

Name _____

Date 10/4/2011

Period _____

Microscope Notes #2

Vocabulary

- 1. Microscope**

An instrument with a lens (or combination of lenses) that gives a clear, larger image of a small object viewed through it.
- 2. Compound Microscope**

A microscope with two lenses in a row
- 3. Eyepiece/Ocular lens (10x)**

You look through this lens - It magnifies an object 10x
- 4. Objective Lens**

The magnifying lens (magnifies more than ten times.)
- 5. Specimen**

The thing to be magnified by the microscope.
- 6. Slide**

A small rectangular piece of glass for the specimen.
- 7. Cover Slip**

A small square piece of plastic (or glass) that covers the specimen on the slide.
- 8. Diaphragm**

Located under the stage.
- Used to change the amount of light on the specimen.
- Each microscope has one or the other type, but not both (Disc type or Iris type)
- 9. Field of Vision**

The amount of specimen you see through the 'scope.
- 10. Focal Plane**

The very thin, flat layer of the specimen that can be seen clearly at any one time. Anything above it or below it will be out of focus!
- 11. Image Reversal**

The lenses of the microscope make the image look upside down and backwards. The slide has to be moved the opposite direction on the stage from the way you want it to move in the field of vision.
- 12. Lens**

A clear piece of optical equipment, used for forming an image by focusing rays of light. From the Latin word meaning "lentil" for its shape.

Microscope Notes 2

~ Using a COMPOUND MICROSCOPE ~

A. *Question* - When should you use a microscope?

Answer - **When the answer is yes to all questions below**

- * Is the object (specimen) flat?
- * Will it fit on the stage?
- * Is it fairly neat & clean?
- * Will light shine through it?

B. Carrying a microscope ...

One hand on the arm, the other UNDER the base.

C. To Focus - **Follow all steps, IN ORDER**

- a. Begin with the **stage AWAY FROM** the objective.
- b. Select the **low power objective lens**.
- c. Plug in scope and turn on light.
- d. Adjust the **diaphragm** so the light is bright.
- e. Place the covered **slide with specimen** over the stage window.
- f. To focus, move the stage **up, closer** to the objective.
 1. Use **Coarse** Adjustment for low and medium power.
 2. Use **Fine** Adjustment for high power.
 3. Practice your skills with a prepared slide.

D. How to PREPARE YOUR OWN SLIDE - follow steps IN ORDER!

- a. Get a **slide & cover slip**
- b. Place your **specimen** on the slide.
- c. Carefully place a drop of **water** on the specimen (if necessary).
- d. Cover carefully with a **cover slip**. Don't squish it!
- e. Practice your skills with your own slide. Enjoy!