Physics Unit 0 Daily Slides

Welcome to Physics
Mrs. Wentzloff
C9

Sit at your Pod according to your card.

Take out a notebook and pencil.

Don't have paper?

Check the student station on the right side of the room

Attendance

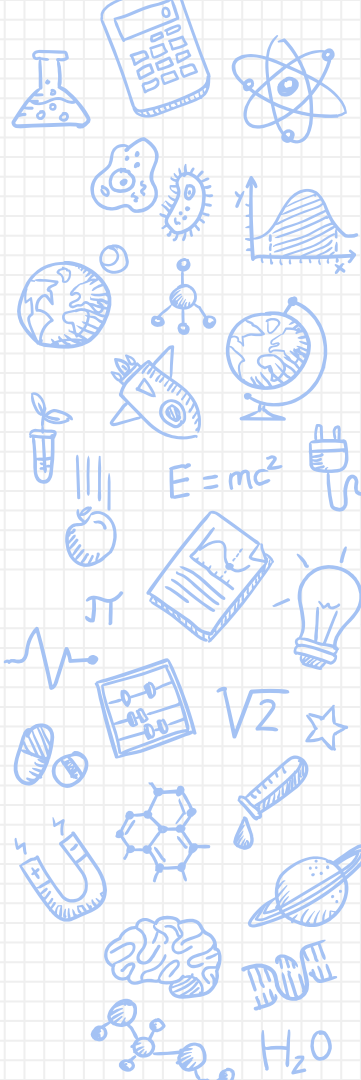
- ✘ Name
- ✘ Grade
- ✘ Something you are involved with at AHS or outside of AHS

I don't care if you learn physics.
I care that you learn how to think like scientist, gather information and make conclusions.

Observe the objects for 30 seconds.
We will go in two groups.

Quiz #1- 30 seconds

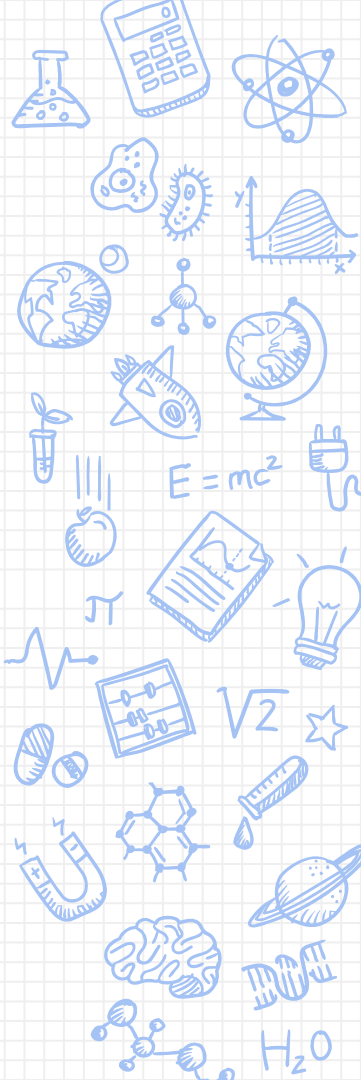
1. How many pieces of pasta?
2. What are all of the colors of the plane?
3. What is the brand of the golf ball?
4. How much money is in the box?
5. What side of the paint brush has more paint?

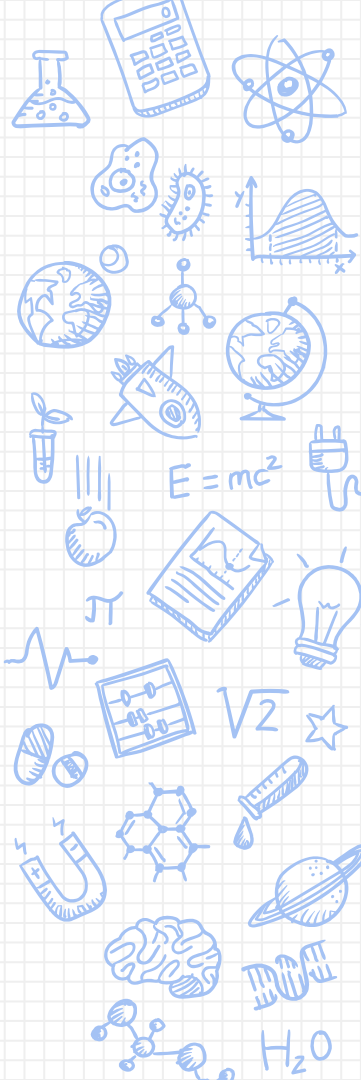


Observe the objects for 45 seconds.
You can write down as much as you want.
We will go in two groups.

Quiz #2- 30 seconds

1. What is the suit and number of each card?
2. Which is the heaviest rock?
3. How many pieces of spaghetti?
4. What is the code on the bottom of the bottle cap?
5. What color is the zip tie?




E = mc²
H₂O

Physics Daily Agenda 9/4

Agenda

1) Attendance
2) Partners
3) Expectations
4) Procedures
5) Finish Box Activity
6) Reflection on Observation
7) Egg Activity

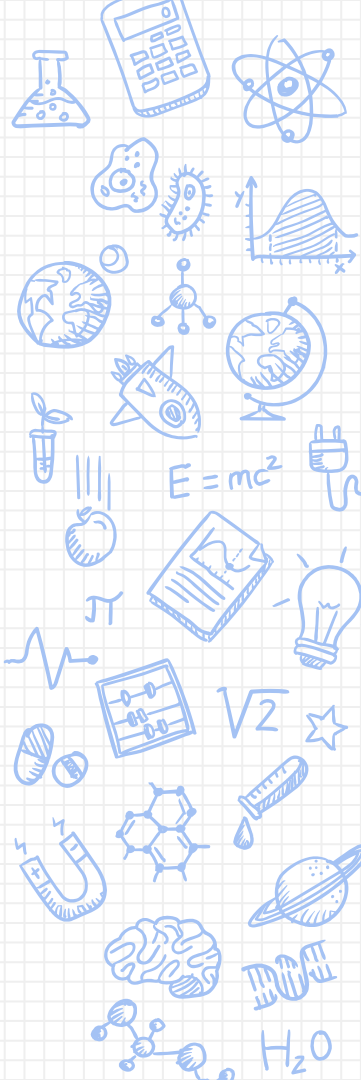
Do Now

- ✘ Sit at your pod from yesterday
- ✘ Take out your notebook/paper from yesterday

Standards

C.1

Scientific Observation



Observe the objects for 30 seconds.
You can write and touch the objects.
We will go in several groups.

Now, you can work with your teams! Organize your data so you can answer questions together.

The Final Quiz

1. How many pieces of pasta?
2. What are all of the colors of the plane?
3. What is the brand of the golf ball?
4. How much money is in the box?
5. What side of the paint brush has more paint?

1. What is the suit and number of each card?
2. Which is the heaviest rock?
3. How many pieces of spaghetti?
4. What is the code on the bottom of the bottle cap?
5. What color is the zip tie?

1. What color is the monkey?
2. What is the brand of bottle camp?
3. What is the suit of each card?
4. What is written in the middle of the poker chip?
5. How many red rocks are in the tub?

The Final Quiz

1. 5 or 7
2. Navy, Silver, Black, White, Red
3. Wilson 2
4. $5.25
5. Side with the writing

1. 8 Diamonds, 2 Spades
2. Larger White Rock
3. 2
4. CZSSH CHLRK
5. Yellow

1. Blue
2. Pepsi
3. Spades, Diamonds
4. Bicycle
5. 1

When was it easiest to learn what was in the box? What does this tell us?

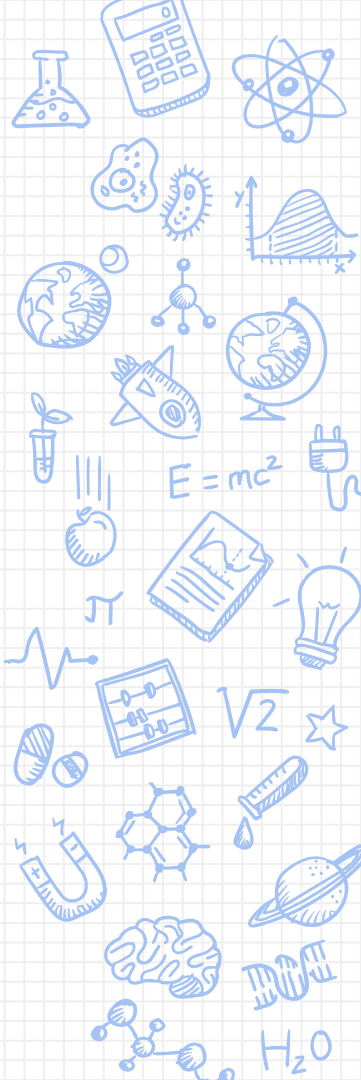
What's in the egg?

You have an egg filled with objects. What are these objects?

You have 10 minutes to observe the egg using all of your senses.
You cannot open the egg.
You need to make a conclusion about what is in the egg based on your senses. We will share out after.

Potential Objects

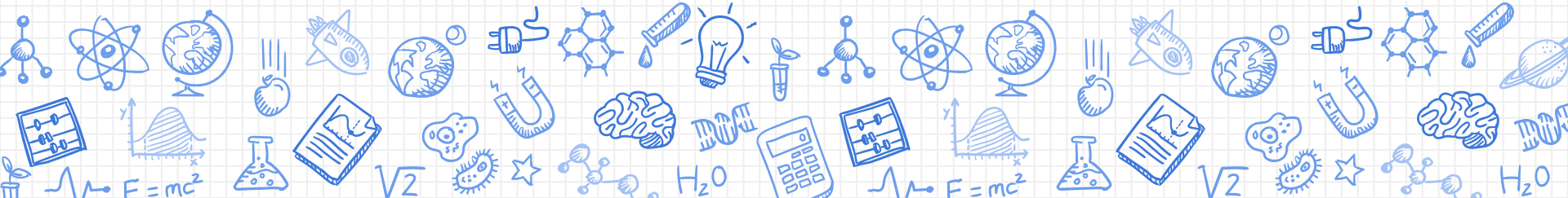
- ✘ Buttons
- ✘ Pills
- ✘ Staples
- ✘ Erasers
- ✘ Sugar Packet
- ✘ Thumb Tacks
- ✘ Word Magnet
- ✘ Paper Clips
- ✘ Beads



Swap with another group.

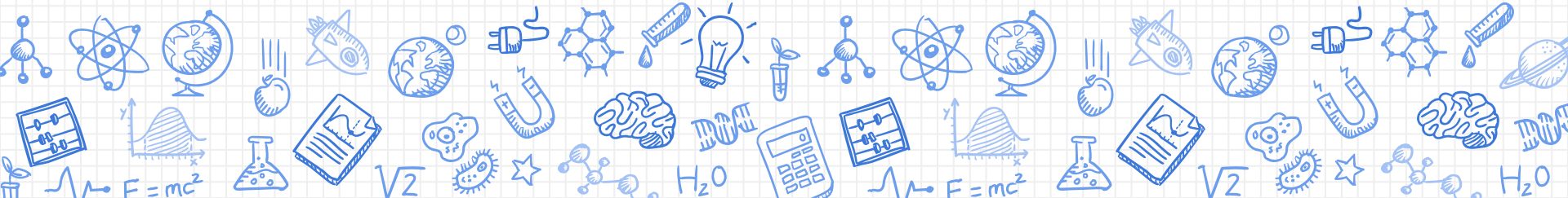
Try to infer what is in the other egg.

Share with your partner group. Introduce yourselves and tell us what you think is in your egg (they are all different) and WHY.



Open Up Your Egg

What were you right about?
What were you wrong about?
What would you need to know to be more accurate?
Write down your findings.



Scientists use all their senses and writing down observations to make conclusions. Sometimes they are wrong, but then we find better methods to get data.

Physics Daily Agenda 9/5

Agenda

1) Attendance
2) Finish Up Egg Activity
3) Observation Rubric
4) Check Activity

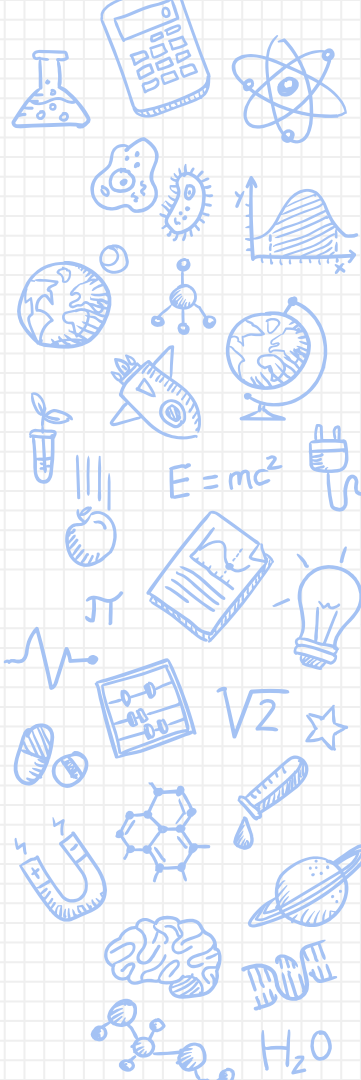
Do Now

- ✘ Sit at your seat from yesterday
- ✘ Take out your notebook

Standards

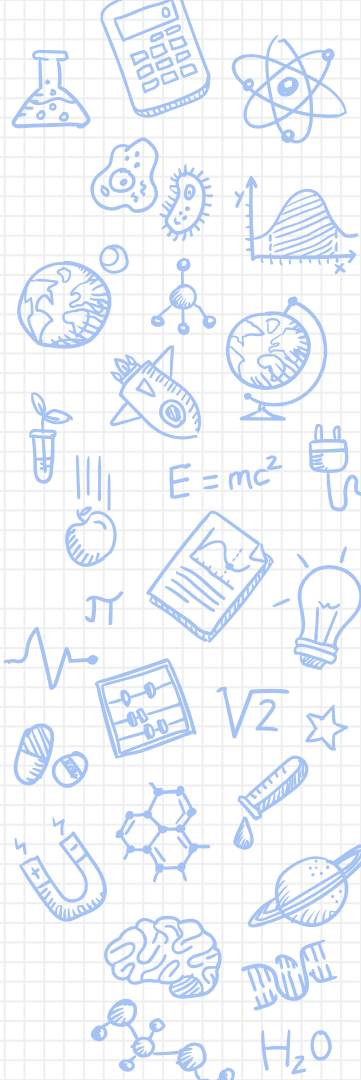
C.1

Scientific Observation



Story

Evidence



What happened to Sam Science?

Take out **one check only**.
Based on this check make a story about Sam Science.

Take out **three more checks (total of 4).**

Rewrite your story.

Take out **four more checks (total of 8).**

Rewrite your story.

Take out four more checks (total of 12). Rewrite your story.

Take out **the remaining checks (total of 16).** Write your final story on a blank piece of paper!

Share out

Why do we make different conclusions from the same data?

Physics Daily Agenda 9/6

Agenda

1) GC/Remind Codes
2) Index Cards
3) Check Activity Finish + Share Out

Do Now

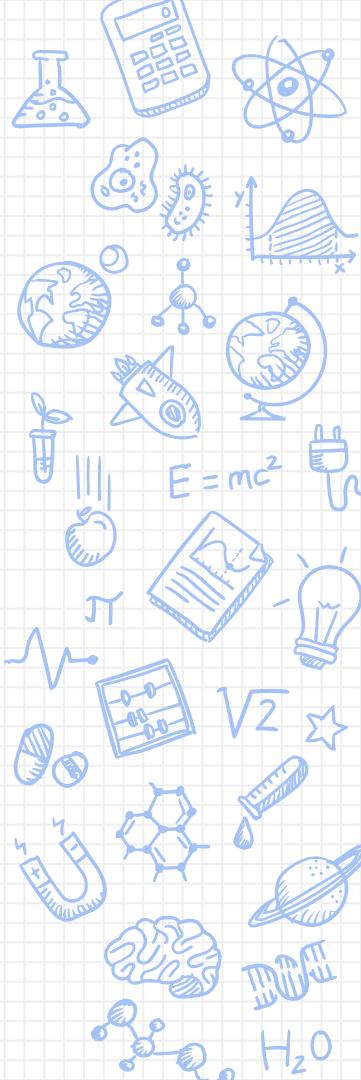
- ✘ Sit with your partner from yesterday
- ✘ Get your agenda and phone

Standards

C.1

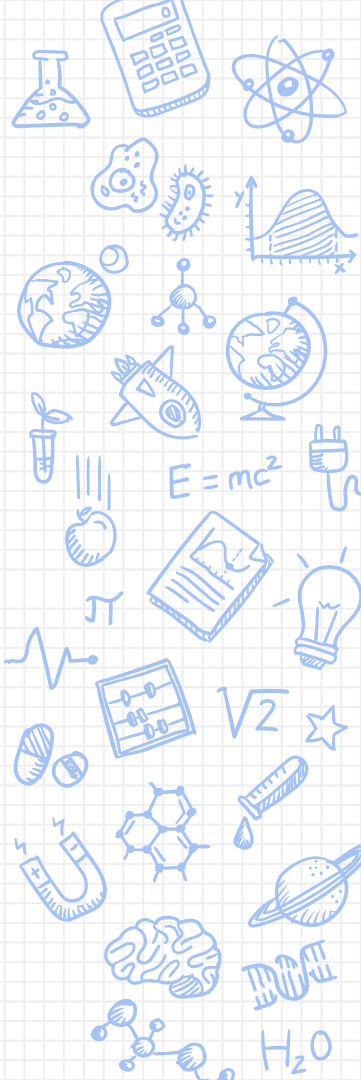
Scientific Observation

C.3 CER



Remind and GC Codes

Class Hour	Remind Text 81010 or on the app	Google Classroom
1	@wentzphys1	4ti63x
3	@wentzphys3	8q9gwin
4	@wentzphys4	uwn5e5x
5	@wentzphys5	3c6t9os



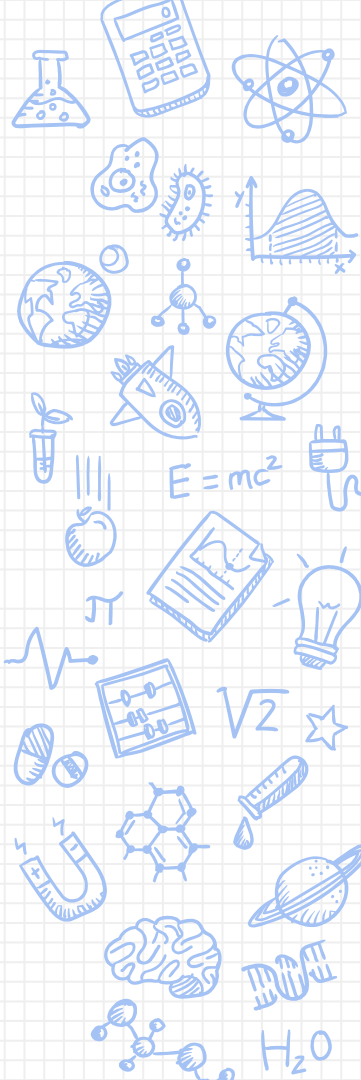
Index Card Activity

FRONT

- ✘ Name (first and last)
- ✘ Nickname
- ✘ Grade
- ✘ Activities you're involved in at AHS and outside of AHS

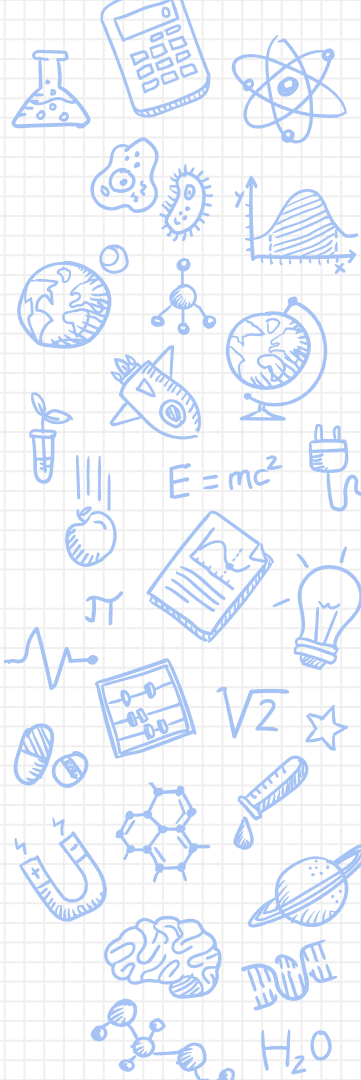
BACK

- ✘ Career and/or college goals
- ✘ Favorite subject/teacher/class
- ✘ Why did you take this class? (be honest)
- ✘ Siblings or relatives at AHS (past or present)



Write your Final Story (on colored paper)

Story	Evidence
Same Science had a mid life crisis so he bought a Ferrari.	Ferrari Check
After that he divorced his wife and hired the most expensive lawyer in town.	Lawyer Check



Physics Daily Agenda 9/9

Agenda

1) Syllabus
2) GC/Remind Codes/Index Cards- Absent Students
3) Check Activity Final Draft
4) Share Out
5) CER Intro

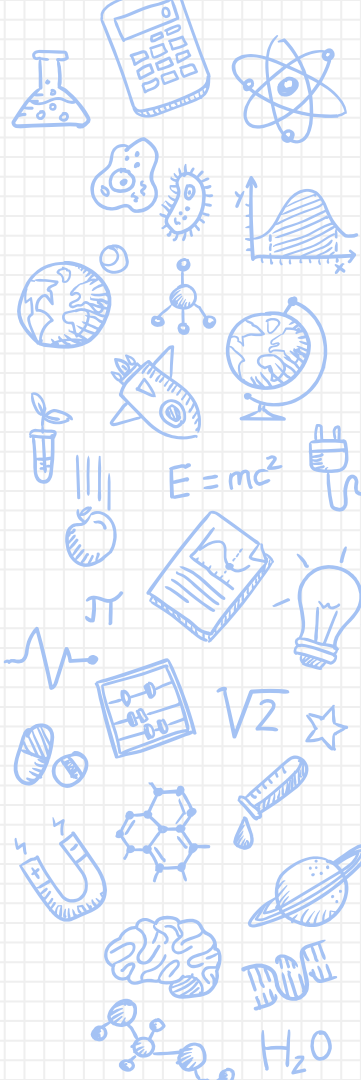
Do Now

- ✘ Sit with your partner from Friday
- ✘ Take Out Your Notebook
- ✘ Get a check envelope

Standards

C.1 Scientific Observation

C.3 CER



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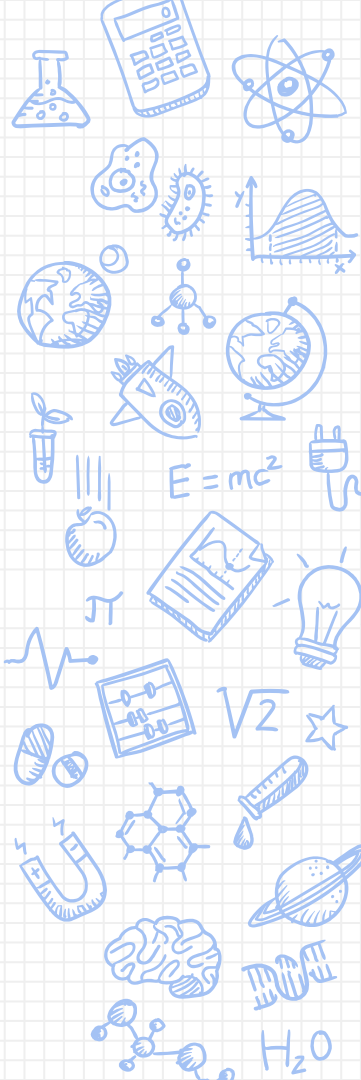
3	@wentzphys3	8q9gwin
4	@wentzphys4	uwn5e5x
5	@wentzphys5	3c6t9os



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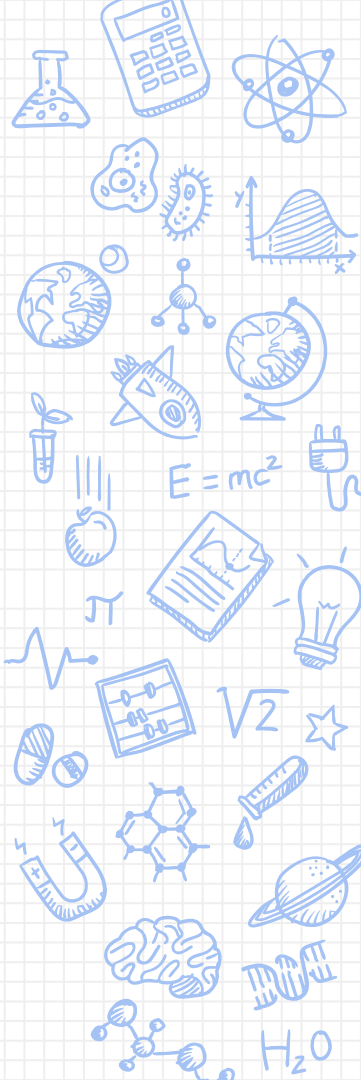
- ✘ Grade
- ✘ Activities you're involved in at AHS and outside of AHS

BACK

- ✘ Career and/or college goals
- ✘ Favorite subject/teacher/class
- ✘ Why did you take this class? (be honest)
- ✘ Siblings or relatives at AHS (past or present)



Write your Final Story (on colored paper)

Story	Evidence
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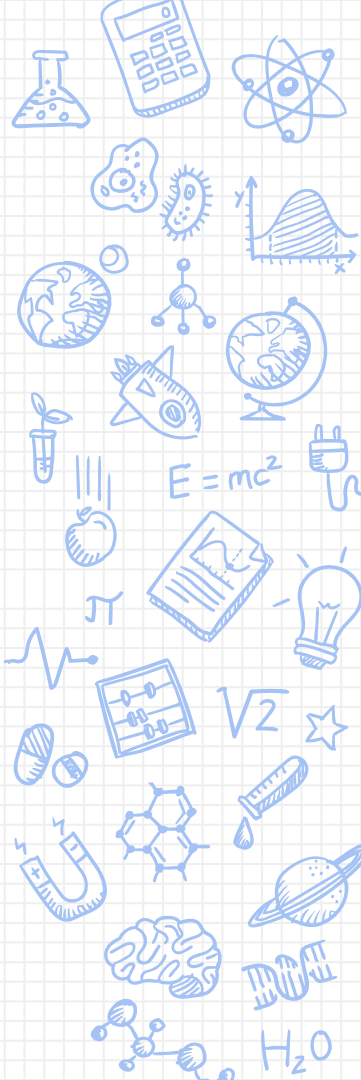


Final Share Out

- Each group reads their story
- Record what is similar and different about your stories
- What are at least two pieces of evidence you interpreted the same?
- What are at least two pieces of evidence you interpreted differently?

Is it Science?
Intro to CERs

Physics Daily Agenda 9/10

Agenda

1) Check Activity Final Share Out and Reflection
2) What is a CER?
3) CER Examples
4) CER Practice
5) Is it Science?

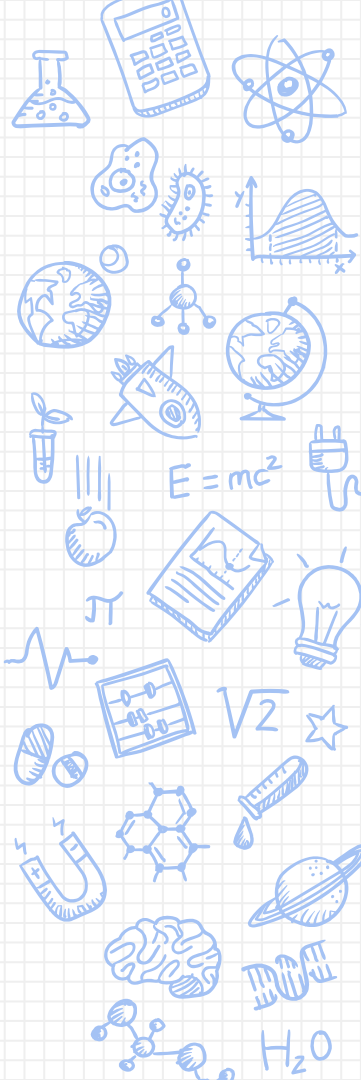
Do Now

- ✘ Sit with your partner from Friday
- ✘ Take Out Your Notebook

Standards

C.1 Scientific Observation

C.3 CER



Final Share Out

- Each group reads their story
- Record what is similar and different about your stories
- What are at least two pieces of evidence you interpreted the same?
- What are at least two pieces of evidence you interpreted differently?

Write down anything you noticed about this video.

SCIENTIFIC EXPLANATIONS

CLAIM

Statement about the results of an investigation

- A one-sentence answer to the question you investigated.
- It answers, **what can you conclude?**
- It should not start with **yes** or **no.**
- It should describe the relationship between **dependent** and **independent** variables.


EVIDENCE
Scientific data used to support the claim
Evidence must be:
• Sufficient — Use enough evidence to support the claim.
• Appropriate — Use data that support your claim. Leave out information that doesn't support the claim.
• Qualitative — (Using the senses), or Quantitative (numerical), or a combination of both.

REASONING

Ties together the claim and the evidence

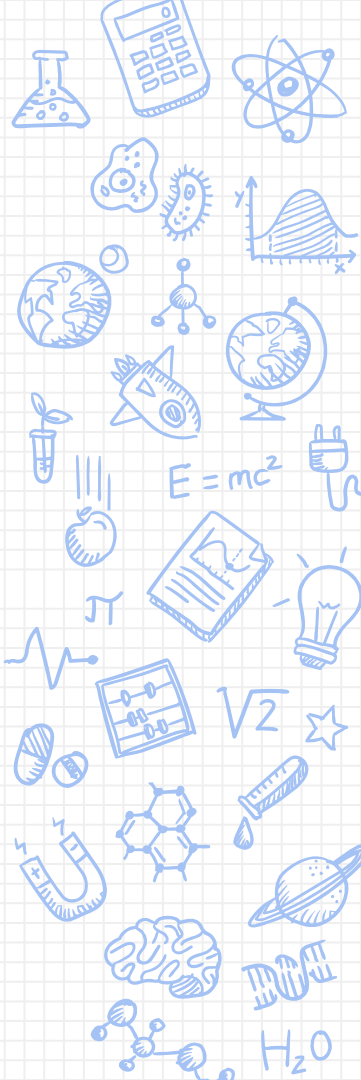
- Shows **how** or **why** the data count as evidence to support the claim.
- Provides the justification for why **this** evidence is important to **this** claim.
- Includes one or more **scientific principles** that are important to the claim and evidence.

CER Helpline

Claim: All kids at Avondale should be able to eat lunch off campus.

Evidence: I don't like cafeteria food. Lots of kids say they want to eat off campus.

Reasoning: I already explained it. I don't like lunch food and kids say they don't like the lunch food.



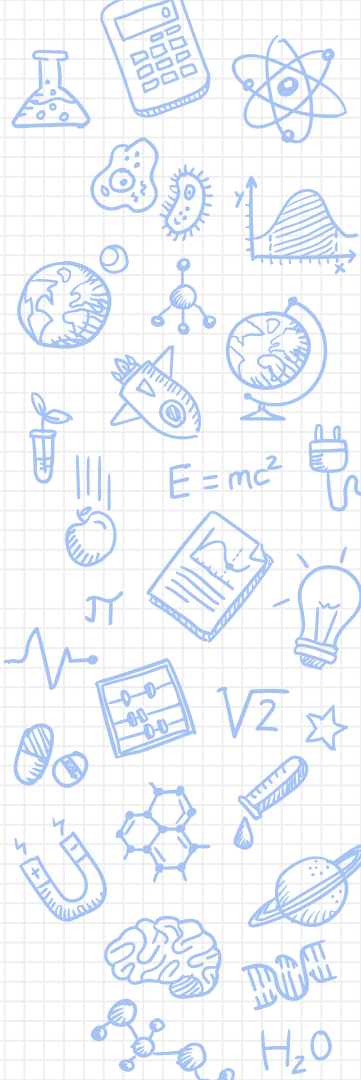
CER Helpline

Claim: Seniors at Avondale should be able to eat lunch off campus if they are in good standing and are passing all classes.

Evidence:

- ✘ 90% of seniors surveyed want to eat lunch off campus.
- ✘ 96% of seniors think it should be for seniors only in good standing
- ✘ 85% of seniors think it should be for seniors who are passing all of their classes.

Reasoning: The data shows that we need to do this.



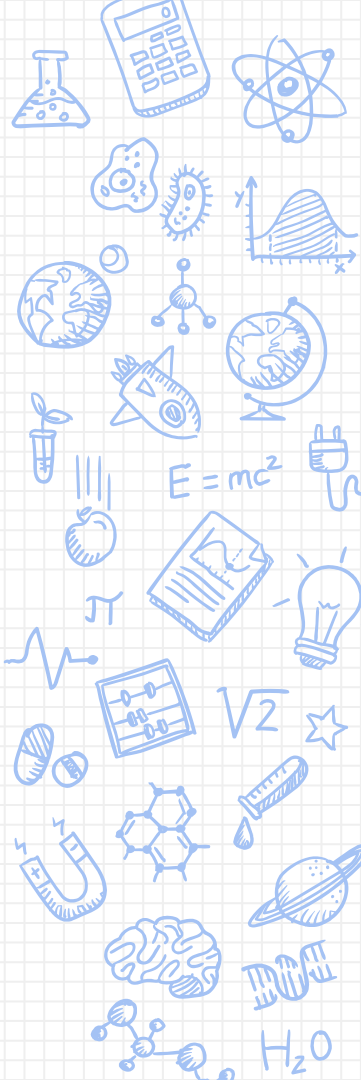
CER Helpline

Claim: Seniors at Avondale should be able to eat lunch off campus if they are in good standing and are passing all classes.

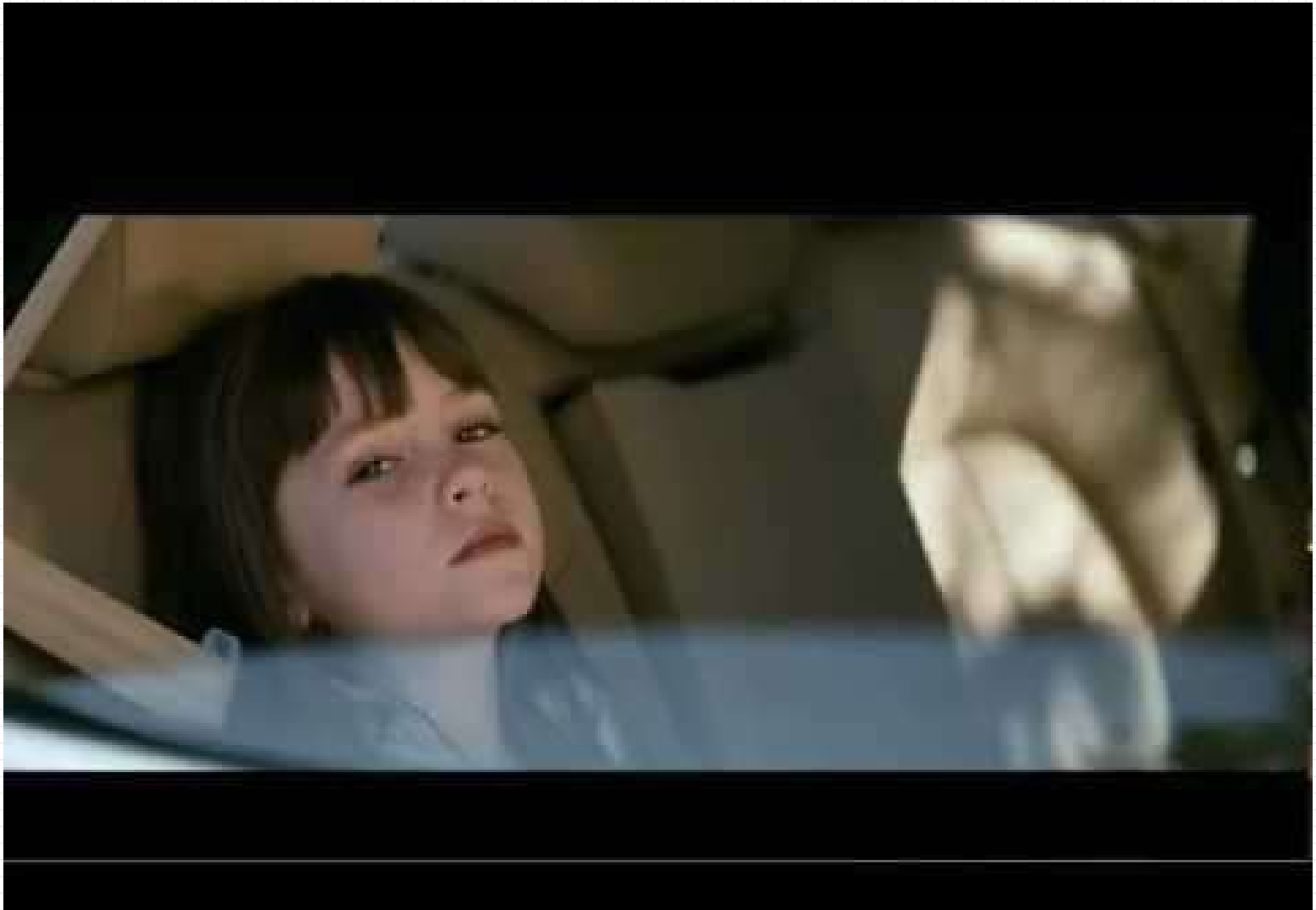
Evidence:

- ✘ 90% of seniors surveyed want to eat lunch off campus.
- ✘ 96% of seniors think it should be for seniors only in good standing
- ✘ 85% of seniors think it should be for seniors who are passing all of their classes.

Reasoning: The vast majority of AHS seniors want to eat off campus. To make this more of an incentive for students, all students going off campus must be in good standing. This would also make admin more likely to approve as well.



Question: What did the dog do to the cat in the video? Practice CER.



Practice CER
Assess Yourself & Your Partner

- Get Partner
- Get Topic
- Write down everything you know about it

Physics Daily Agenda 9/11

Agenda

1) Is It Science? Directions
2) Is It Science? Research Day

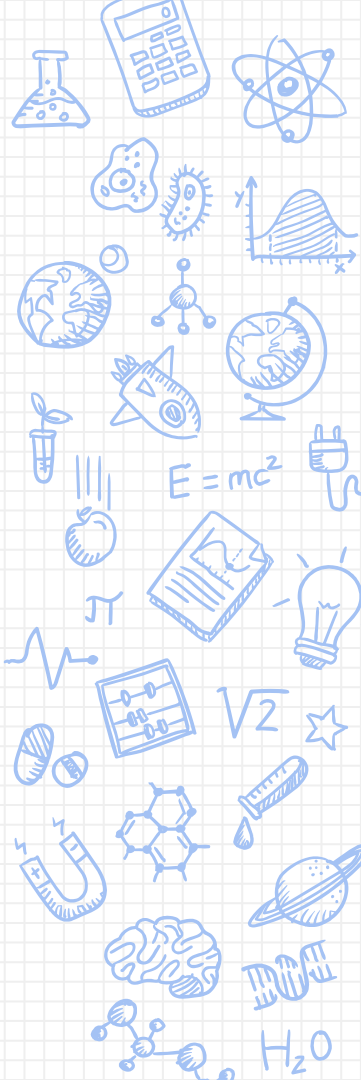
Do Now

- ✘ Sit with your partner from yesterday
- ✘ Get a laptop **(one per group)**
- ✘ Load GC
- ✘ Take out the sheet from yesterday

Standards

C.1 Scientific Observation

C.3 CER



Physics Daily Agenda 9/12

Agenda

1) Is It Science? CER Individual
2) CER Share Out
3) CER Assess
4) CER Turn In

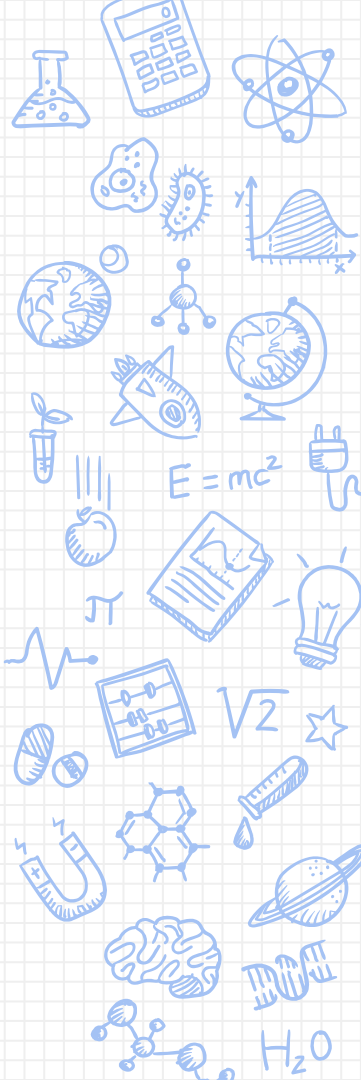
Do Now

- ✘ Sit with your partner from yesterday
- ✘ Take out the sheet from yesterday

Standards

C.1 Scientific Observation

C.3 CER



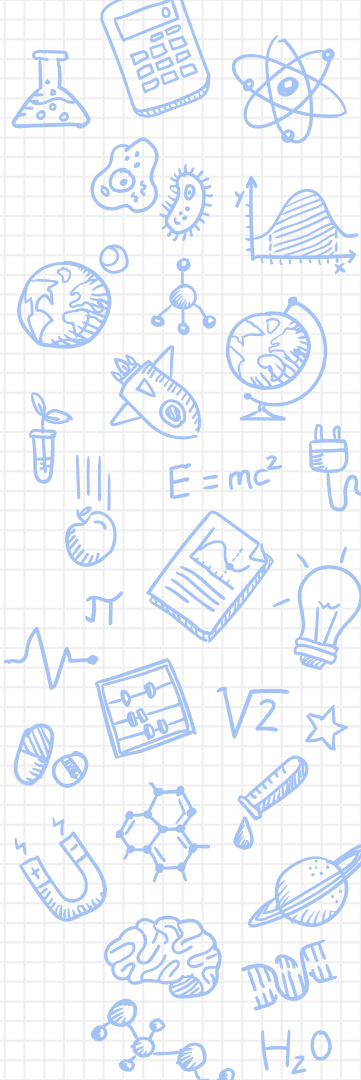
Write 2 CERs

#1

You are writing for the PRO or BELIEF in your topic

#2

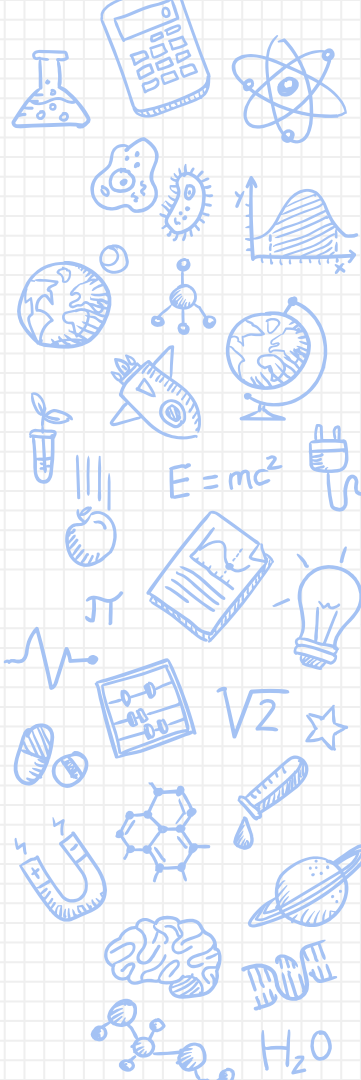
You are writing the CON or DOES NOT BELIEVE in your topic



#4: Argumentation (Claim, Evidence, Reasoning)

Rubric Criteria	4	3	2	1	0
Claim: *What Do You Know?* **A statement or conclusion that answers the original question/problem**	The claim is clear and specific while relating to the question presented in class	The claim is clear but does not relate to the question presented in class	The claim is unclear, does not relate to the question presented in class	Does not make a claim or makes an inaccurate claim or claim is not related to the question presented in class	No claim
Evidence: *How Do You Know That?* **Scientific data from the lab that supports the claim. The data needs to be appropriate and sufficient to support the claim**	The evidence is detailed and persuasive Includes: all necessary qualitative data and/or quantitative data that supports the claim	Evidence may be missing a few details but is still persuasive. Missing some necessary qualitative and/ or quantitative data that supports the claim	Provides related but insufficient evidence to support the claim. May include some unrelated evidence that does not support the claim. Includes some reasoning instead of evidence.	Only provides unrelated evidence (Evidence that does not support the claim) **OR** only provides reasoning and no evidence from data	No evidence provided
Reasoning: *Why Does Your Evidence Support Your Claim?* **A justification that connects the evidence to the claim. It shows why or how the data counts as evidence by using appropriate and sufficient scientific principles**	Explanations and organization of reasoning strongly enhance the communication of evidence. The reasoning is based on clear and sound scientific principles. Fully explains ***why or how*** the data supports the claim The reasoning is from a reputable source if sources were used	Provides accurate and complete reasoning that links evidence to claim. The reasoning is sound but may not elaborate on evidence adequately - explains ***why or how*** data supports the claim but fails to demonstrate a complete understanding The reasoning is from a reliable source if sources were used	Provides reasoning that links claim and evidence. Repeats the evidence. The reasoning is sound but may not elaborate on evidence adequately - starting to explain ***why or how*** the data supports the claim is from a questionable source if sources were used	Only provides reasoning that does not link evidence to claim Does not explain ***why or how*** the data supports the claim The reasoning is not from a reliable source if sources were used	Does not provide reasoning

- ✘ Get a rubric... one per person
- ✘ Read over with class
- ✘ Read rubric and see if you need to make any changes
- ✘ Swap with your partner and write their name on the rubric
- ✘ Assess directly on your rubric
  - ✘ Assessing is about feedback, not being "nice". You won't help anyone giving them a 4 when you know it's a 1. You don't have to be a 4 now. You probably aren't yet!
- ✘ Turn in rubrics
- ✘ Find a new group and share your topic!



Teacher Directions

1) Split groups up into random pairs of students. Make sure to split up students are diversely as possible. (15 total)
2) Students are randomly given a topic.
3) Students write down everything they know about a topic on white boards. Students DO NOT write their opinion
4) Students watch/read all 5-6 sources about the topic and use the sheet to break them all down- will be attached (Perspective Sheet)
5) Day 2- Students create 2 CER posters- one for pro and one for against using sources. Gallery walk or share out at end.
6) Reflection- What can evidence tell us? Is all evidence good? How does evidence shape our opinion.

Is it Science?

1) Students watch/read all 5-6 sources about the topic and use the sheet to break them all down- will be attached (Perspective Sheet)
2) Day 2- Students create 2 CER posters- one for pro and one for against using sources. Gallery walk or share out at end.
3) Reflection- What can evidence tell us? Is all evidence good? How does evidence shape our opinion.

Is It Science- Student Steps

1. Get partner
2. Choose topic (random)
3. Write down everything you know on sheet
4. Work on gathering your evidence from your sources on Is It Science Sheet? **Focus on bias.**

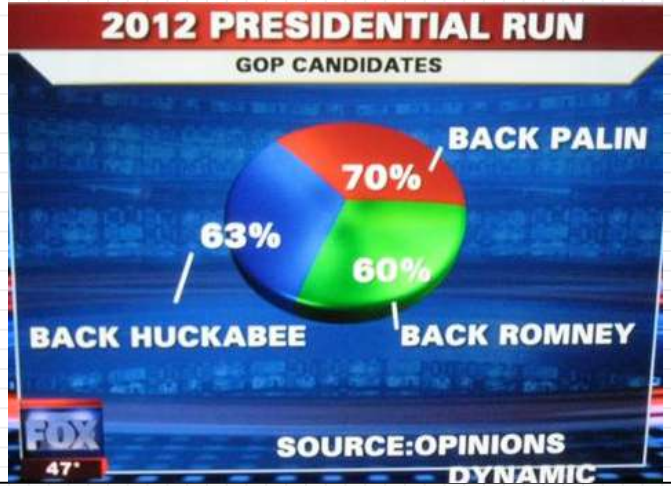
Physics Daily Agenda 9/13

Agenda

1) Super Quick Graphing Review
2) Measuring Stuff
3) Graphing and Correlations Lab

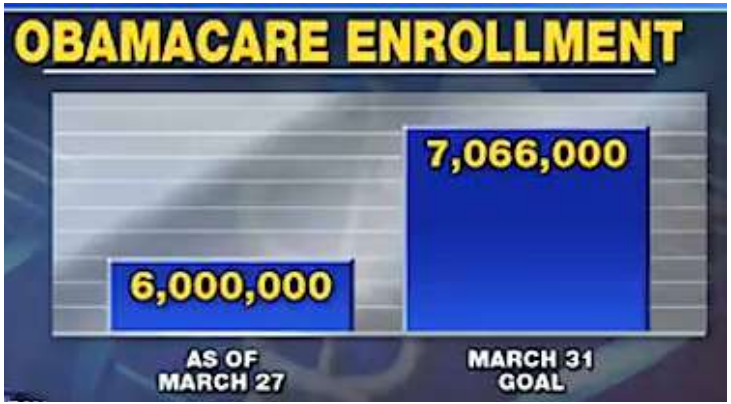
Do Now

✘ Take out your notebook. What do you notice about this graph?



Standards

0.1 Measuring in Metric


OBAMACARE ENROLLMENT
6,000,000
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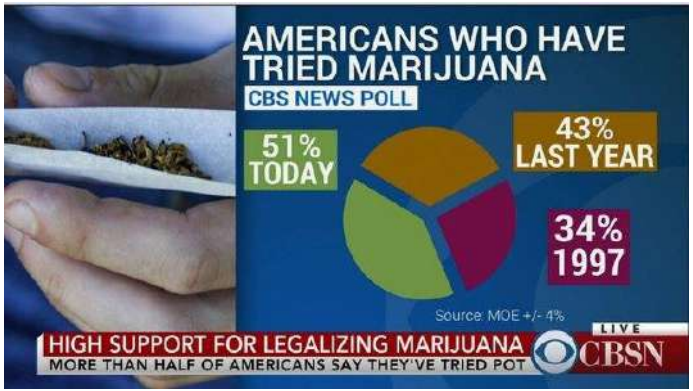
AS OF MARCH 27
MARCH 31 GOAL

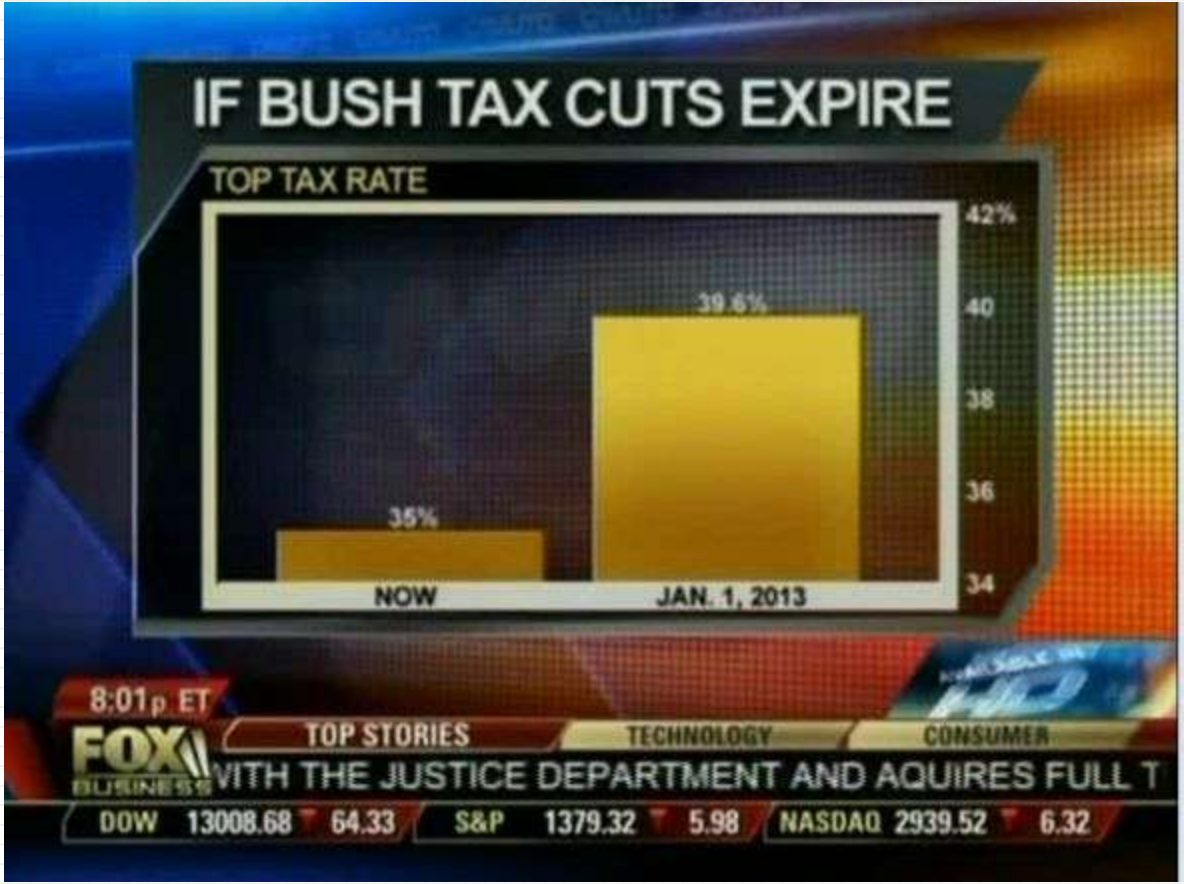

COST OF GAS
NATIONAL AVERAGE
$3.60
$3.50
$3.40
$3.30
$3.20
$3.10
$3.00
$2.90
$3.17
$3.51
$3.57
LAST YEAR
LAST WEEK
CURRENT


AMERICANS WHO HAVE TRIED MARIJUANA
CBS NEWS POLL
51% TODAY
43% LAST YEAR
34% 1997
Source: MOE +/- 4%
HIGH SUPPORT FOR LEGALIZING MARIJUANA
MORE THAN HALF OF AMERICANS SAY THEY'VE TRIED POT
LIVE
CBSN


JOB LOSS BY QUARTER
7 MIL
9 MIL
13.5 MIL
15 MIL
DEC '07
SEPT '08
MARCH '09
JUNE '10

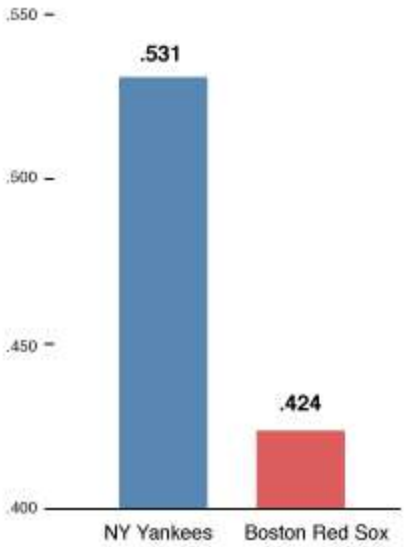

OBAMACARE ENROLLMENT
6,000,000
7,066,000
AS OF MARCH 27
MARCH 31 GOAL


OBAMACARE ENROLLMENT
6,000,000
7,066,000
AS OF MARCH 27
MARCH 31 GOAL


IF BUSH TAX CUTS EXPIRE
TOP TAX RATE
42%
40
38
36
34
39.6%
35%
NOW
JAN. 1, 2013
8:01p ET
FOX BUSINESS
TOP STORIES
TECHNOLOGY
CONSUMER
VITH THE JUSTICE DEPARTMENT AND AQUIRES FULL T
DOW 13008.68 64.33
S&P 1379.32 5.98
NASDAQ 2939.52 6.32

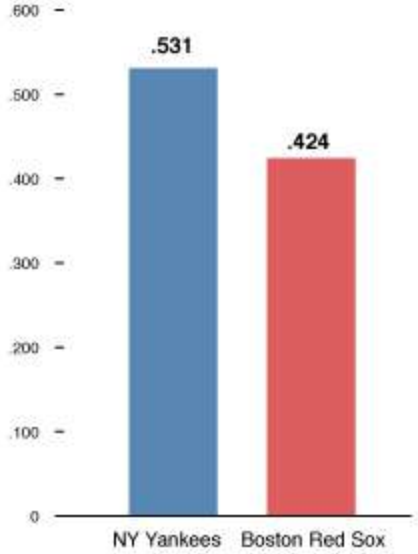
Percentage of victories

WRONG



Percentage of victories

RIGHT



Graphing Correlation Lab

- Each student gets a number
- With a partner take your data for each part. Make sure you are using the correct units!
- Share with others in the class. You need all students including yourself!
- You cannot copy off of anyone: you need to ask every student!
- Work on your three graphs. They are **scatter plots** with line of best fit! That's what we do in this class!
- Answer the follow up question about each graph

Physics Daily Agenda 9/16

Agenda

1) Graphing and Correlations Lab Finish
2) Go Over Lab and Correlations
3) Intro to Scale Drawings

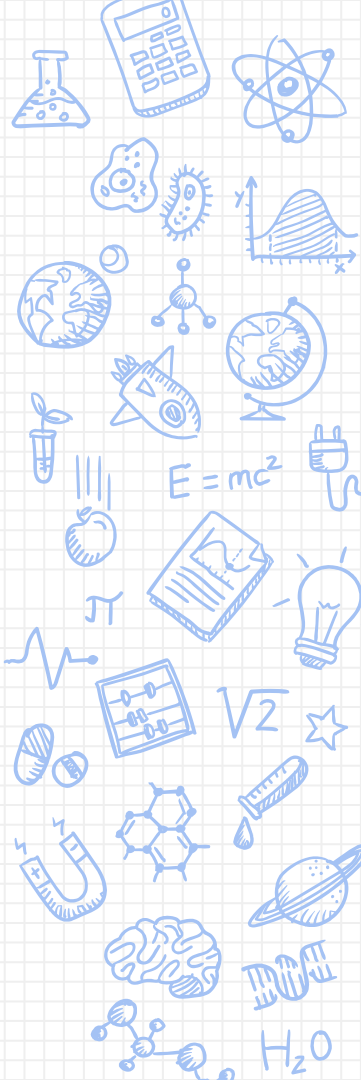
Do Now

✘ Take out your graphing lab from Friday. If you don't have one, get one from up front.

Standards

0.1 Measuring in Metric

0.2 Scale Drawings



Look at your map.

Choose two major cities.

How can you determine the distance between them just using the map?

Physics Daily Agenda 9/17

Agenda

1) SBG Intro
2) Intro to Scale Drawings
3) Assignment of Areas
4) Stride Length
5) Measuring Time

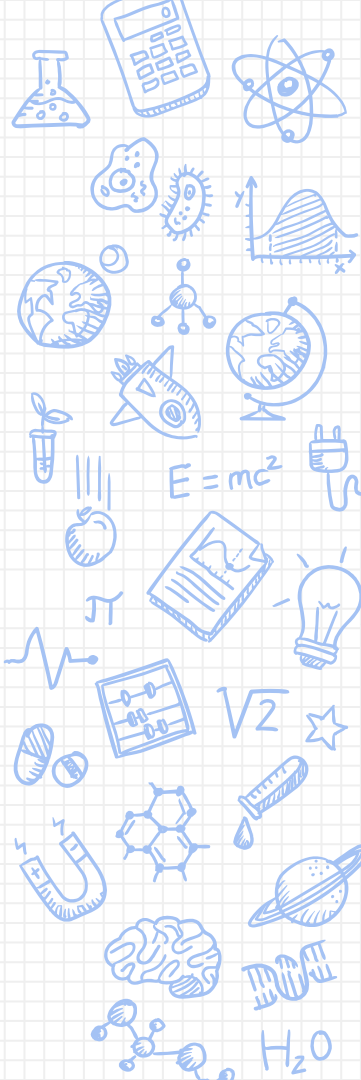
Do Now

✘ Take out your graphing correlations lab.

Standards

0.1 Measuring in Metric

0.2 Scale Drawings



SBG Explanation

Look at your map.

Choose two major cities.

How can you determine the distance between them just using the map in miles?

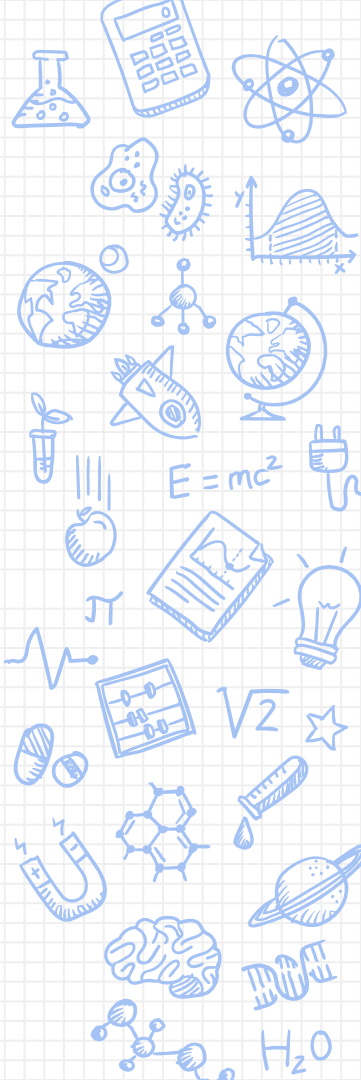
What is a scale drawing?

A scale drawing gives us an accurate representation of the world around us.

Final copy due FRIDAY end of class!

Today's Goal

- ✘ Get assigned area
- ✘ Stride length
- ✘ Measure area (everything including width, door width and alcoves)
- ✘ Make a rough sketch of your area with measurements.



Physics Daily Agenda 9/18

Agenda

1) Scale Drawings Teach
2) Finish measuring
3) Rough draft of measurements
4) Get checked by teacher
5) Start scale drawing rough/final draft

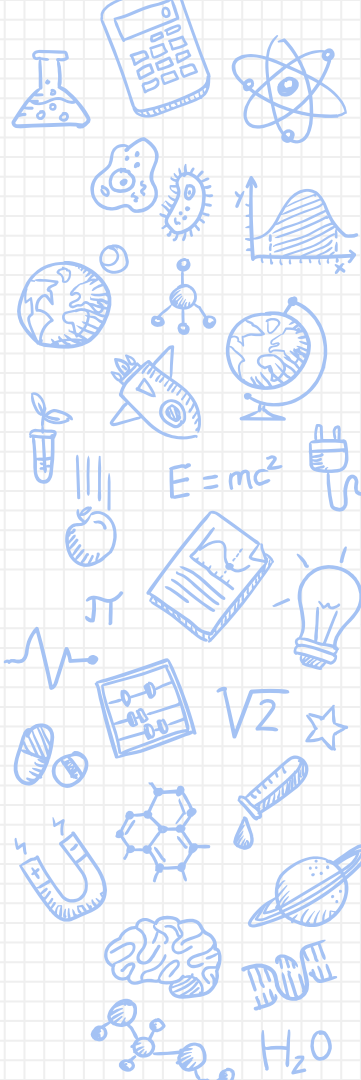
Do Now

✘ Take out your measurements/sketch and requirement sheet from yesterday.

Standards

0.1 Measuring in Metric

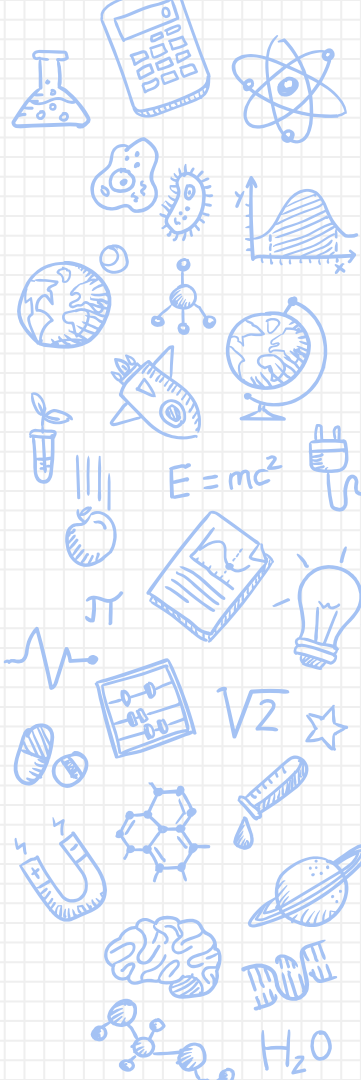
0.2 Scale Drawings



Scale 1/2” = 3 feet

Steps to Scale Drawing

1) Finish measuring
2) Rough draft of measurements
3) Get checked by teacher
4) Start scale drawing rough/final draft



Physics Daily Agenda 9/19

Agenda

1) Final Requirements for Scale Drawing
2) Drawing rough/final draft

Final Draft Scale Drawing due FRIDAY END OF CLASS

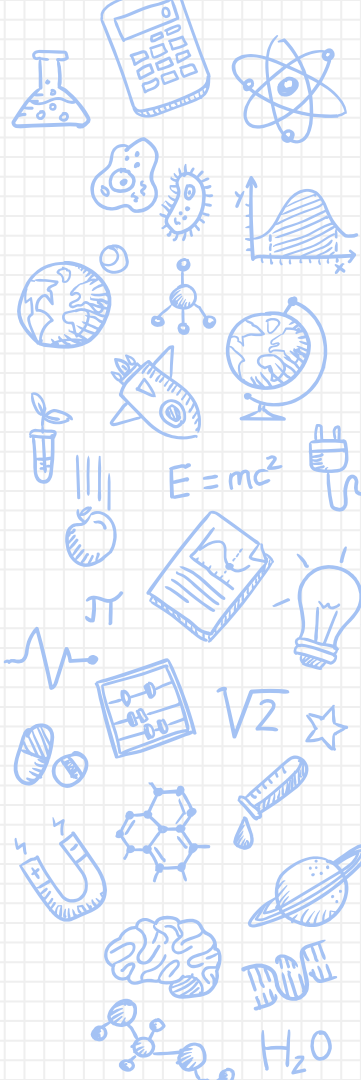
Do Now

✘ Take out your requirement sheet and your current draft

Standards

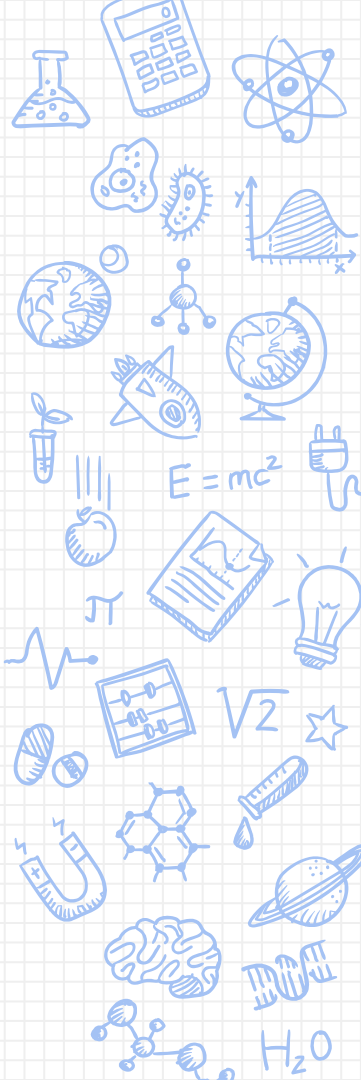
0.1 Measuring in Metric

0.2 Scale Drawings



Final Draft Requirements

- ✘ On white paper or graph paper
- ✘ Outlined in pen, marker or Sharpie
- ✘ Scale included
- ✘ Legend or key
- ✘ All rooms labeled
- ✘ All measurements in meters
- ✘ No pencil markS
- ✘ Your name and hour



Physics Daily Agenda 9/20

Agenda

1) Final Requirements for Scale Drawing
2) Drawing final draft

Final Draft Scale Drawing due END OF CLASS

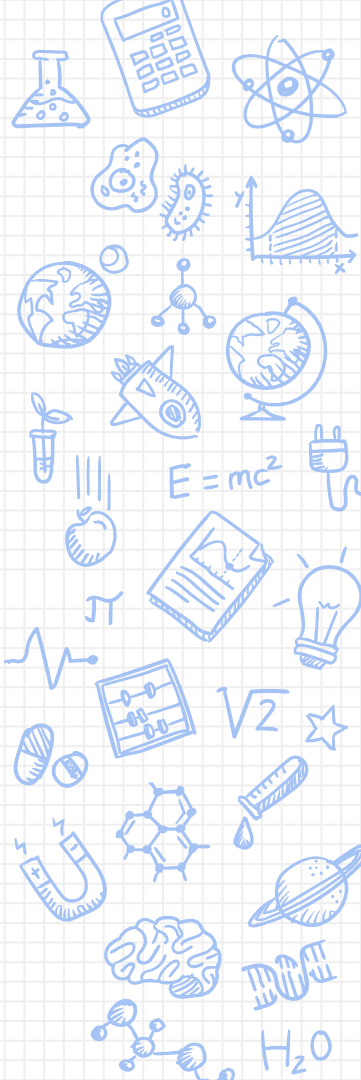
Do Now

✘ Take out your requirement sheet and your current draft

Standards

0.1 Measuring in Metric

0.2 Scale Drawings



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