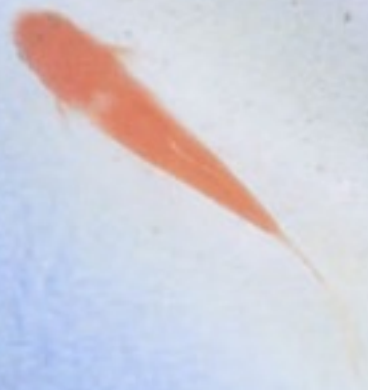
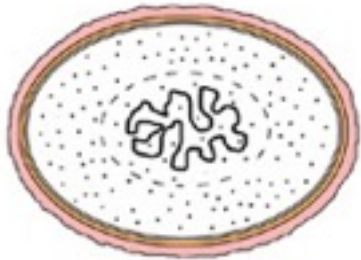


# The Cell -Under Microscope





Prokaryotic Cell



Animal (Eukaryotic) Cell

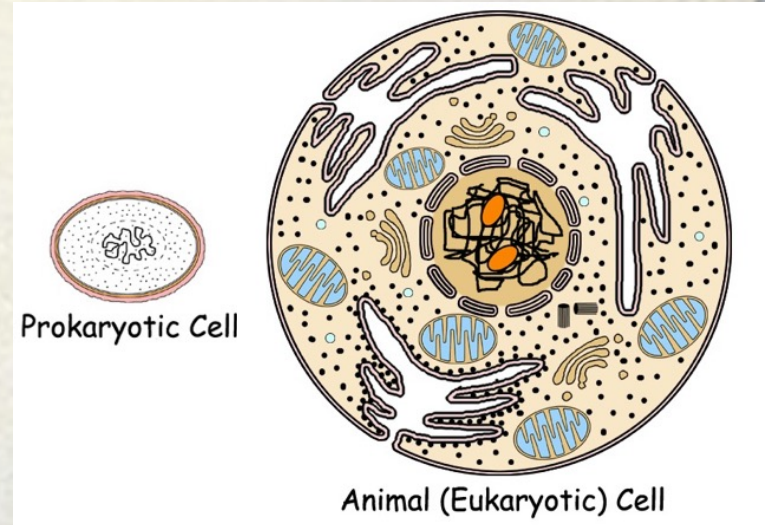
# Prokaryotic VS Eukaryotic

## Prokaryotic Cell :

- Small and simple
- Single circular strand of DNA

## Eukaryotic Cells :

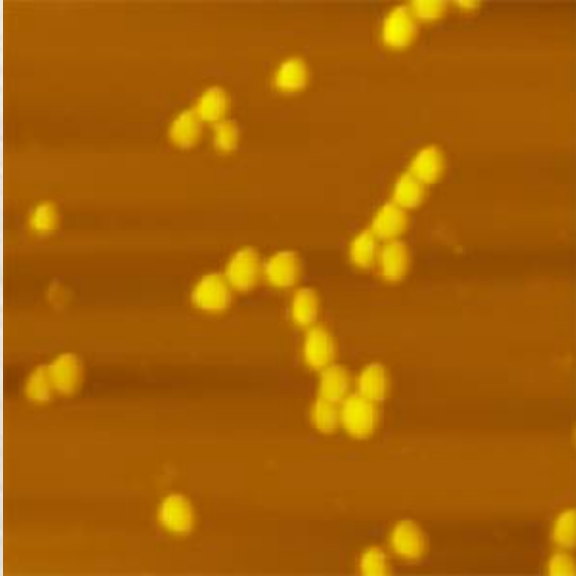
- Organelles
- DNA in a double membrane nucleus



# Prokaryotic Vs. Eukaryotic

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Prokaryotic Cells  
· Bacteria

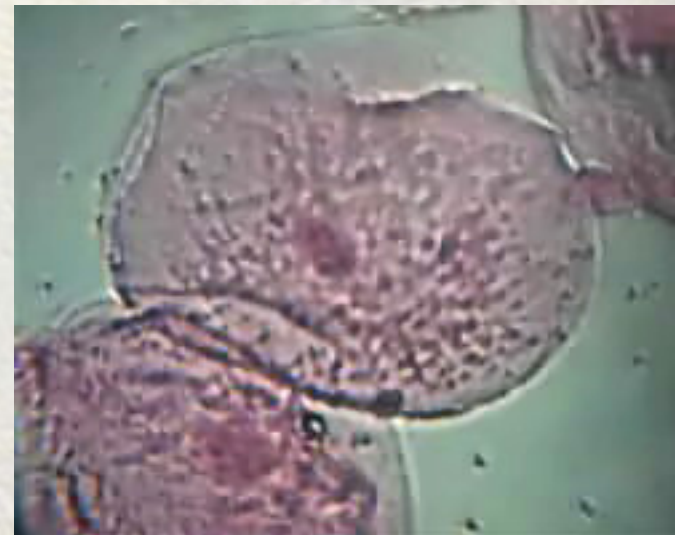
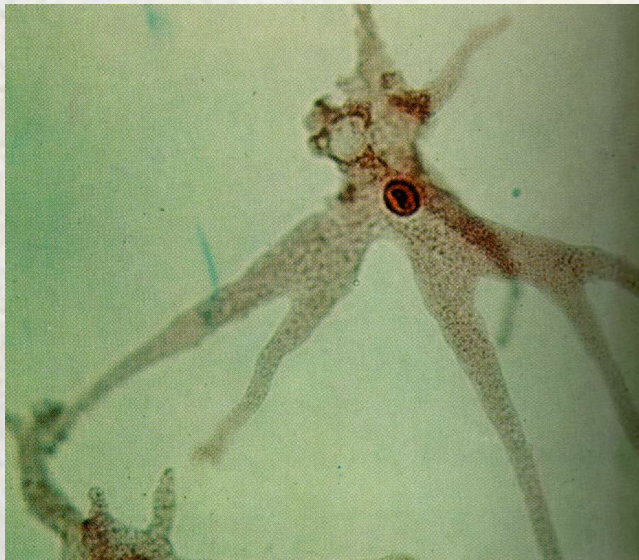


# Prokaryotic Vs. Eukaryotic

Eukaryotic Cells (having true nucleus)

A. Animal

- Amoeba
- Cheek

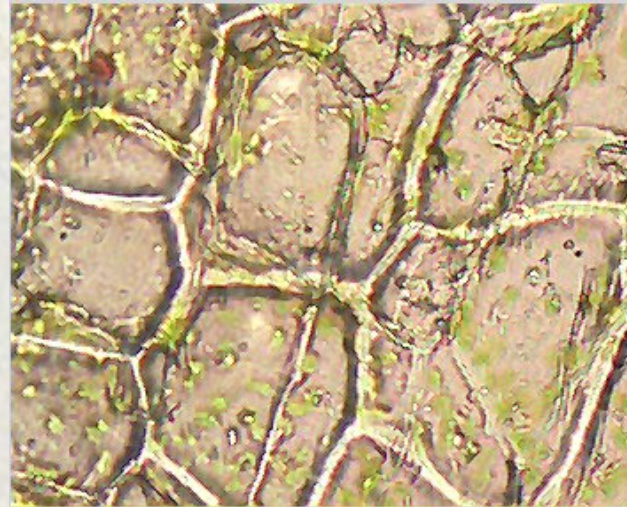
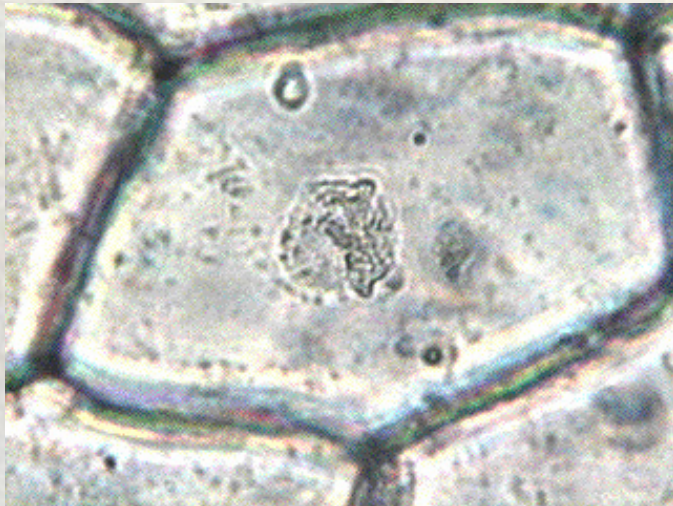


# Prokaryotic **Vs. Eukaryotic**

Eukaryotic Cells (having true nucleus)

B. Plant

- Onion skin



	<b>Prokaryotes</b>	<b>Eukaryotes</b>
<b>Cell Organization</b>		
<b>Nucleus</b>		
<b>Components</b>		
<b>Types</b>		
<b>Size</b>		

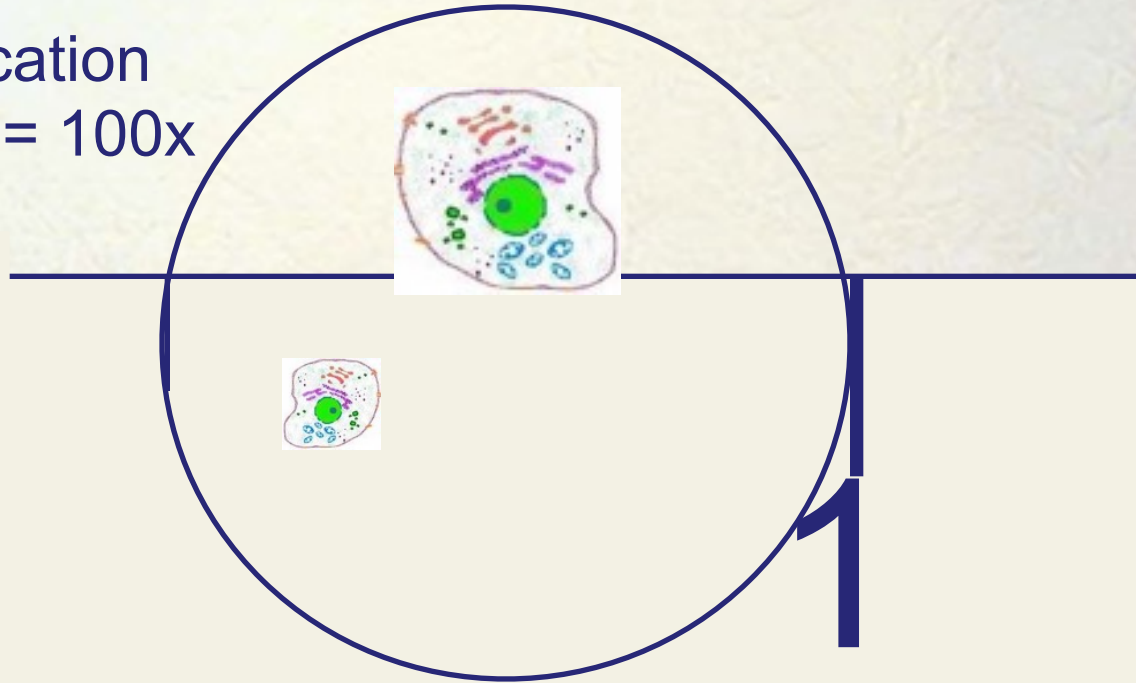
# **Using the Microscope**

- ? Low rule (light, stage, power)
- ? Scope placement
- ? Magnification
- ? Making a wet mount



# Measuring Size

Magnification  
 $10 \times 10 = 100x$



1. Go to 100x magnification- (10 eye piece x 10 objective)
2. Use the scale of diameter = 1000  $\mu\text{m}$
3. Estimate size

# Illustration Rules

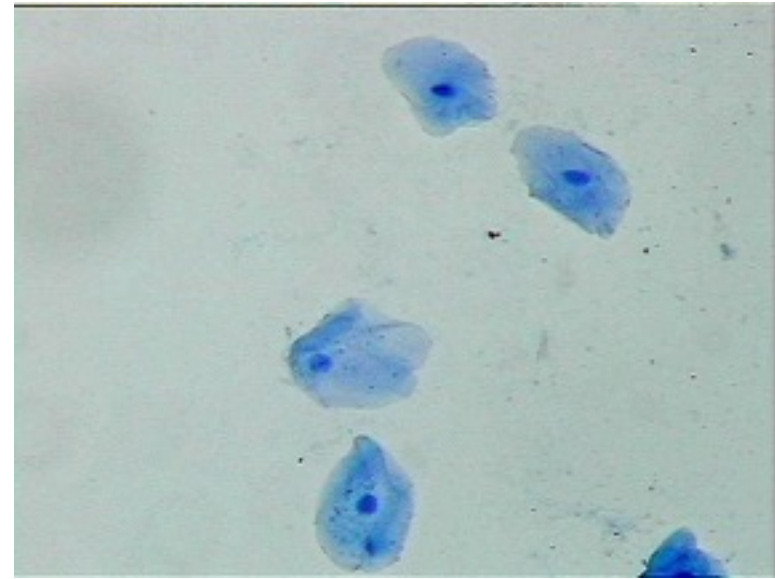
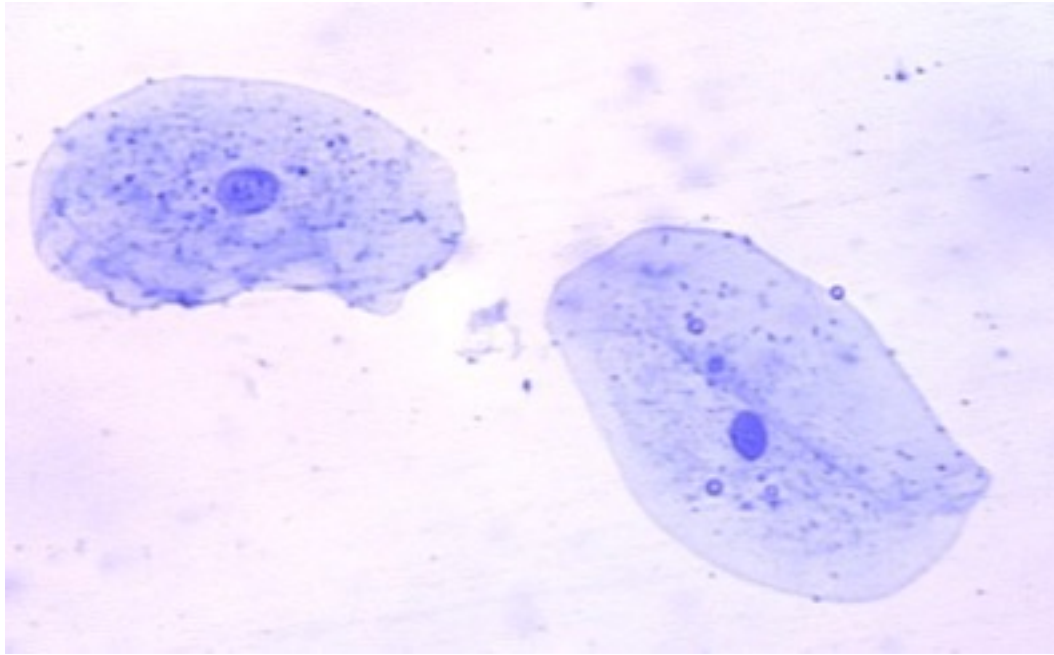
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- » Always use a pencil.
- » Always print.
- » Draw a circle to represent the microscope's field of view.
- » Label off to one side.
- » Use a RULER when labelling.
- » Add a title and state the observed magnification.
- » Draw cells at the BEST magnification (that which shows the required detail).
- » With tissues or groups of cells, Illustrate only 3-5 cells to get the gist.

g

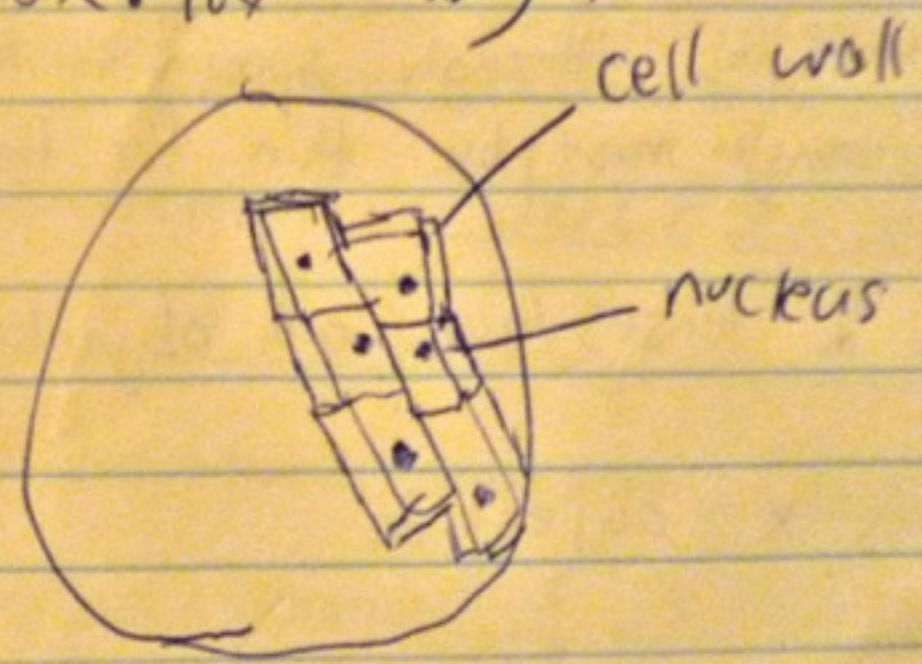


# Work samples

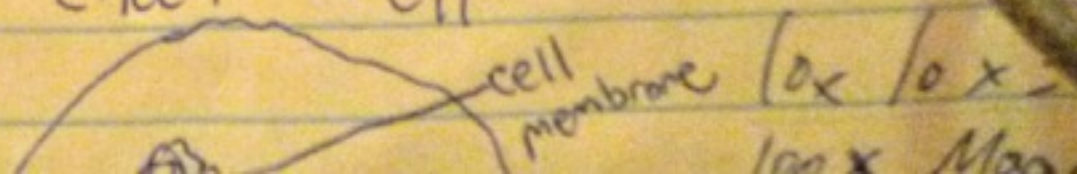


Onion Shell Skin  
lax. lax = 1000  $\mu$ m

Plant



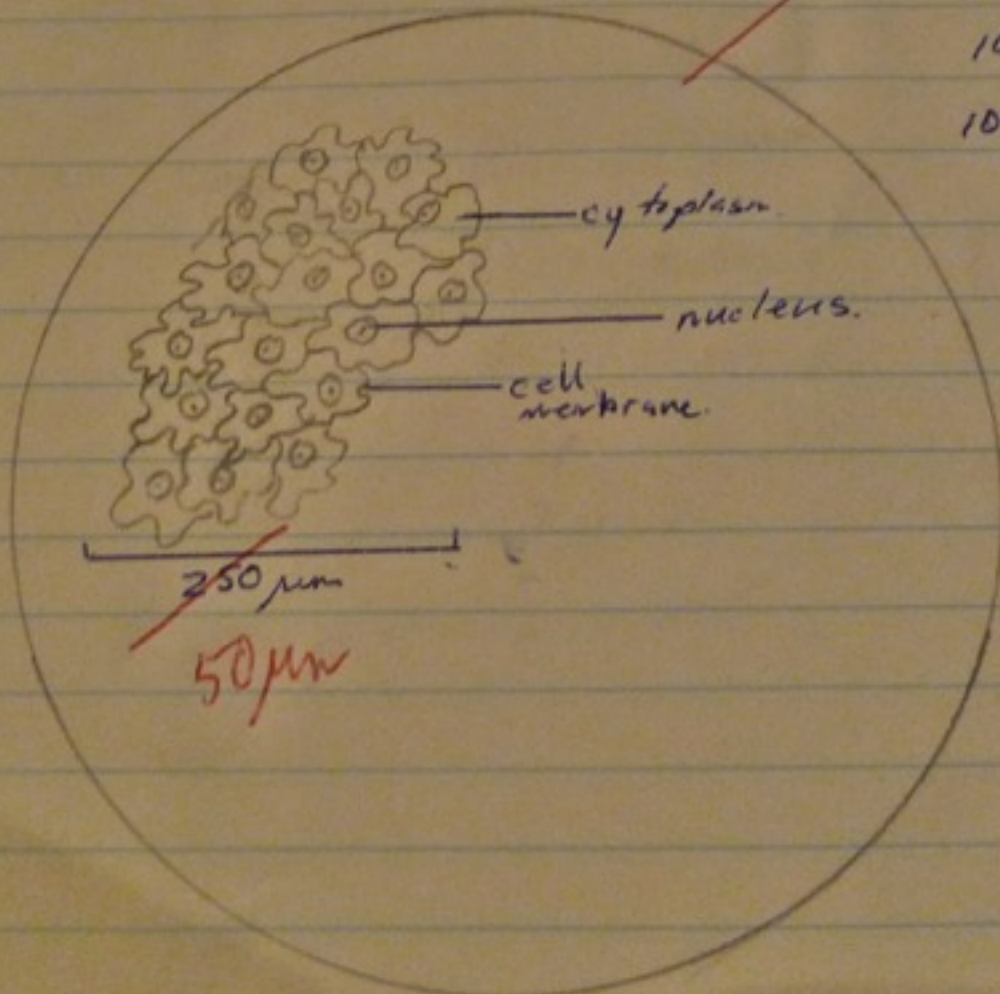
Cheek Cell



Check Cell

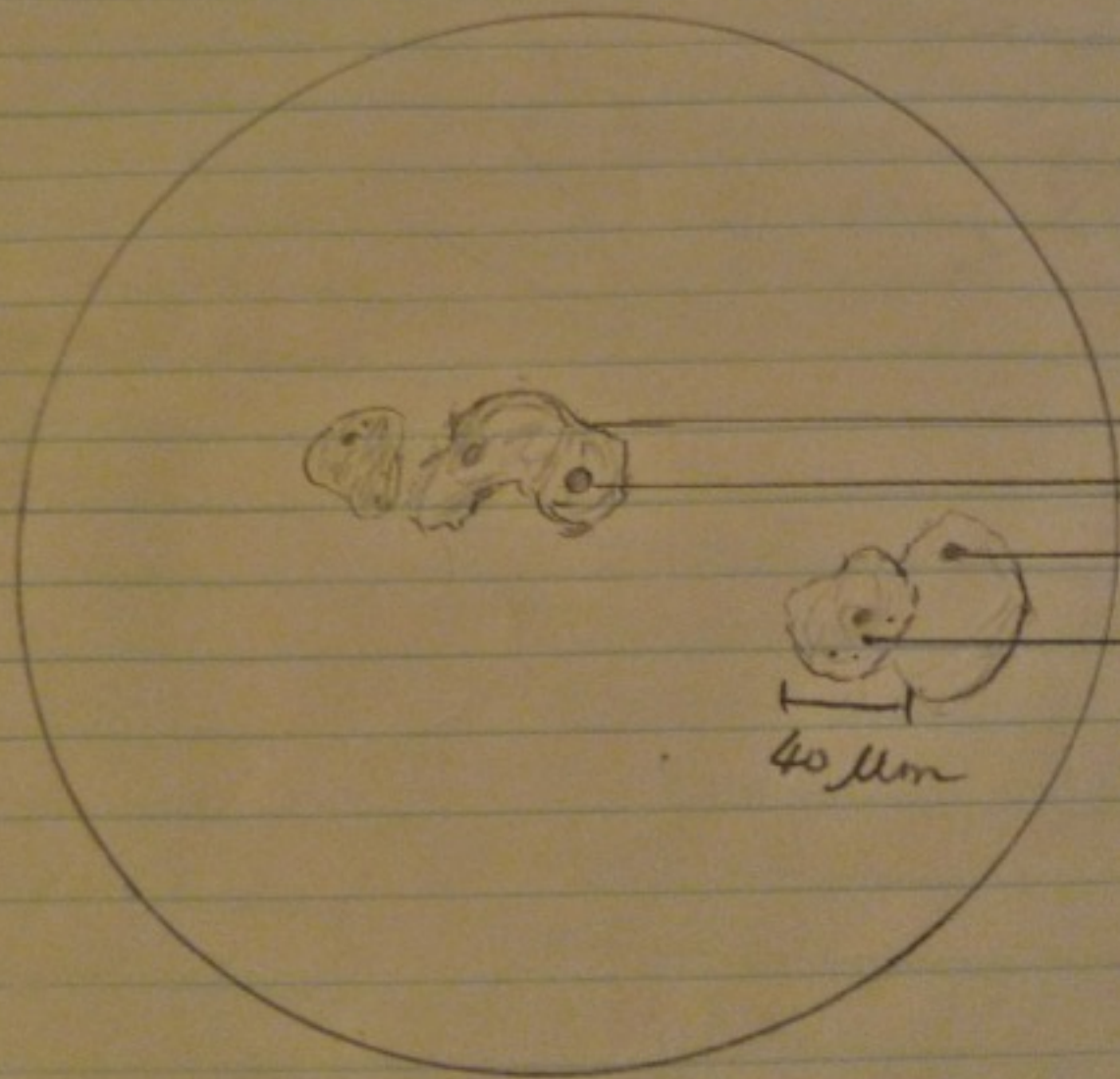
~~10x = 10x =~~

100x magnification.



February 7, 2011

# Cheek Cells



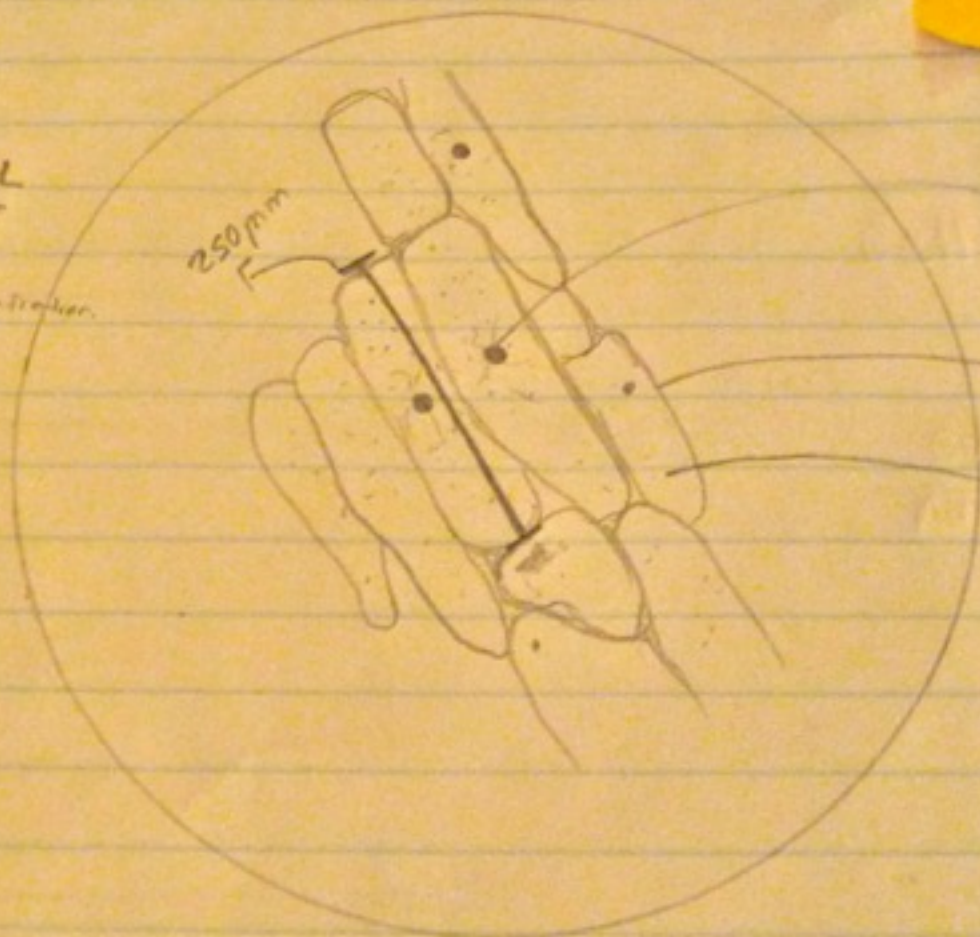
cell membrane  
nuclear membrane  
nucleus  
cytoplasm

40  $\mu$ m

# CELLS:

## ONION CELL

10 X 10 = 100 magnification.



nucleus

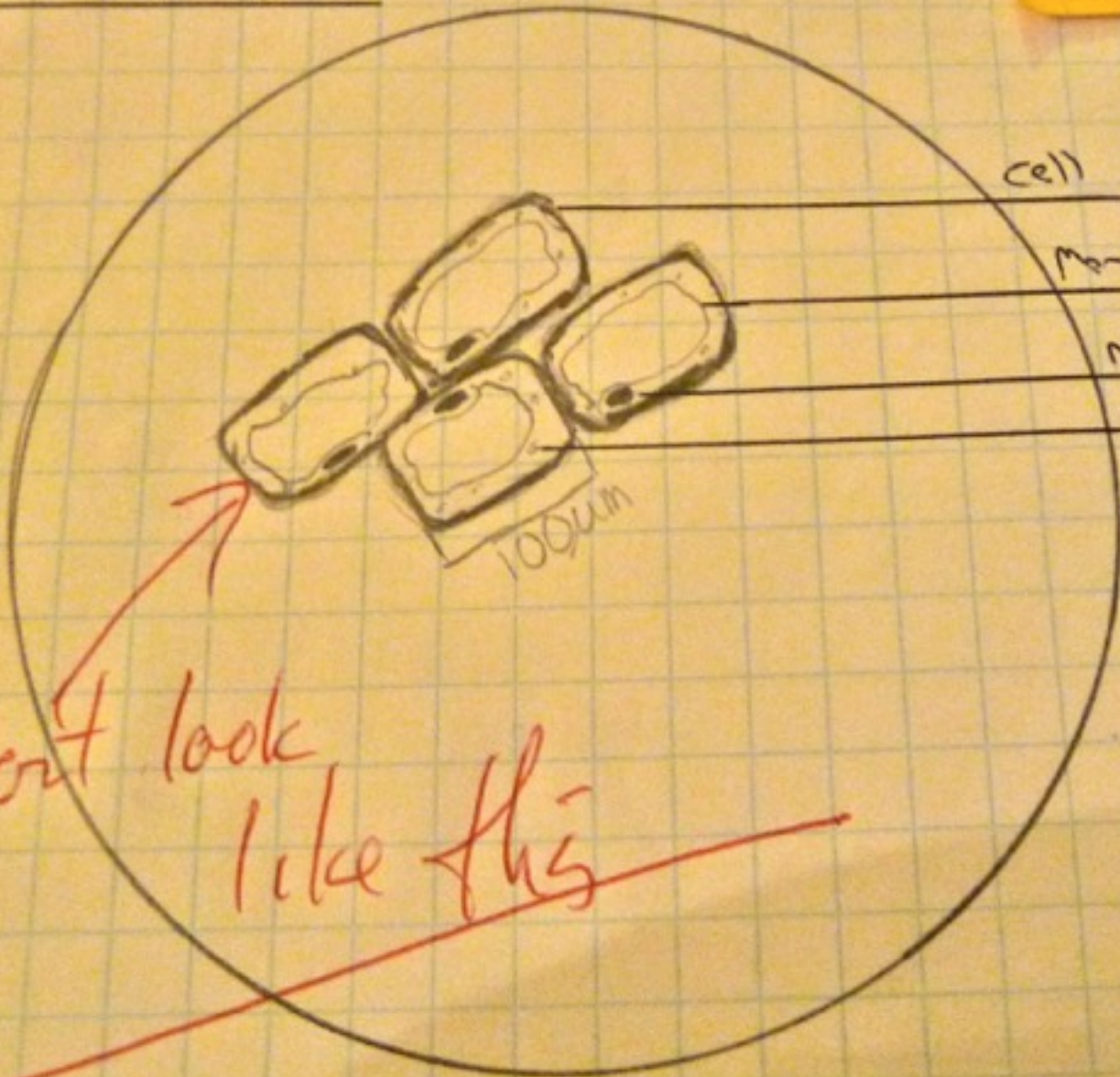
cell wall

membrane

size of cell:  
 $1000 \mu\text{m} \div 4$   
 $= 250 \mu\text{m}$



Osmotic cell (skin)



cell wall

membrane (vacuole)

nucleus

chloroplast

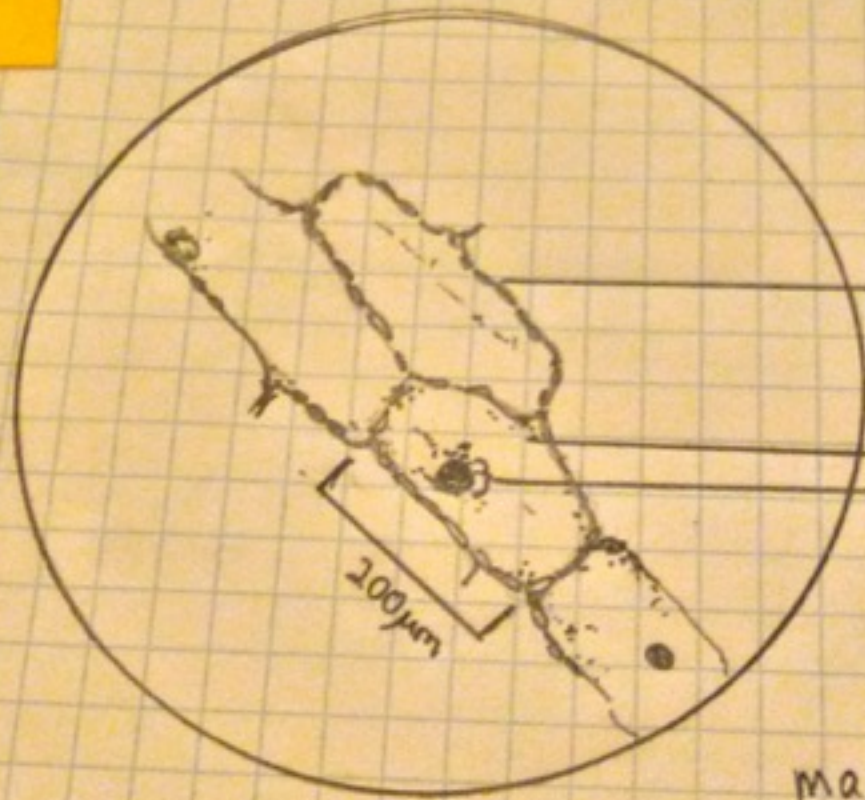
100um

Don't look like this

(10 x 10)

100

Onion skin cells



Cell wall

Cytoplasm  
nucleus with membrane

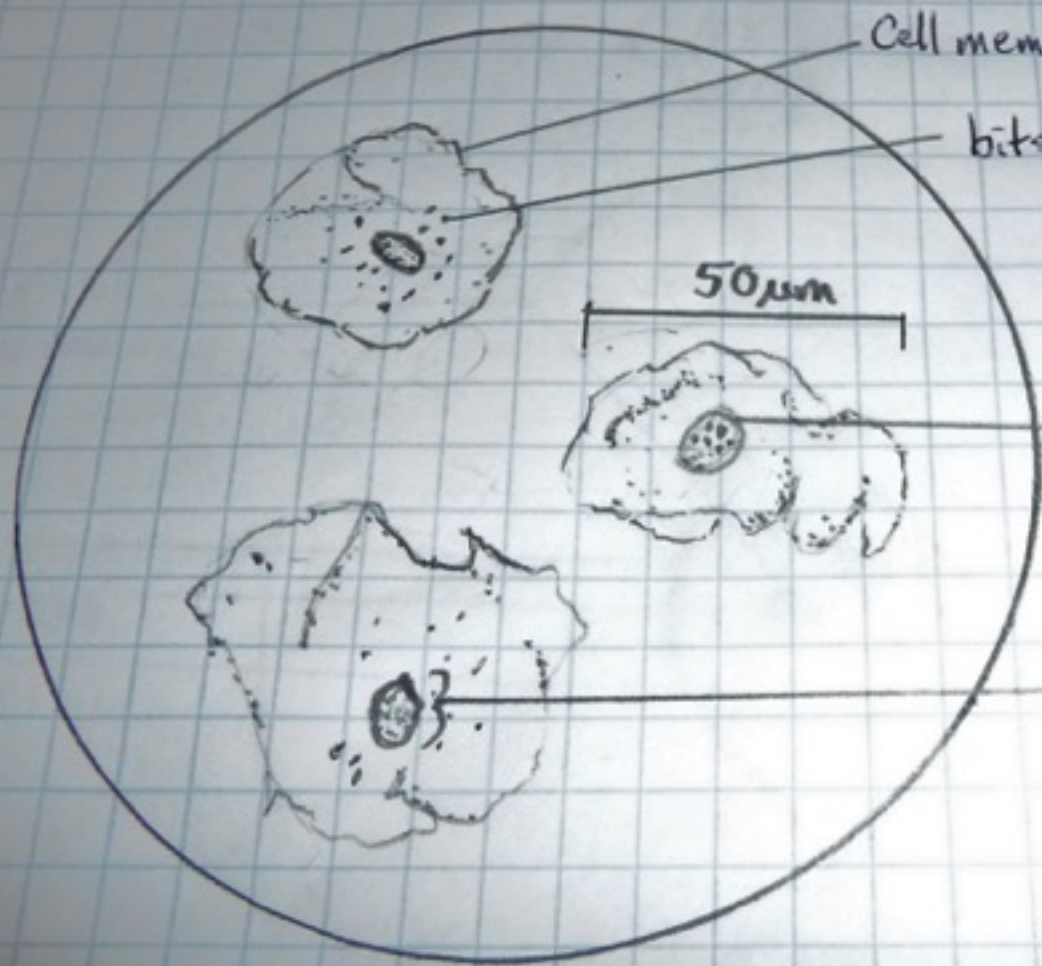
magnification =  $\frac{(10 \times 10)}{100} = 100X$

Nicely done!

Check cells

Cell membrane

check cells



Cell membrane

bits in cytoplasm

50µm

nucleus membrane

nucleus

magnification =  $\frac{10 \times 40}{1}$  = 400x