**NOTES 1.1: Observing Living Things**

* There are 5 characteristics of living things:
	1. Living things \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Living things \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Living things \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	4. Living things\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	5. Living things \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Is a burning candle alive? Compare a burning candle to a human being: describe the similarities and differences. Explain



* Anton van Leeuwenhoek was one of the first people to build a \_\_\_\_\_\_\_\_\_\_\_\_\_. He could magnify up to \_\_\_\_\_\_\_, and used it to observe microscopic living things.
* The compound light microscope has two sets of \_\_\_\_\_\_\_\_\_\_\_ that magnify an image
* The \_\_\_\_\_\_\_\_\_\_\_ lens has a total magnification of \_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Each of the objective lenses has a different magnification power.
	+ Low power = \_\_\_\_\_\_\_\_ objective
	+ Med power = \_\_\_\_\_\_\_\_ objective
	+ High power = \_\_\_\_\_\_\_\_ objective
* Multiply the objective by the eyepiece for total magnification.
	+ Example: High Power =

Now you try: Example. What would be the total magnification when viewing a specimen under medium power? Show your work

* The ability to distinguish between two dots or objects that are very close together is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



The human eye has a resolving power of \_\_\_\_\_\_\_\_\_\_\_\_\_\_

The resolving power of a compound light microscope is \_\_\_\_\_\_\_\_\_\_\_ (microns). A micron is a millionth of a meter

* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is what you see when you look through the microscope.
* Once you know the size of the field of view you can estimate the size of an object that you are viewing

* The diameter of the field of view represented on the left is \_\_\_\_\_\_\_\_\_\_\_\_.
* We often use microns since most objects are smaller than a millimeter
* Multiply millimeters by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to convert to microns
* Example. 2.5mm x \_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Label the following parts of a compound light microscope.



Each part of the compound light microscope is listed in the left column of the table below. In the right column, describe the function of each microscope part. For assistance, refer to pages 12–13 of *BC Science* 8.

|  |  |
| --- | --- |
| Microscope part | Function |
| Eyepiece |  |
| Arm |  |
| Revolving nosepiece |  |
| Objective lenses |  |
| Fine focus knob |  |
| Coarse focus knob |  |
| Stage |  |
| Base |  |
| Light source |  |