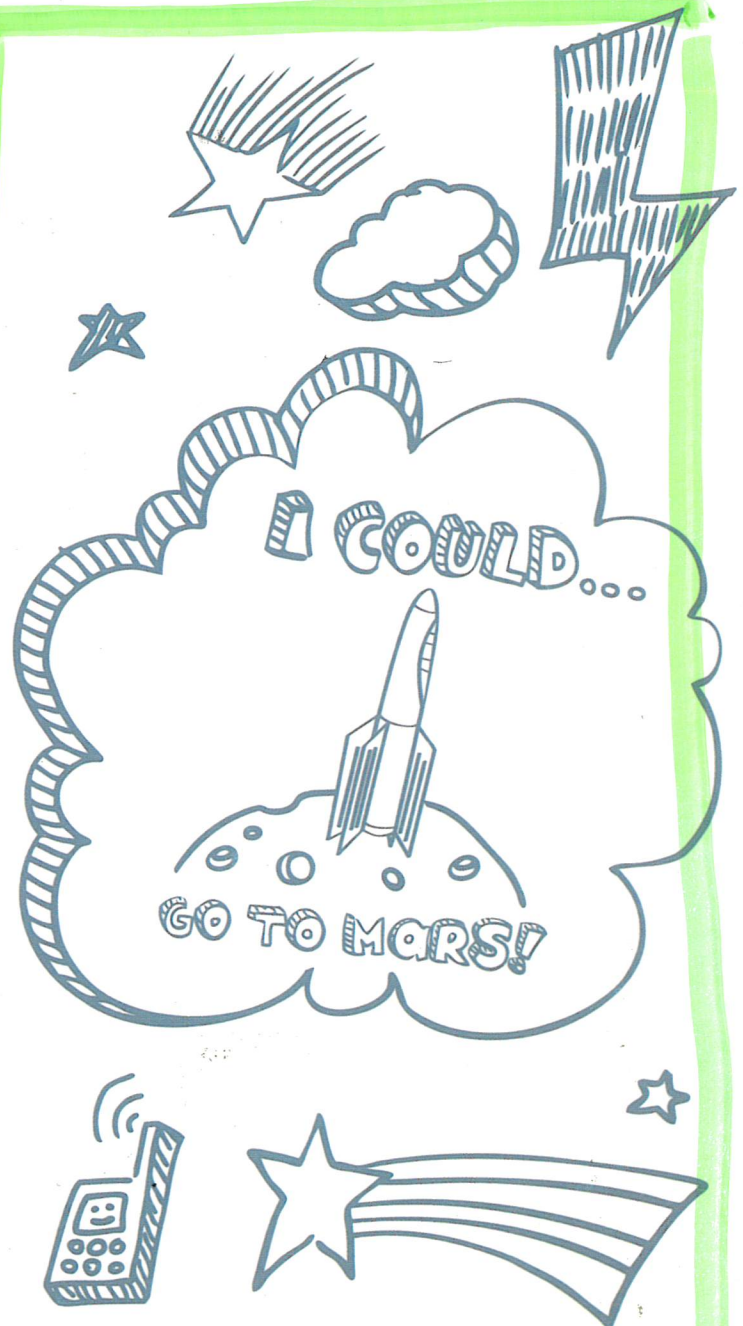


SCIENCE LAB NOTEBOOK

Roger Groom
6th grade Science
2019-2020
Groom Period



Books On-Line Login Information

Username these should be filled

Password in w/ personalized login

Chrometbook # _____

METRIC UNITS TO U.S. CUSTOMARY UNITS

<u>Metric Units</u>		<u>Factor</u>	<u>Convert</u>	<u>U.S. Customary Units</u>
---------------------	--	---------------	----------------	-----------------------------

LENGTH

millimeters (mm)	X	0.039	=	inches (in)
meters (m)	X	3.28	=	feet (ft)
meters (m)	X	1.09	=	yards (yd)
kilometers (km)	X	0.621	=	miles (mi)

VOLUME

milliliters (mL)		0.034	=	fluid ounces (fl oz)
liters (L)	X	0.264	=	gallons (gal)
cubic meters (m ³)	X	35.314	=	cubic feet (ft ³)
cubic meters (m ³)	X	1.307	=	cubic yards (yd ³)

MASS

grams (g)	X	0.035	=	ounces (oz)
kilograms (kg)	X	2.202	=	pounds (lb)

TEMPERATURE

Celsius (°C)		$1.8(C) + 32$	=	Fahrenheit (°F)
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Title Page for
Cell Biology & Disease

9/4

Title Page for
Cell Biology & Disease

Cell Biology and Body Systems

Big Ideas & Essential Questions

Name: _____

Period: _____

<p><u>Big Ideas</u> related to SEPUP Cell Biology and Body Works Units</p>	<p>Essential Questions</p>
<ul style="list-style-type: none"> • The cell is the basic unit of life. • There are levels of organization in living things. • Cell and body processes are related. • The human body has systems with different functions. 	<p>How do systems within an organism help it survive? (SYSTEMS AND SYSTEM MODELS)</p> <p>How do the structures of cells and body systems influence their function? (STRUCTURE AND FUNCTION)</p> <p>What patterns exist between different living things? (PATTERNS)</p>

for Cell Biology & Disease

Learning Targets for Unit C: Cell Biology and Disease

Activity 35: A License to Learn

- SEP #3 and Content: I can explain how a microscope works, can name all its parts, and can demonstrate skill in using one correctly.
- CC #6: I can explain how the structure of a microscope leads to its function.

Activity 36: Looking for Signs of Micro-Life

- SEP #3, 8: I can use a microscope correctly to view, draw, and label a variety of microscopic life forms.
- CC #6: I can observe and predict the function of certain visible structures on microscopic organisms.

Activity 38: Microbes, Plants and You

- SEP #4: I can use a microscope to observe different types of cells.
- Content: I can distinguish between plant and animal cells.

Activity 37: The History of the Germ Theory of Disease

- Content: I can describe how scientific discoveries and inventions led to the development of the Cell Theory.
- Content: I can name and summarize the key contributions that a number of scientists had on our understanding of cells and disease.
- SEP #8: I can critically read and interpret scientific texts to determine central ideas and supporting details.

Activity 39: Cells Alive!

- Content: I can explain what cellular respiration is and why it is important for all living things.
- Content: I can explain how an indicator works to provide evidence of change.
- SEP #2, 3: I can design a controlled experiment and hypothesize about how a model of cell behaves.

Activity 40: A Cell Model

- SEP #2: I can create a model of a cell to investigate the function of the cell membrane.

Activity 42: A Closer Look

- Content and CC#6: I can identify and describe the function of cell parts and organelles.
- Content and CC#4: I can explain how multicellular organisms are organized from cell organelles all the way to organisms.
- SEP #8: I can critically read and interpret scientific texts to determine central ideas and supporting details.

Activity 49: An Ounce of Prevention

- Content: I can explain what vaccines are, when they are necessary, and their pros and cons.
- SEP #7: I can use evidence to support a decision about the use of vaccines, and present the trade-offs of that decision.
- Content and CC#4: I can explain how multicellular organisms are organized from cells to organisms.

Activity 51: The Full Course

- Content: I can model and explain how bacteria can get resistant to antibiotics, and why it is important to always take antibiotics as prescribed.
- SEP #2: I can use a model of a scientific concept and analyze data from it to understand the concept of antibiotic resistance.

Contents:

- microscope quiz

-

-

WRU Thinking?

Have you ever used a microscope before? If so, what did you look at? If not, what would you like to look at?

Vocabulary

Compound Microscope: a microscope with more than one lens.

Magnification: A microscope's power to increase an object's apparent size.

Resolution: a microscope's ability to show detail clearly.

Analysis Questions (#2-4)

#2.

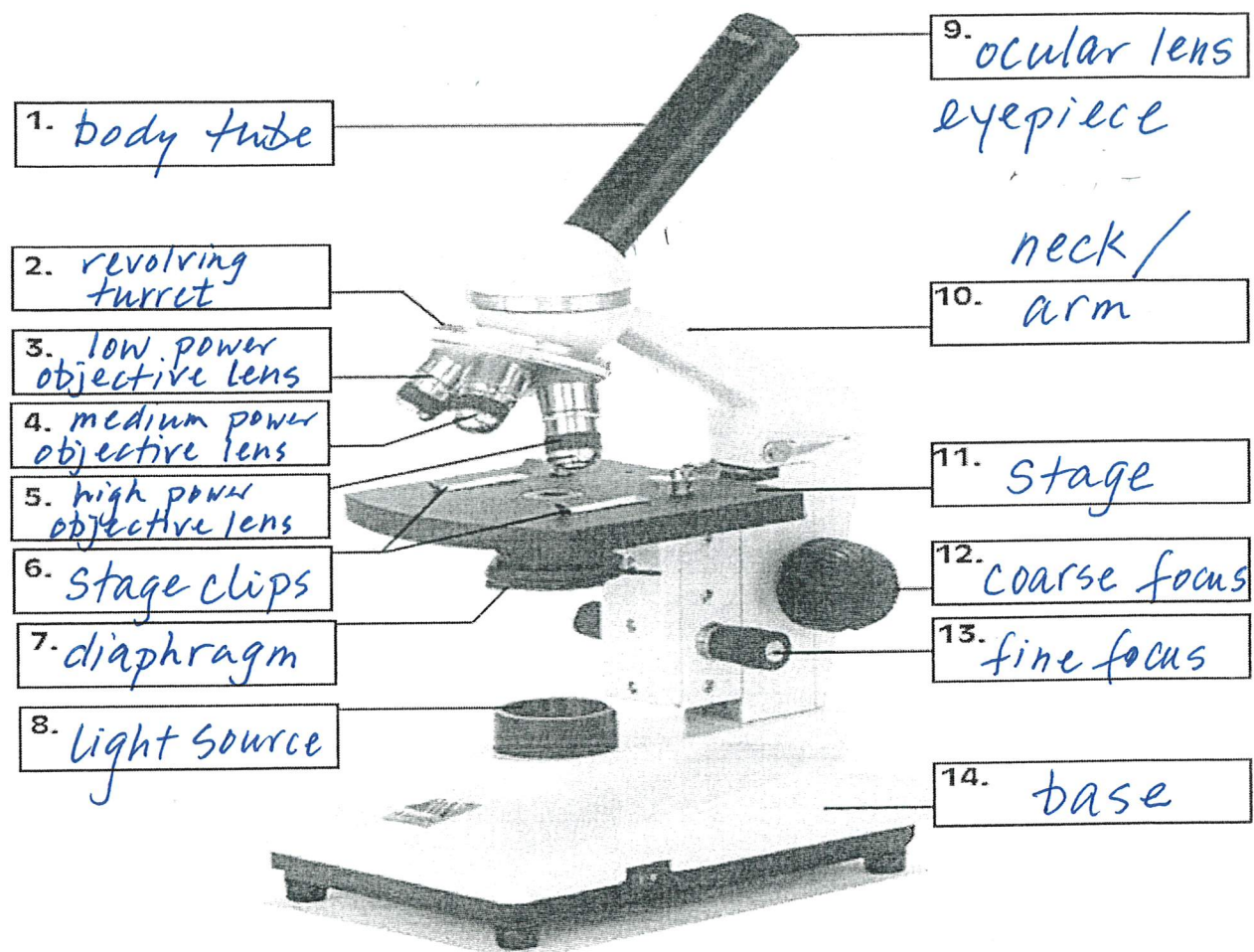
Rules for AQ

1. RQIA
Repeat
Question
In
Answer
2. Full
sentences
3. Skip lines

ACT 35: MICROSCOPE PARTS,
USE, AND LETTER "E" LAB

Name _____ Per. _____

Today's Date 9/10 Due Date: 9/12



Notes about microscope use:

1. Use stage clips – it's easier to move slide around carefully.
2. Move stage to its lowest position and then USE LOW POWER (4x) LENS FIRST.
3. Set light control with diaphragm. Highest light isn't always the best.
4. Focus using the COARSE ADJUSTMENT first, THEN the fine focus.
5. Move slide in opposite direction you want your specimen to move. The lenses in the microscope reverse everything.
6. Switch to medium power (10x) lens. You should only need to use the fine focus. If you need the coarse focus, be very small in your motions.
- ★ 7. If you can't find your specimen, go back to LOW POWER LENS and start over.
8. Once in focus, switch to high power (40x) lens. NEVER USE COARSE FOCUS WITH HIGH POWER LENS!
9. NEVER touch the lenses – they need to be cleaned with special cloth.
10. The total MAGNIFICATION is calculated by multiplying the eyepiece (ocular) lens magnification (usually 10x) by the objective lens magnification (4x, 10, or 40x). On the objective lens, the magnification is after the "DIN".

Analysis Questions, continued

Signs of Micro-Life

WRU Thinking?

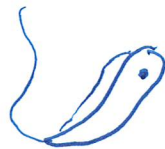
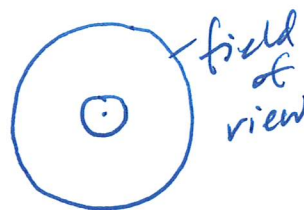
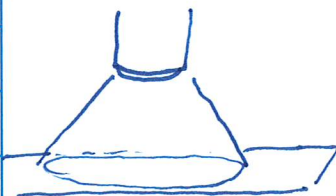
If you like to draw, explain why.
If you don't like to draw, explain why not?

Vocabulary:

Scanning lens: wide angle lens that allows you to see a large area at one time.

Field of View: the area on the slide that you can see when looking through a microscope lens. The area on the slide you can see gets smaller at higher magnification.

Microbe / Microorganism: living things too small to be seen with the naked, human eye.



Spirotrycho-
nympha
bispira

Signs of Micro-Life

WRU Thinking?

If you like to draw, explain why.
If you don't like to draw, explain why not?

Vocabulary:

Scanning lens: wide angle lens that

NAME: _____

ACT 36: MICROSCOPE DRAWINGS

Date _____ Period _____

See page C-24 in book.

Rules for Microscope Drawings:

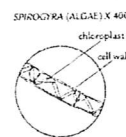
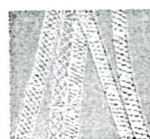
- Use color or shading
- Use ruler for all lines
- Labels and lines in ink
- Lines parallel
- Labels all horizontal
- Labels outside of circle
- Line up labels (if possible)
- Spelling counts
- Correct title and total magnification



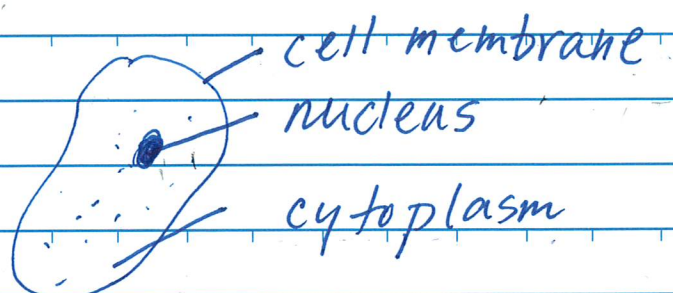
Hint: Plan out where labels will go before you draw/write them!

Part B: Microscopy Drawing Made Easy

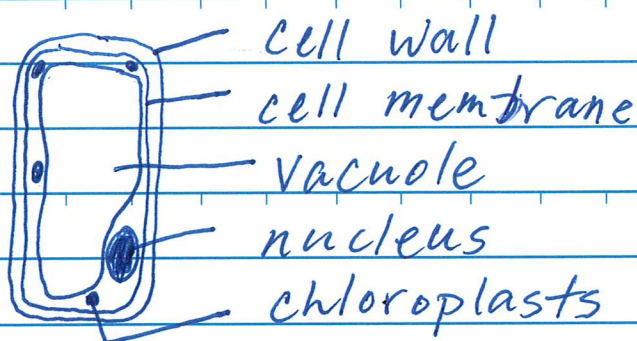
Below is a picture taken through a microscope of the alga *Spizocorya*. The diagram to the right shows what a biologist or biological illustrator might draw and how he or she would label the drawing. Did you know that some artists draw only scientific illustrations?

**SOME TIPS FOR BETTER DRAWINGS:**

- Use a sharp pencil and have a good eraser handy.
- Try to relax your eyes when looking through the eyepiece. You can cover one eye or learn to look with both eyes open. Try not to squint.

Vocabulary, continued

typical animal
cell

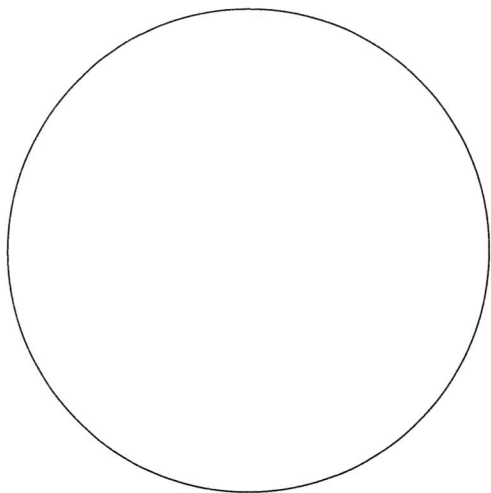
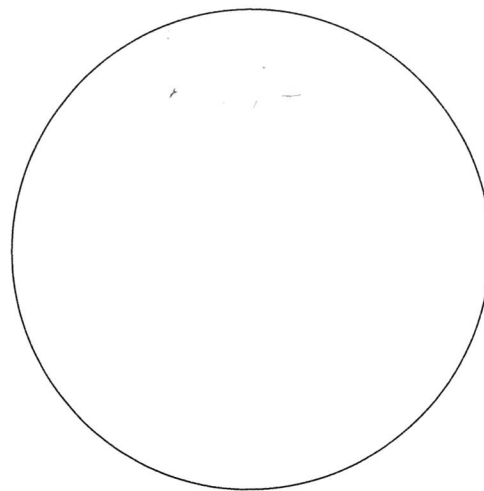
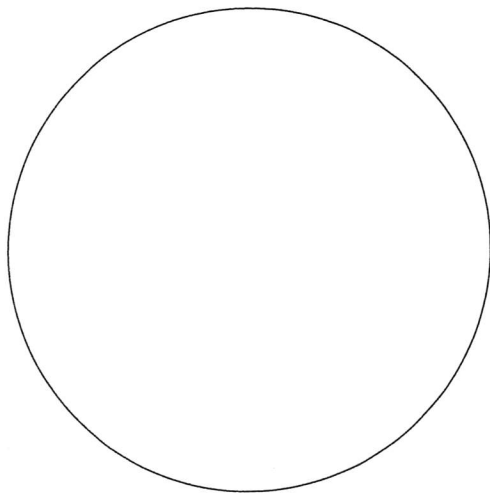
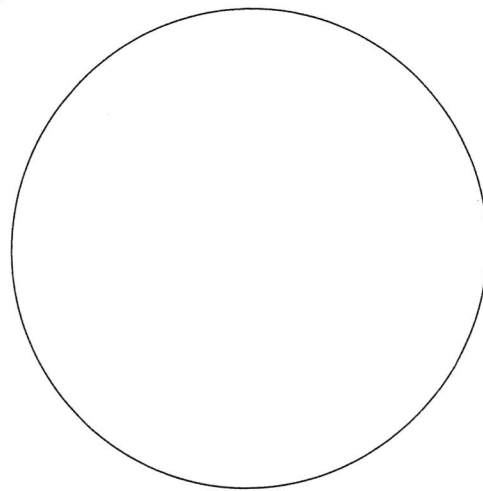


typical plant
cell
(similar to algae)

NAME: _____

ACT 36: MICROSCOPE DRAWINGS

Date _____ Period _____

_____
Total Magnification_____
Title of Slide_____
Total Magnification_____
Title of Slide_____
Total Magnification_____
Title of Slide_____
Total Magnification_____
Title of Slide

Name _____

SCIENCE NOTEBOOK EXPECTATIONS

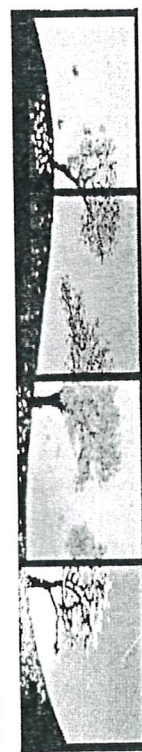
- Your Science Notebook is evidence of **your** hard work and learning, so treat it with utmost care. You are expected to have it with you at all times.

1. Each new Unit begins with title page and student-generated diagrams related to Unit. Pocket on next page holds a **few** loose papers related to Unit.
2. **Each** page must have the heading with Activity Name, Number, and date. On the first page of the activity, the entire name of the activity should be written with the Activity #. Each following page of the activity must have activity number on top.
3. All papers associated with each activity must be taped neatly on the page of the activity. Tape on the inside margin. No Activity-related papers should be loose, in Paper Pockets, or sticking out from the Notebook.
4. Everything you're asked to write in the course of a lesson should be written in your notebook neatly and the heading for each section underlined to make them stand out. That includes: "WRU Thinking", Vocabulary, Procedure and Data, and Analysis Questions.
5. Skip lines between different sections, e.g. between Procedure and Analysis Questions, and skip lines between Analysis Questions to make them easier to read.
6. Diagrams need to be added in the white space to aid in remembering concepts and vocabulary.
7. Different parts of your notebook should be consistently and neatly color-coded. These include Activity # and Name, Vocabulary, and Analysis Questions. Highlighters will be provided every Friday. All headings will be green, all vocabulary and/or notes in yellow, and all Analysis Questions in pink.
8. The notebook should be relatively clear of doodling.
9. Analysis questions must be answered, **in full sentences**, in such a way that you know what the question was asking (reflect/repeat question in the answer - RQIA). For example:

Analysis Question: "Which of the following items are examples of physical characteristics?"

- a. Appropriate answer: "Color, size, and shape are examples of physical characteristics." This answer will allow you to study from it and understand the content of the lesson later.
- b. Not an appropriate answer: "Color, size, and shape." When you read this later, you won't have any idea what the lesson/question was about.

Proficient	HP or 4	expectations, above and beyond
Proficient	PR or 3	Meets expectations
Close to Proficiency	CP or 2	Almost meets expectations, but incomplete
Developing Proficiency	DP or 1	There are significant gaps, or something incorrect



or e-mail me. Comments that work has been revised will appear in ParentVUE. Revising work is the answer to the common question, "How can I improve my grade?"

After warnings, there are consequences for each according to school policies.

Jarades and Gurn

Last but not least . . .

Please sign below to indicate that you have seen this policy handout. Students will keep it in their Science Notebook for reference.

Child's Name: _____

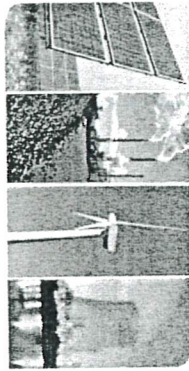
Parent/Guardian Written Name and Signature: _____

2019 - 2020

Mr. Groom - Policies and Expectations

Communication

Please let me know if you feel your needs are not being met as a learner. Growth comes from challenge, and



success comes one step at a time. Be proactive about learning. Use my website, usually updated daily, for lots of information and help.

It is your child's responsibility to check StudentVUE for any posted grades.

PERIOD 1

Name	Something interesting about this person
Nick Akita	
Gavin Benedict	14 world records on Mario Wii
Quara Bock-Rossi	mom is spanish 1st teacher
Stella Bolick	
Sadie Brown	The Hate U Give is fav. book
Ana Debaker	likes to sing
Xander Dodge	
Sophie Durocher	mom is a teacher
AJ Echeverria	don't like chocolate ice cream
Lila Effros	
Liv Fraser	fav color is black
Emi Gillam	
Eden Gittler	dad can't braid her hair
Caleb Hahn	
Kingston Irinaga	
Owen Lanier	Has dissected a chicken wing
Katelyn Lewis	dog slipped off ^{in backyard} cliff & needing rescuing!
Claire Lutey	
Brooke McCullough	does tumbling