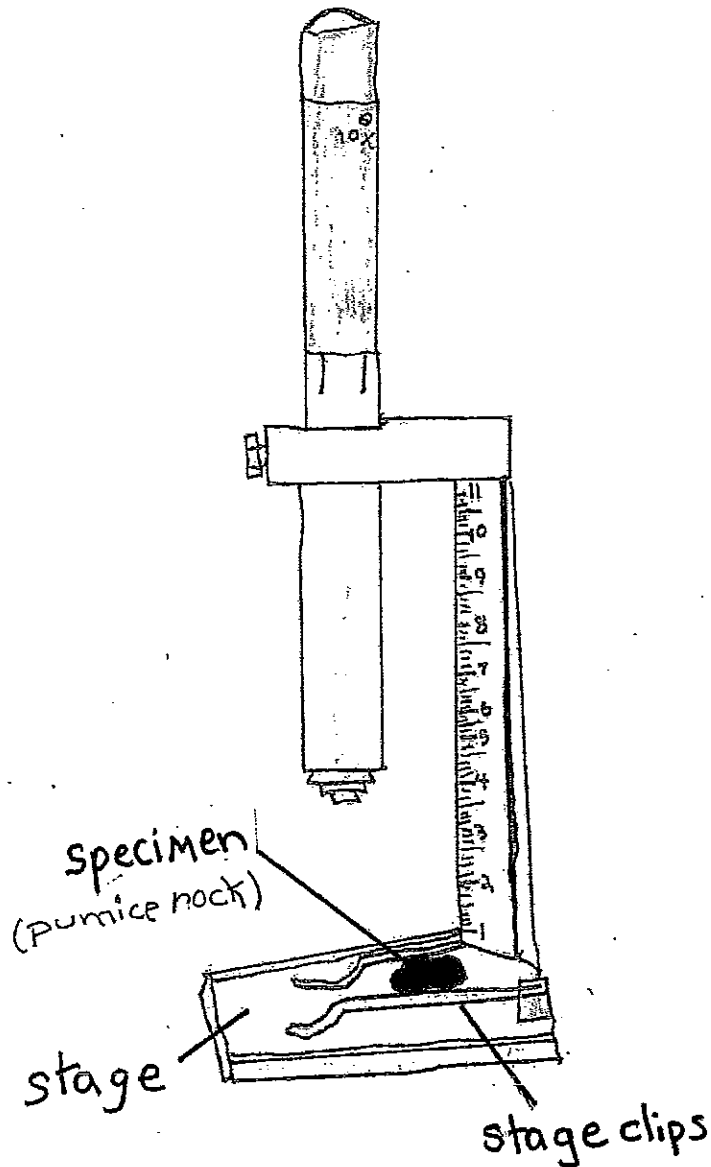
## The Optical Tube

The part of the monoscope that you look through is called the optical tube. The optical tube will allow you to magnify your view of whatever specimen you are looking at. There are two lenses. One is at the top and the other is at the bottom. Don't touch the lenses because you could smudge or scratch them. Make sure that the optical tube is *completely lowered* before you start using it. Why? Because if you start with the tube in a raised position, when you adjust the tube you might lower it on to the specimen and possibly break the lens!



## Setting the Stage

Under the optical tube is the stage. The stage is held in place by two stage clips. Place the specimen on the stage directly under the tube. If the specimen is too thick and will not fit under the tube, remove the stage by spreading the stage clips open.



The stage is two-sided, one white and one black. If your specimen is dark, use the white side of the stage. If the specimen is light colored, use the darker side!

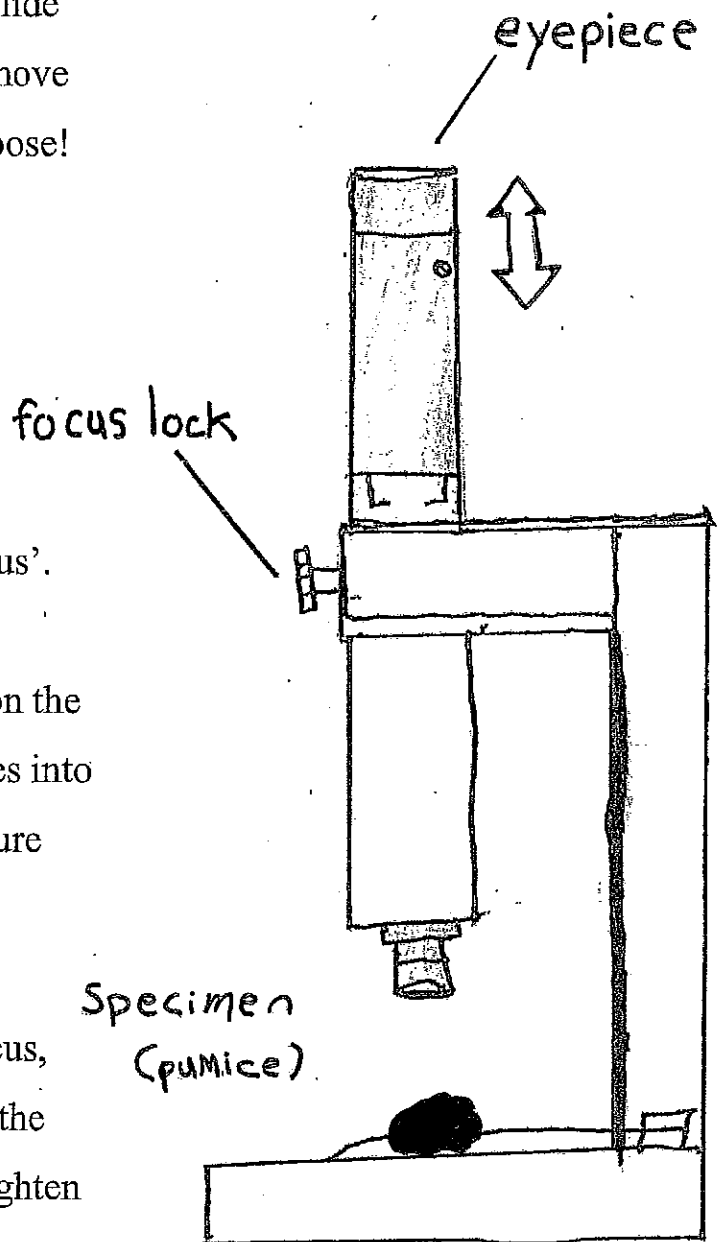
Simple, huh?

## Focus Please!

A small screw holds the optical tube in place. The screw is called the focus lock. Loosen the focus lock about a half turn, so you can slide the optical tube up. Don't remove the focus lock - just make it loose!

Now let's find the 'coarse focus'. Raise the optical tube while ALWAYS keeping your eye on the eyepiece. The specimen comes into focus very quickly, so make sure you don't miss it.

Once you have found your focus, tighten the focus lock to keep the optical tube in place. Don't tighten the focus lock too much.

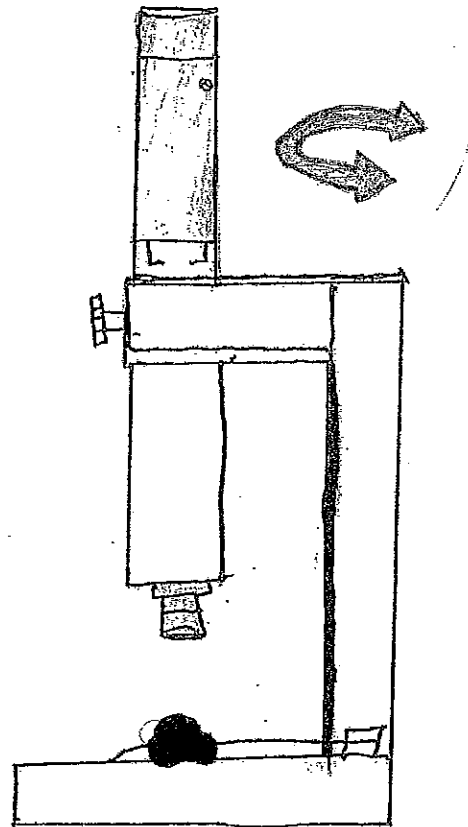


## Fine Focus

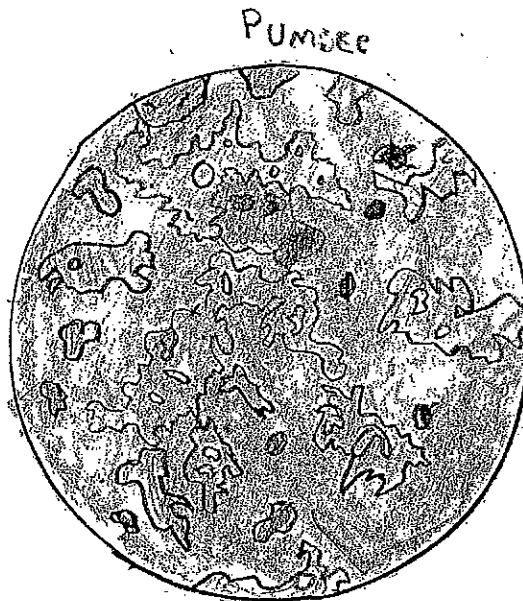
Once you have found your coarse focus, it's time to find your 'fine focus'.

Look through the optical tube at your specimen. Twist the top of the optical tube just a little bit. This will help you find your fine focus.

The fine focus helps you to see the different parts of the specimen, especially when there are different angles and heights. By the way, the circular area you see through the optical tube is called the 'field of view'.



This is what pumice (an igneous rock) looks like in the field of view.



### Wrapping it Up

Once you're done, remove the specimen from the stage. If you have removed the stage, put it back and slide the stage clips on top of the stage. Loosen the focus lock and gently lower the optical tube all the way down. Tighten the focus lock again. Now it's time to replace the dust cover. Remember to use both of your hands to carry your monoscope back to where you got it from.



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