

KEEP THIS IN THE FRONT OF YOUR BINDER FOR EASY REFERENCE

Magnification

APPARENT MAGNIFICATION

How much the image of the specimen has been magnified by the microscope.

OCULAR POWER X OBJECTIVE POWER

***Ocular power is always 10x

For example: If you are looking through the low power lens (4x), the apparent magnification = (10x) x (4x) = 40x

ACTUAL LENGTH

Measures the true length of the organism

- Trace the outline of a petri dish. This becomes your *field of view (FOV)*.
- Draw the specimen to scale (i.e. if the specimen only takes up a quarter of the field of view through the microscope, then draw your specimen a quarter of the field of view on paper.)

STEP 1

Calculate how many times the organism fits across the diameter of the field.

$$\frac{\text{Petri dish diameter (mm)}}{\text{Drawing length (mm)}} = \text{_____ times across}$$

STEP 2

Measure the field of view in millimeters and convert it to micrometers by multiplying by 1000 μm

The field of view is the diameter of the field, taking into account the magnification being used

	Field of View (mm)	Multiply by 1000 μm	Field of View (μm)
LOW POWER	4.3 mm	X 1000 μm	4300μm
MEDIUM POWER	1.7 mm	X 1000 μm	1700μm
HIGH POWER	0.43 mm	X 1000 μm	430μm

STEP 3

Calculate the actual length of the specimen

$$\frac{\text{Diameter of field (μm)}}{\text{\# of times the specimen fits across}} = \text{_____ } \mu\text{m}$$

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BIOLOGY DIAGRAMS

- Drawings of specimens are not sketches. The lines must be sharp and clear – no shading.
- Use a sharp pencil only. NO PEN OR PENCIL CRAYONS.
- Use a ruler for drawing label lines
- Label lines should always extend beyond the drawing. Do not have your labels inside of the petri dish circle.
- Label (title) your drawing
- Always include apparent magnification
- Draw your diagram within the outline of a petri dish tracing

Example:

