HW: Practicing Scientific Method Worksheet, Quiz Friday (lab safety, measurement, scientific method and scientific vocabulary). Roll Call #5-8 Scientific Sherlock Friday 9/23.

Do Now: 9/21

1. Take out your HW to be checked
2. Label the Microscope worksheet.

WORD BOX:		
Revolving nose piece	Stage	Stage clip
Base	Coarse adjustment	Fine adjustment
Diaphragm	Eye piece	Objective lenses
Arm	Light Source	

Sep 4-8:44 AM

Roll Call!

Sep 17-8:01 AM

Experimental Design Practice with Independent and Dependent Variables

I D

1. An experimenter wanted to test which brand of cleaner would make his shirts look whiter. He bought three new white T-shirts and put dirt on them. He washed the first shirt for 2 minutes in brand A cleaner, the second for 2 minutes in brand B cleaner, and the third shirt for 2 minutes in brand C cleaner. Brand C was the regular cleaner he has always been using. After washing them he let the shirts dry in the sun and one shirt was put in the dryer. He then looked to see which shirt looked the most white.

If I then D b/c

Restate the **hypothesis** If I use different brands of cleaner on my dirty white shirt, then I will find out which one whitens best, because I will be able to compare them side by side.

What is the **control?** The control is Brand C (the regular cleaner he has always been using)

What is the **independent** variable? The Brand of Cleaner (A, B, and C)

What is the **dependent** variable? The whiteness of the shirt

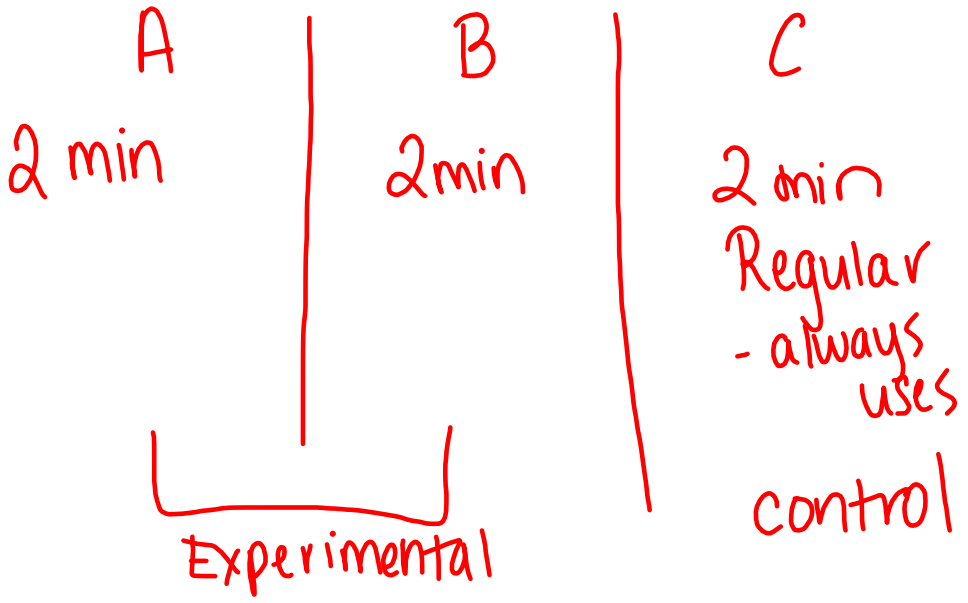
List three things to **make this a better experiment.**

1) You could dry all the shirts the same way

2) You could increase the time the cleaner is used for all brands

3) You could repeat the experiment with more shirts

Sep 21-6:51 AM



Sep 21-1:59 PM

D I

2. Besi wanted to figure out how she could make brownies softer. She predicted that the brownies would be softer if she added more eggs. She compared three groups of brownies. In Group 1 she added more eggs and sugar than the normal recipe. In Group 2 she made the brownies in her normal way. In Group 3 she added more sugar than the normal recipe. She baked each group and tasted to find out which made the brownies softer.

Restate the hypothesis: If I add more eggs to my brownie recipe, then the brownies will be softer, because each egg makes the batter more moist.

What is the **control**? Group 2 is the control group (the brownie recipe made the normal way)

What is the **independent** variable? The amount of eggs used

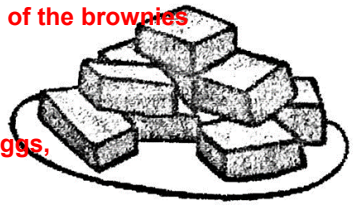
What is the **dependent** variable? The dependent variable is the softness of the brownies

List three things to **make this a better experiment.**

1) You could keep the amount of sugar the same in each group

2) You could try a different recipe in three groups (more sugar and eggs, the regular way and more sugar only)

3) You could repeat the experiment with a larger batch of batter



3) What is the difference between a control group and an experimental group?

The control group does not receive the independent variable and is used for comparison. The experimental group is the group that receives the independent variable and is compared to the control group after the experiment ends.

Sep 21-6:51 AM

1
+ eggs
+ sugar

2
normal

3
+ sugar

Sep 21-2:06 PM

The control group does not receive the independent variable and is used for comparison. The constants in an experiment are the factors in an experiment that are the same in both the experimental group and the control group.

4) What is the difference between a control group and constants?

Read each hypothesis and list the independent and dependent variable.

1. The more I study for the next exam the better my score will be.

Independent variable: Study Time

Dependent variable: Exam Score

2. Two objects dropped from the same height will reach the ground at the same time.

Independent variable: Object used

Dependent variable: Time it takes to reach the ground

3. Adding more sugar to my recipe will make the cookies taste sweeter.

Independent variable: Amount of sugar used

Dependent variable: Sweetness of the cookies

4. Teaching can be improved if teachers would ask students more questions.

Independent variable: Amount off questions asked to students

Dependent variable: Teaching success

Sep 21-6:51 AM

Use the independent and dependent variables to create a hypothesis in the If...Then..Because format.

5. Independent variable: Hours of sunlight Dependent Variable: Plant Growth

If I increase the hours of sunlight, then the plant will grow taller because sunlight is necessary for photosynthesis

6. Independent variable: Cups of Coffee Dependent Variable: Amount of homework completed

If I drink more cups of coffee, then I will be able to complete more homework because coffee contains caffeine which will help me get more work done.

7. Dependent variable: Growth of grass Independent variable: Type of fertilizer

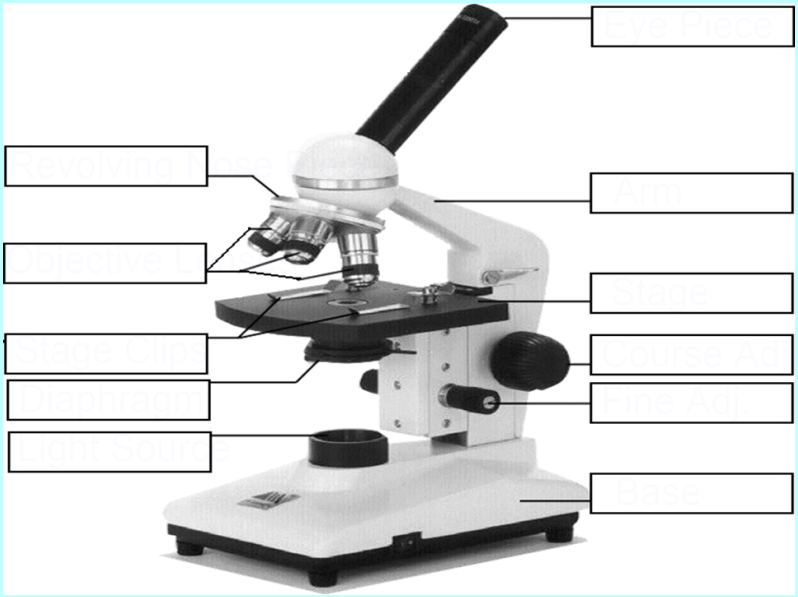
If I use a quality brand fertilizer, then my grass will grow thicker because fertilizer adds nutrients to the soil that will increase growth

8. Dependent variable: Quiz grades Independent variable: Hours of studying

If I invest more hours to studying for the science quiz, then my quiz grade will be high because I will be more prepared to answer the questions.

Sep 21-6:52 AM

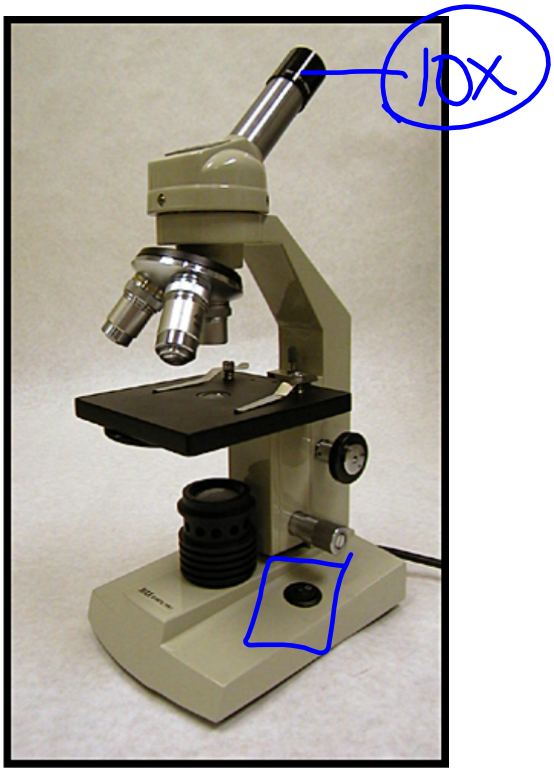
Label the microscope diagram....let's see what you remember from last year!!



WORD BOX:
Revolving nose piece
Stage
Stage clip
Base
Coarse adjustment
Fine adjustment
Diaphragm
Eye piece
Objective lenses
Arm
Light Source

Sep 4-8:44 AM

Move your mouse over the parts of the microscope photograph at the right to find out more about each part and its' specific function.



microscope description

Objective lens: magnification

Low = 4X
Med = 10X
High = 40X

Total magnification:

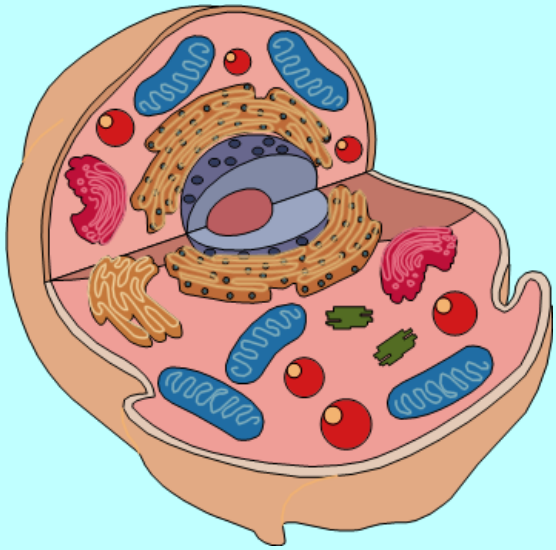
objective lens x eye piece

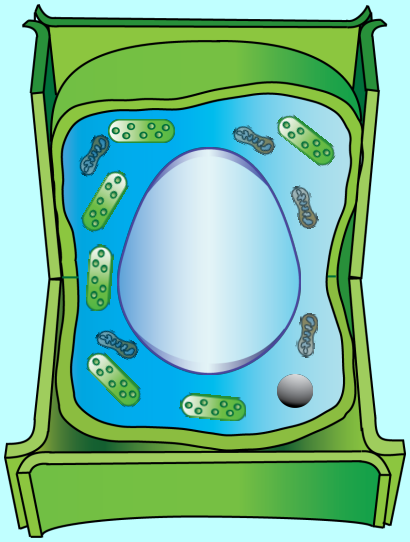
10X

10X · 10X
40X · 10X
4X · 10X

Sep 21-10:43 AM

Who coined the term "cell"?
How did this all come about??





Sep 4-8:53 AM

Robert Hooke

Not Captain James Hook from Disney

Robert Hooke looked at dead cork (part of a tree) under the microscope. He thought they looked like Jail cells (or Monestary cells) and that's how he coined the term "cell."

Sep 4-8:58 AM

Monastery Cell

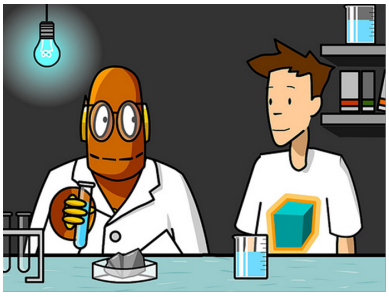
Jail Cell

Sep 11-4:48 PM

Microscope License Answers

C 1. Moves body tube or stage up and down for focusing
L 2. Supports the microscope slide and viewing object
G 3. Supports the body tube and is used to carry the microscope
A 4. Contains the lens you look through
F 5. Reflects light up through the diaphragm, stage, viewing object, and lenses
B 6. Provides the least magnification; usually 10X
I 7. Supports the microscope
J 8. Holds the microscope slide in place
E 9. Provides the greatest magnification; usually 40X
D 10. Controls the amount of light that enters the body tube
M 11. Passageway for light and maintains the correct distance between the lenses
H 12. Moves slightly and is used to sharpen the image of the object you are viewing
K 13. Holds high- and low- power objectives; rotates to change magnification

Sep 21-8:10 AM



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Sep 11-4:46 PM


THERE WAS THIS HUGE EYE THAT WOULDN'T STOP STARING AT ME!
IT'S JUST THE MICROSCOPE DREAM AGAIN... GO BACK TO SLEEP!
CARTOONSTOCK .com
Search ID: bwhn852

Sep 11-4:45 PM