WELCOME

2023-24

Dara Ross -dross@rhmail.org

Lynelle Cherry-lcherry@rhmail.org

Flip

e013e3a7

Introductions

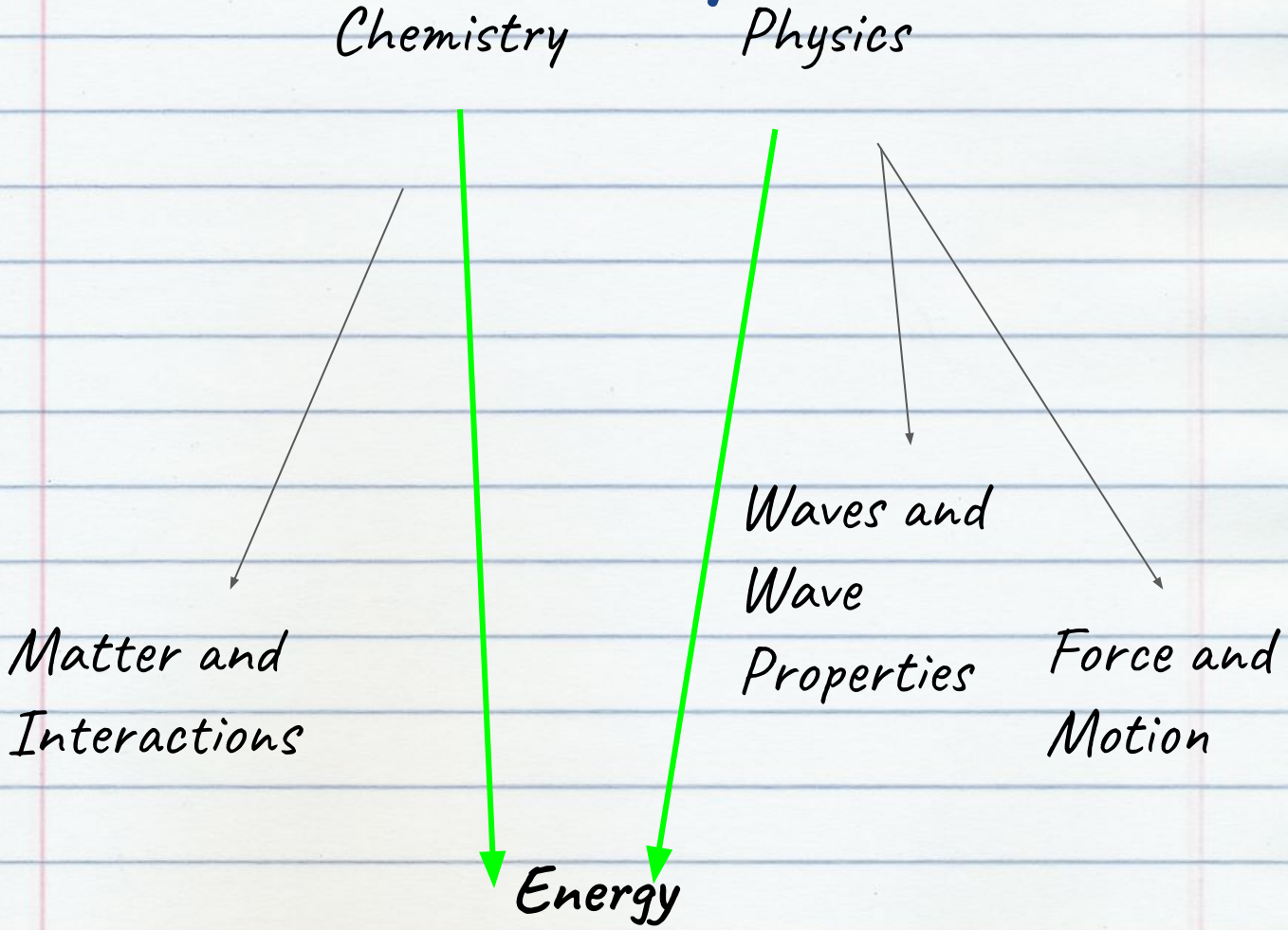
Your flipgrid will contain this information:

1. Your name
2. Three words that describe you
3. Respond to this quote:

"Nothing in this world is worth having or worth doing, unless it means effort, pain, difficulty."

-Mary Jackson, NASA Engineer

Physical Science
Fall 2023-2024
Dara Ross
What is Phys Sci?



Questioning Exercise

Rules:
1) Ask as many questions as you can
2) Do not stop to discuss, judge, or answer any questions
3) Write down every question exactly as stated
4) Change any statement into a question

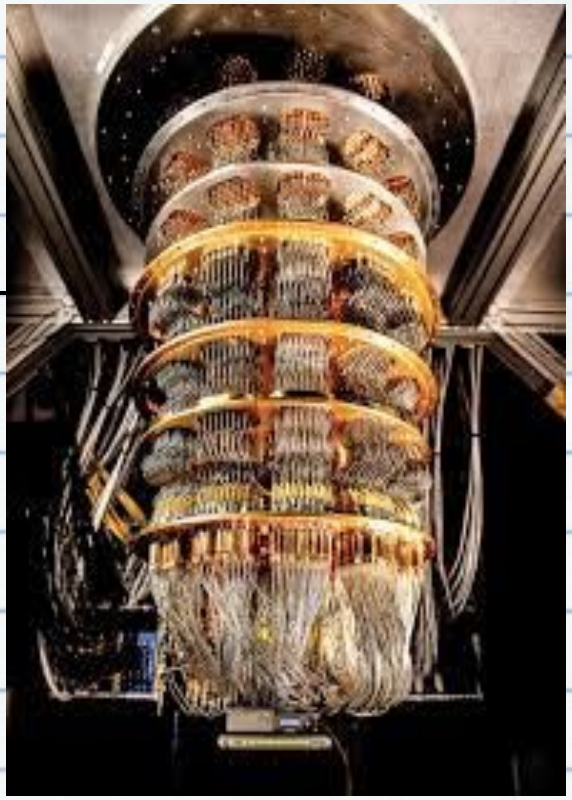
You will work in groups using the rules as discussed.

Pick a scribe.

Provide a list of questions.

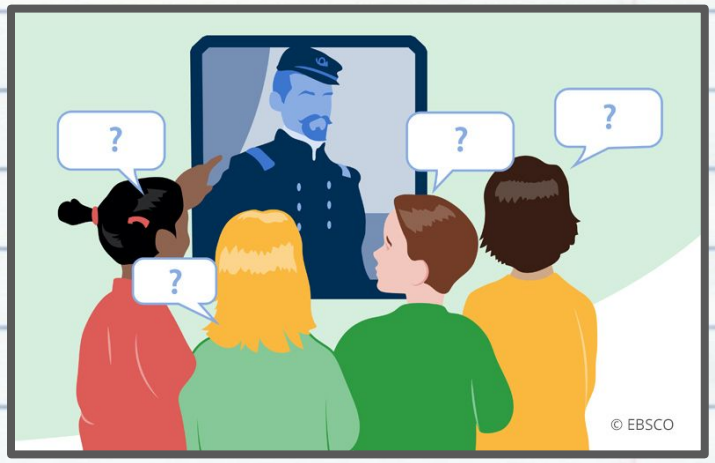
QFocus:

Technology changes over the years.



Step 1: Generate Questions (5 min)

Students will work in small groups following the rules and will generate a list of as many questions as they can.



Tips:

- One person must be a scribe
- All contributions must be documented by the scribe.
- I am here to keep you on track. I will not give examples or answer questions.

Rules:

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QFocus:

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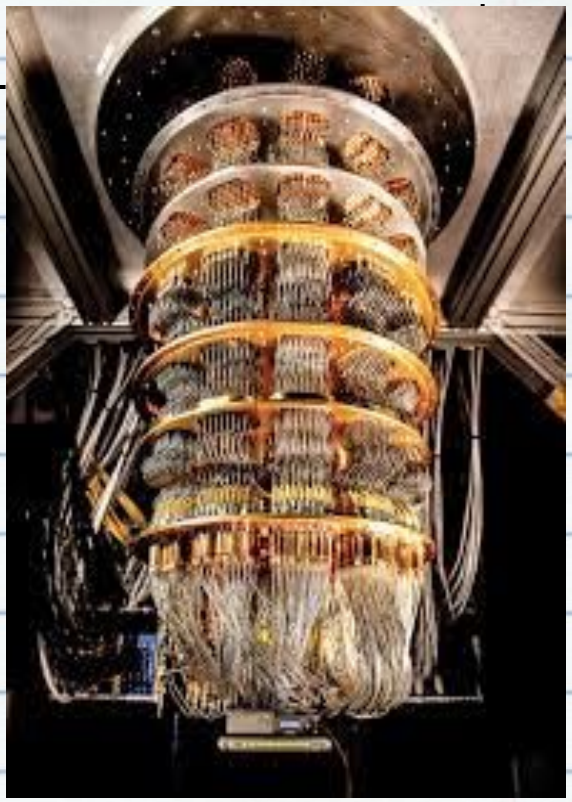
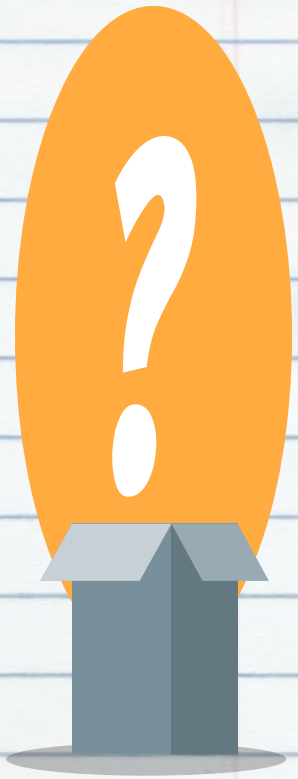


Step 2: Improve Questions (5 mins)

- Work in your group to discuss if each question is open or closed ended. Mark each question with an "O" or "C."
- Choose at least one question and change it from one type to the other. Write the new question down as well.
- Change from Open to Closed or from Closed to Open.



Step 3: Prioritize Questions

- *Take 3 minutes to prioritize questions*

- Criteria for selection?
  - Choose three questions are the most important.
  - Choose three questions that interest you the most.
  - Choose three questions that will help shape your thesis statement.

- Review your questions and come to a consensus
- Explain reasoning for your selections within your group
- Share prioritized questions and reasoning with the larger group.

Last Step: Reflection

Reflect on:

1. **What did you learn today?**
2. **Why is learning to ask questions important for learning?**

Record your reflection on Padlet

Special Thanks to Amy Medina for her intensive and helpful PD on this exercise last year.

Email: amedina@rhmail.org

Reflection

Science Rockhill

How did we get to this plan?

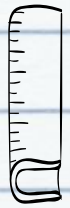
AND SNACKS!

Physical Science is an Opportunity

Are we making assumptions?

When did we last ask what draws students to science?

Identity vs. Action



We can DO science in this course.

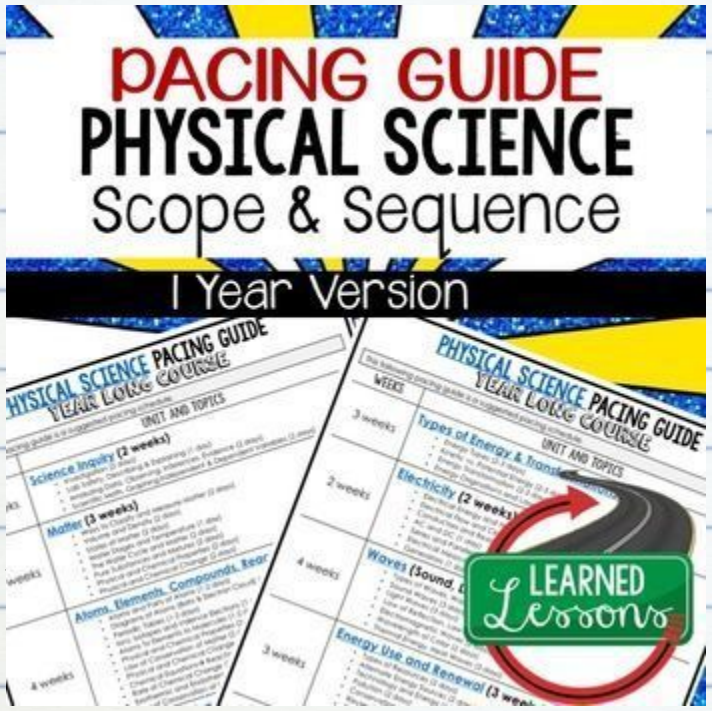
Preparation for more advanced courses

Biology EOC
Chemistry
Physics

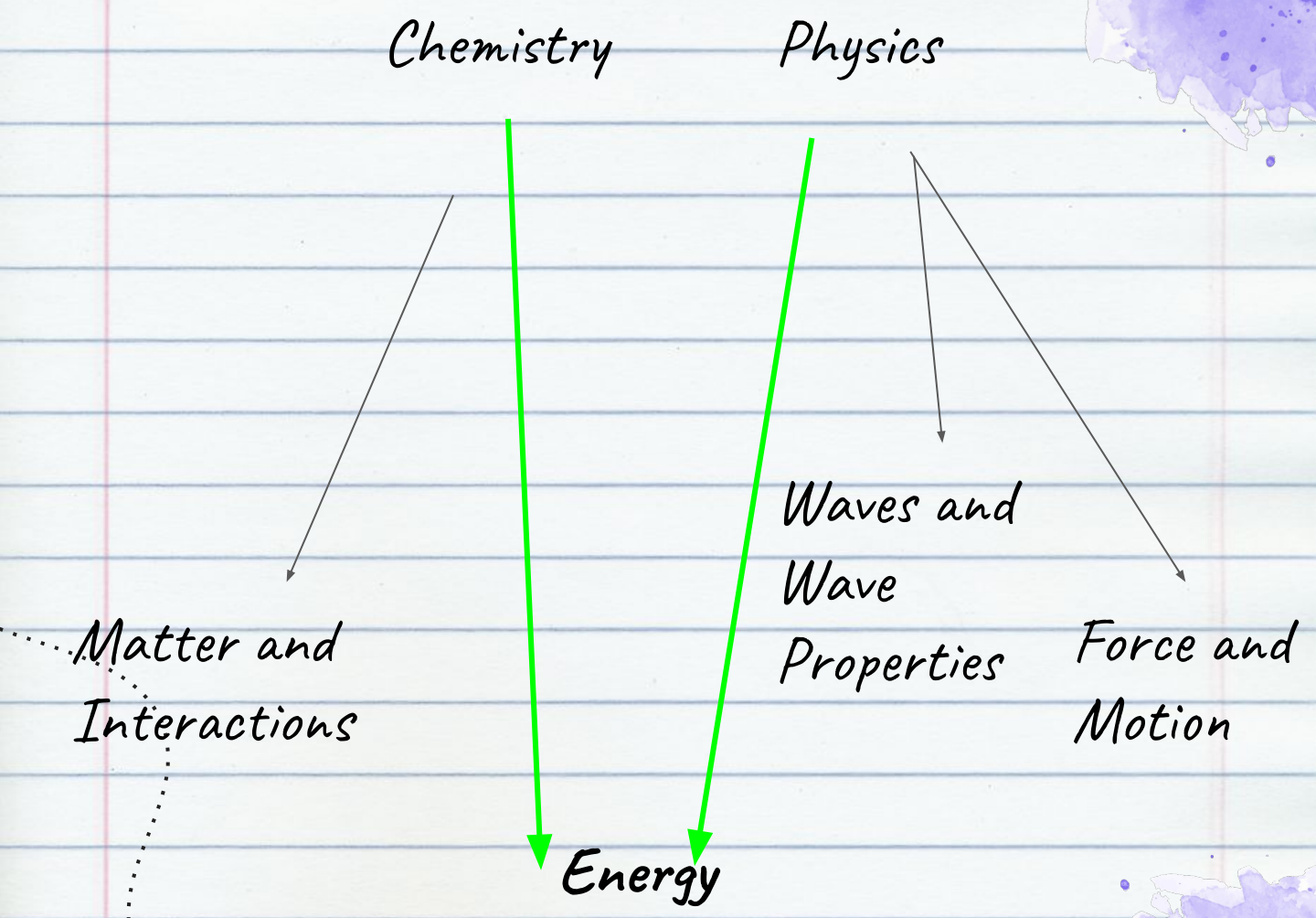
Strategies for Physical Science

1. Pacing
2. Interactive Notebooks
3. Big Picture Labs
4. Efficient to Grade

Pacing Guide!



Vertical Alignment and State Standards



Pacing Guide!

Physical Science Notebook

2023-2024- Scholar Goals

List 2 Goals you would like to accomplish this School year.Remember S.M.A.R.T

1.
2.
3.
4.
5.

What are some measure you will take this school year to ensure these goals will be accomplished? List two measures!

Table of Contents

Topic	Unit	Page #

Unit 1- Process of Science

DATE: Topic

Notes:

Science-

Five Rules to Lab Safety

1.
2
3
4
5

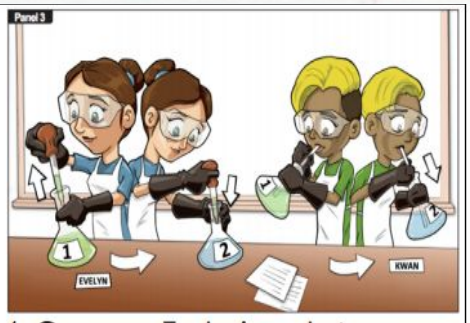
1. List 2 unsafe activities in this picture and explain how they should be changed to make them safe.

a.

b.

2. How should Rick correct his technique?

3. Are these students behaving appropriately? If not, what should they be doing differently?



4. Compare Evelyn's technique with Kwan's technique.

5. Whose technique is the correct one? Why?

Unit 1

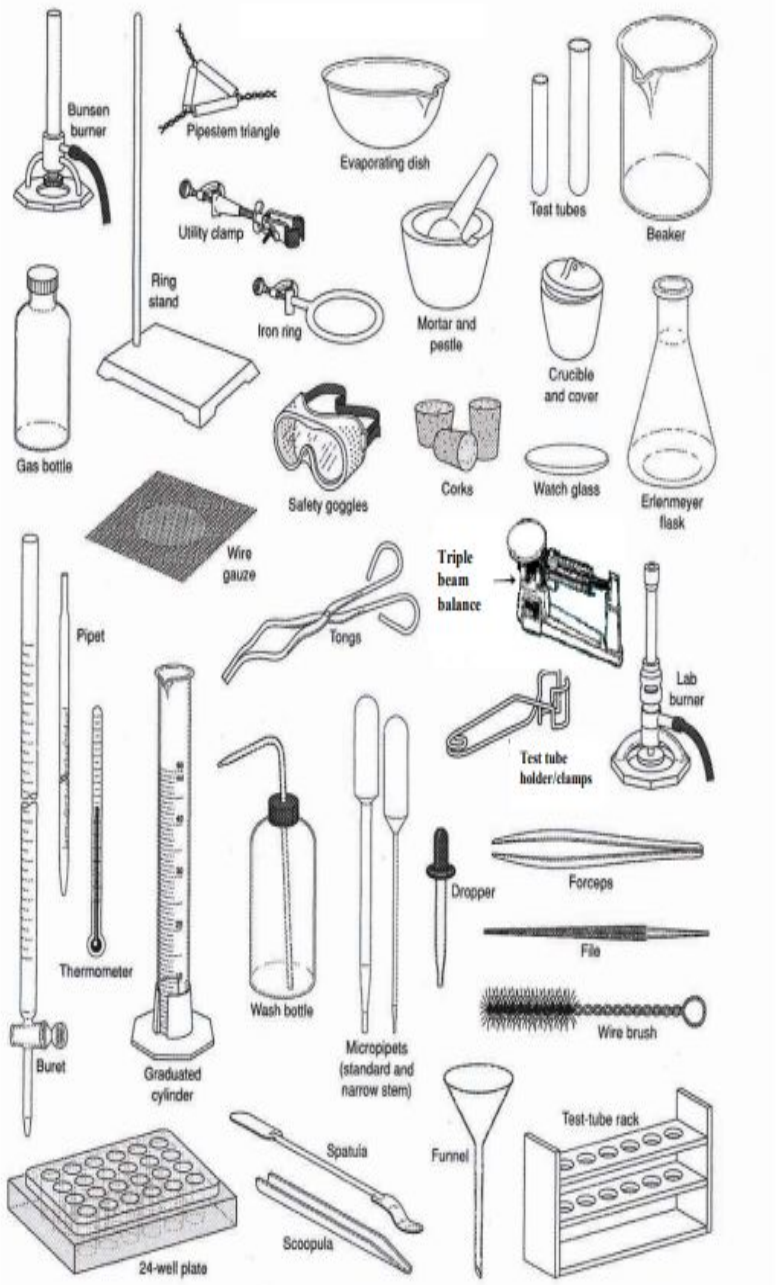
DATE:

Topic

Notes:

Name_____ Date _____ Table #___

Directions: A number of items that may be used in the laboratory are shown below. Study this page and decide what the items may be used for. Use the names of the equipment shown to answer the questions included.



Beaker-

Graduated cylinder-

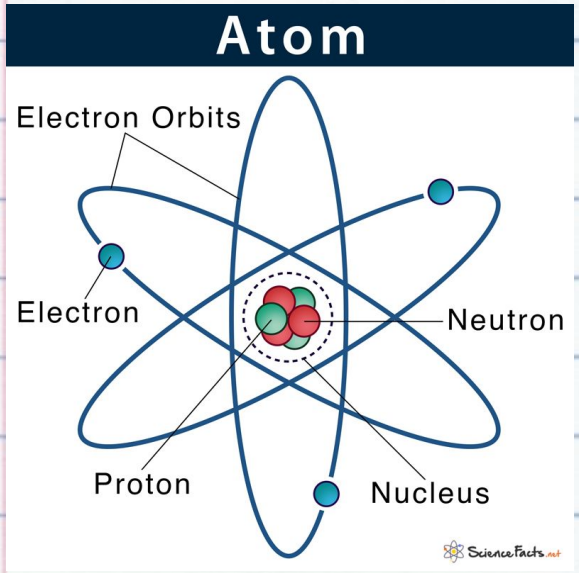
Erlenmeyer Flask-

Test Tube-

Unit 2- Atomic Structure

DATE: Topic

Notes:



Subatomic Particles

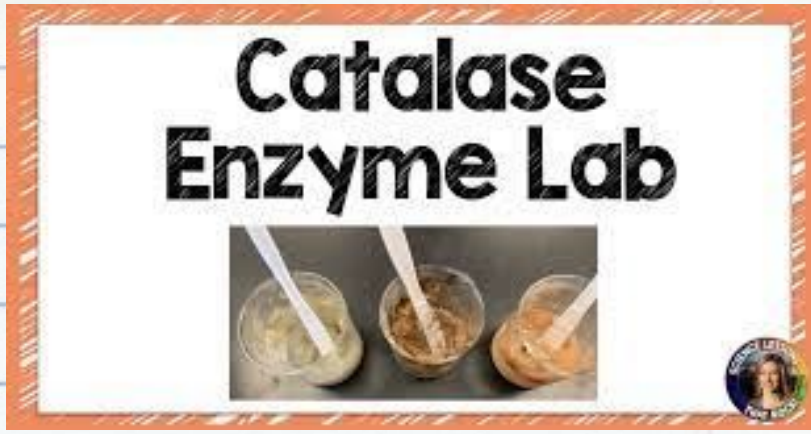
Protons, Neutrons, and Electrons			
	Charge	**Mass (amu)**	**Location**
Proton	+1	1	nucleus
Neutron	0	1	nucleus
Electron	–1	0	orbitals

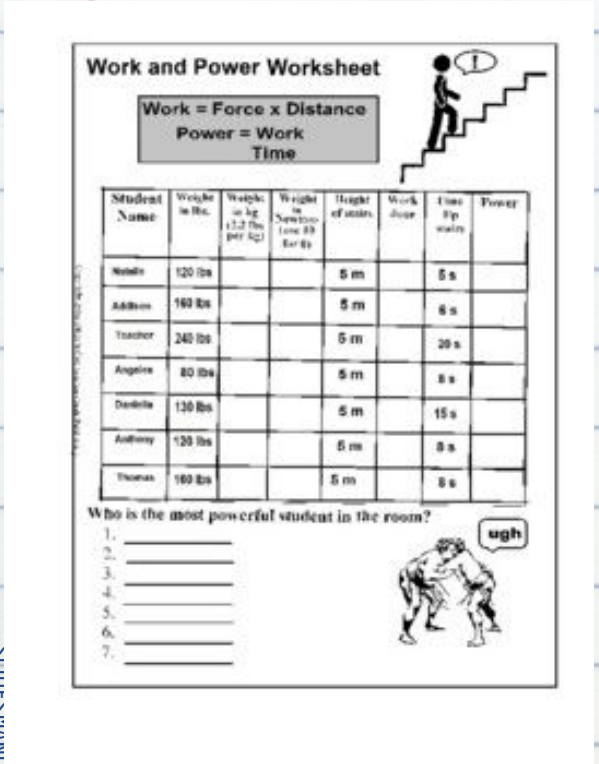
1. Protons tells the identity of the atom.

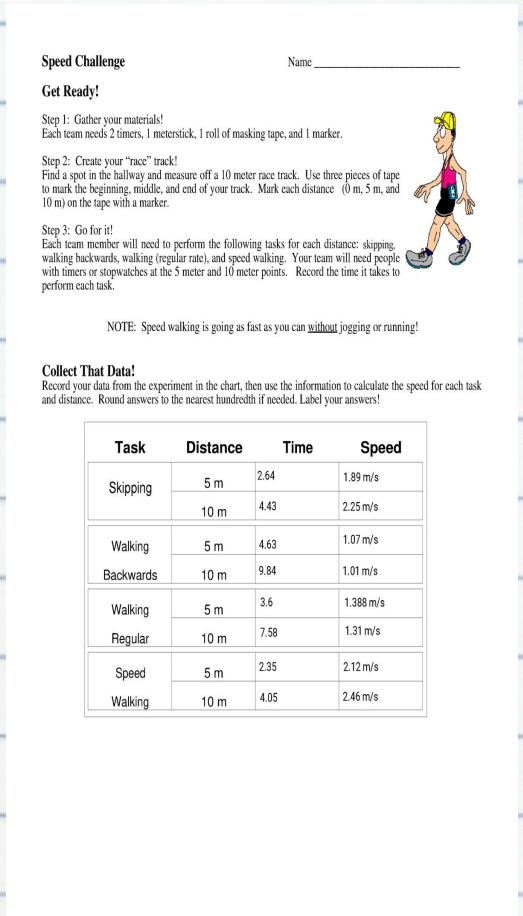
2. # of proteins = # of electrons

3. The mass of the atom is in the nucleus.
4. The electrons move around the nucleus.
5. The energy of the electron is based upon the energy level and distance from the nucleus.

Common Labs







Speed Challenge Name _____

Get Ready!

Step 1: Gather your materials!
Each team needs 2 timers, 1 meterstick, 1 roll of masking tape, and 1 marker.

Step 2: Create your "race" track!
Find a spot in the hallway and measure off a 10 meter race track. Use three pieces of tape to mark the beginning, middle, and end of your track. Mark each distance (0 m, 5 m, and 10 m) on the tape with a marker.

Step 3: Go for it!
Each team member will need to perform the following tasks for each distance: skipping, walking backwards, walking (regular rate), and speed walking. Your team will need people with timers or stopwatches at the 5 meter and 10 meter points. Record the time it takes to perform each task.

NOTE: Speed walking is going as fast as you can <u>without</u> jogging or running!

Collect That Data!
Record your data from the experiment in the chart, then use the information to calculate the speed for each task and distance. Round answers to the nearest hundredth if needed. Label your answers!

Task	Distance	Time	Speed
Skipping	5 m	2.64	1.89 m/s
	10 m	4.43	2.25 m/s
Walking Backwards	5 m	4.63	1.07 m/s
	10 m	9.84	1.01 m/s
Walking Regular	5 m	3.6	1.388 m/s
	10 m	7.58	1.31 m/s
Speed Walking	5 m	2.35	2.12 m/s
	10 m	4.05	2.46 m/s

Lab Feedback

Fall Semester Goal:

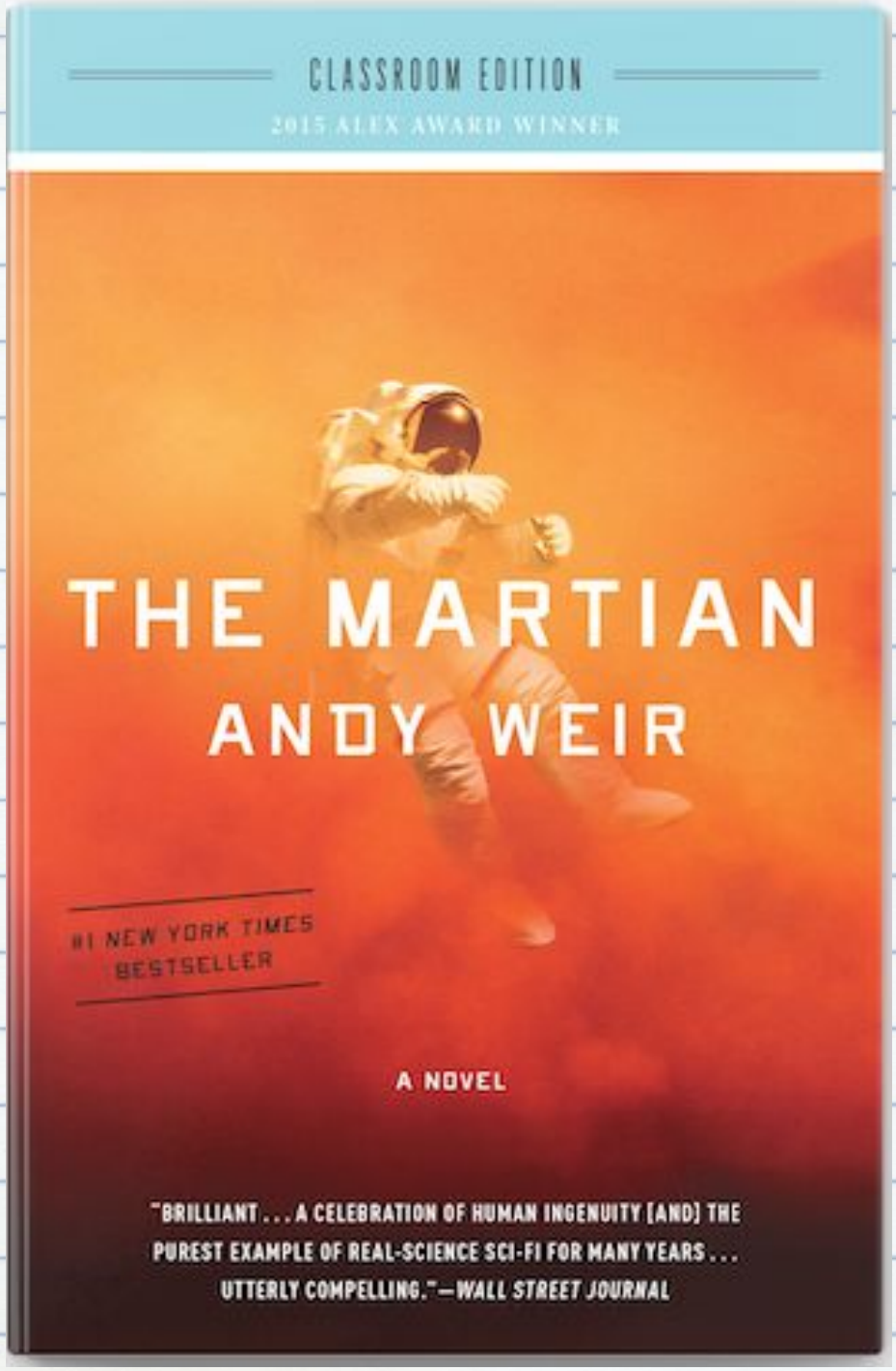
Submit a 1 minute flipgrid for each common lab.

Why?

Creates a share point for our PLC members to complete micro-observations of other teachers in an efficient way.

Documents the value that we are bringing to our students in the PLC.

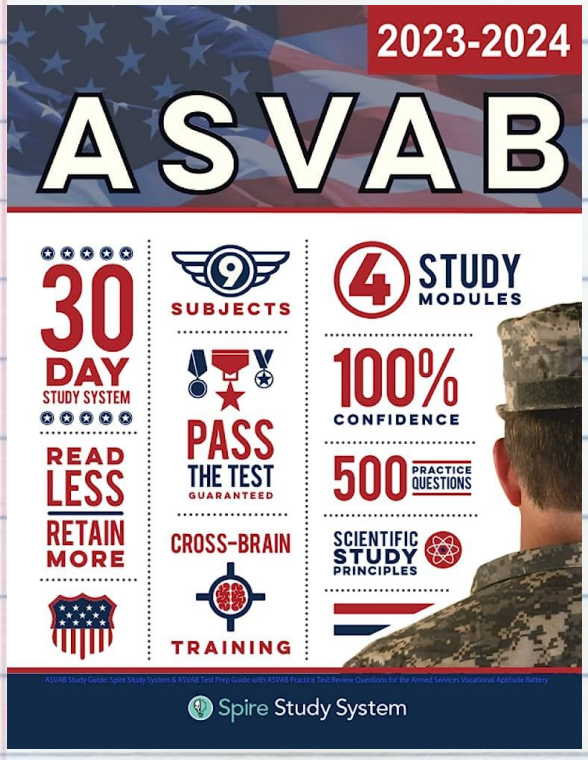
Literacy in Physical Science

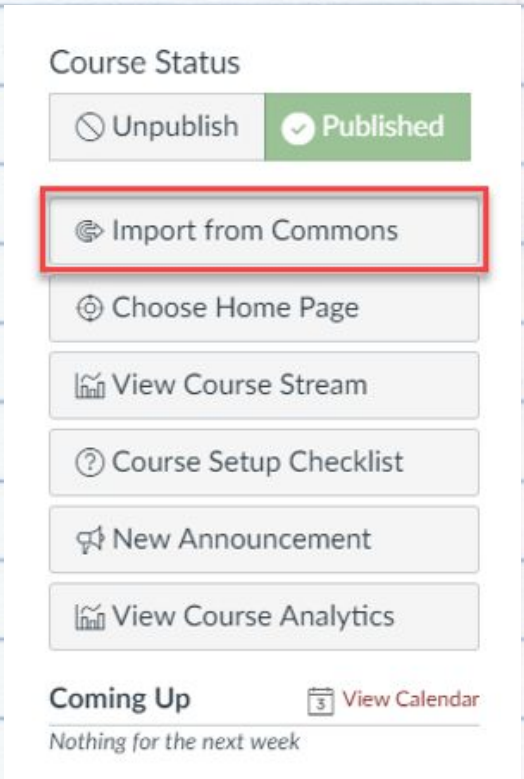


Science and Engineering Practices

Pre-assessment needed for each PLC.

MasteryConnect





Questions/Concerns?

District Assessment

Complete the Professional Learning Needs Assessment

Instructions:

1. Click the link below
2. Scroll down to Professional Learning needs
3. Click on the assessment . Please complete by the ending of the day!

https://sites.google.com/rhschools.org/rhsprofessiou
allearning/2023-professional-learning-conference

Attendance

Scan the code

Physical Science

Tue August 15th, 2023

CA3C36

Tuesday, Aug 15, 2023

8:30-9:00am Arrival and Networking - Teachers move to MS/HS rooms by 8:30			
Middle School		**High School**	
9:00-11:00am	Teaching Thinking Skills through 3D Instruction with Cathy Brooks, Science Outreach Clemson University	9:00-10:15	Q1 Curriculum Discussion for Prep #1
		10:15-11:30	Q1 Curriculum Discussion for Prep #2
11:00-12:30pm	**Lunch**	11:30-1:00	**Lunch**
12:30-3:00pm	Q1 Curriculum Discussions by Grade-Level: -Content Points of Emphasis -Teachers agree upon Labs -Assessment Planning -ESE Considerations: IEPs, ESOL	1:00-3:00pm	Teaching Thinking Skills through 3D Instruction with Dr.Cathy Brooks, Science Outreach Clemson University