TUESDAY, NOVEMBER 27th

DO NOW

- In your notebooks, to be checked, solve this problem…

There are 12 inches in 1 foot. These are units of length!

Know:

$$12in = 1ft$$

Asked: How many inches are in 8 feet?

TODAY'S PLAN

1. Do and review the **DO NOW** and **Qualitative Prompt (QP)**!
   - Today's **QP** = LIST 3 good memories you have from Thanksgiving and then DRAW your favorite holiday food!
2. Open books, WORK on today's **AO!**
3. ***HW** = Finish Quick Lab Intro Posters (1 Scientific + 1 Personal Drawing)!

TODAY'S ACADEMIC OBJECTIVE

Today you will LEARN Mr. Floyd's classroom procedures and INTRODUCE yourself to him!

DO NOW – Units of Length

- **Know/Given:** There are 12 inches in 1 foot. These are units of length!

$$12in = 1ft$$

- **Asked:** How many inches are in 8 feet?

What is KA^2 format? This is an example of a "1-pointer" on a DO NOW!

- **Know:**

$$12in = 1ft$$

$$\frac{12in}{1ft} \qquad \frac{1ft}{12in}$$

- **Asked:** How many inches are in 8 feet?
- **Answer:** $\mathbf{8\cancel{ft} * \frac{12in}{1\cancel{ft}} = 96in}$

DO NOW – Never Forget to Listen to Akila!

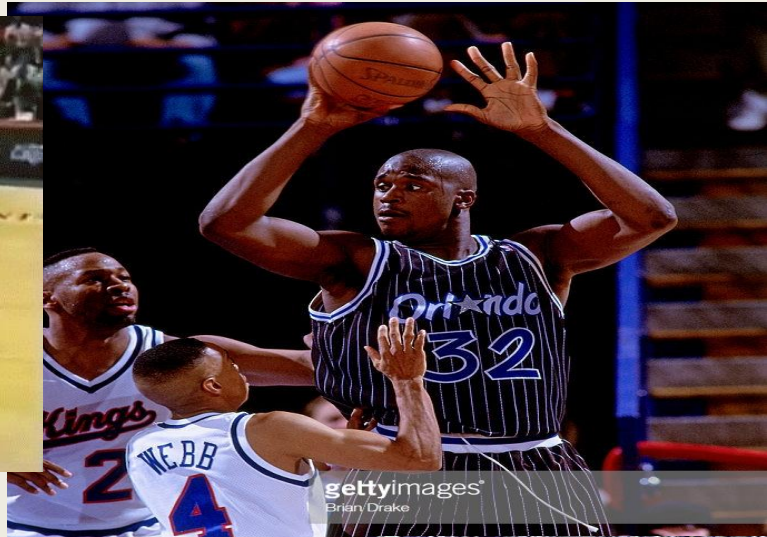
- To solve these problems, just multiply by the fraction with the units you want on top and "*Let the Units Guide You*"!
  - Example: $\mathbf{84\cancel{in} * \frac{1ft}{12\cancel{in}} = 7ft}$

DO NOW – Translating Our Answer

- **Answer:**

$$8\cancel{ft} * \frac{12in}{1\cancel{ft}} = 96in$$

- **$ci Fact** → *WOAH!* That's actually a bit taller than Shaq!
- ***Remember students, to perform these conversions always make sure to divide by the same unit so that they will cancel out! Isn't SCIENTIFIC MATH awesome!



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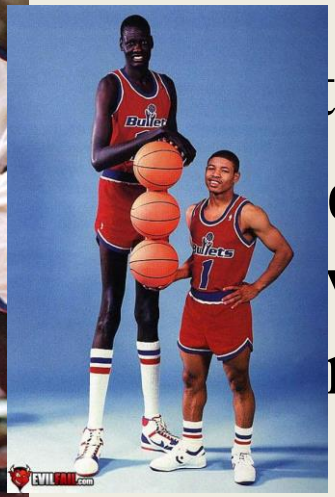

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TODAY'S ACADEMIC OBJECTIVE

Today you will LEARN Mr. Floyd's classroom procedures and INTRODUCE yourself to him!

Today's Qualitative Prompt

LIST 3 good memories you have from Thanksgiving and then DRAW your favorite holiday food!

- Students, Thanksgiving is a great holiday, and its important that you take time to enjoy it!

Today's Qualitative Prompt

LIST 3 good memories you have from Thanksgiving and then DRAW your favorite holiday food!

- I have many good memories from Turkey Day, but my favorite one is of my sister and I playing in the leaves!

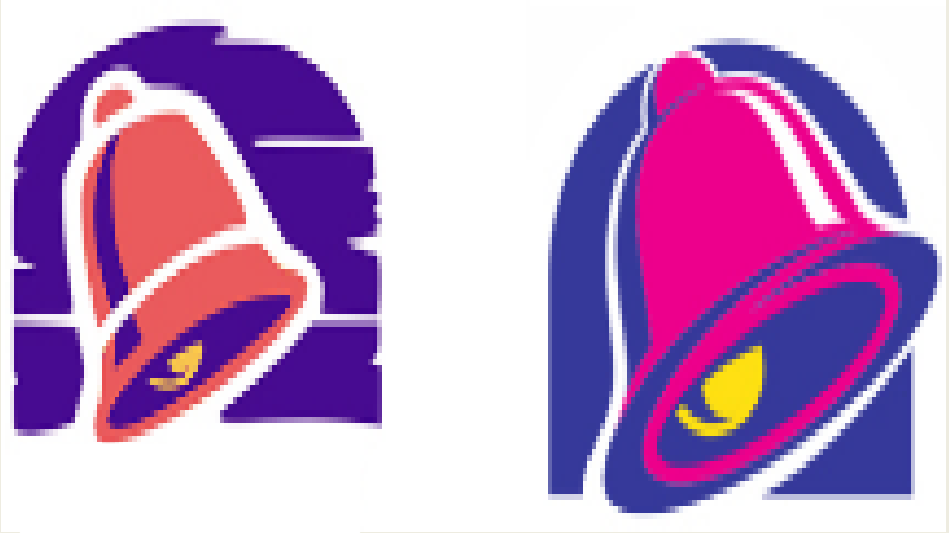
Today's Qualitative Prompt

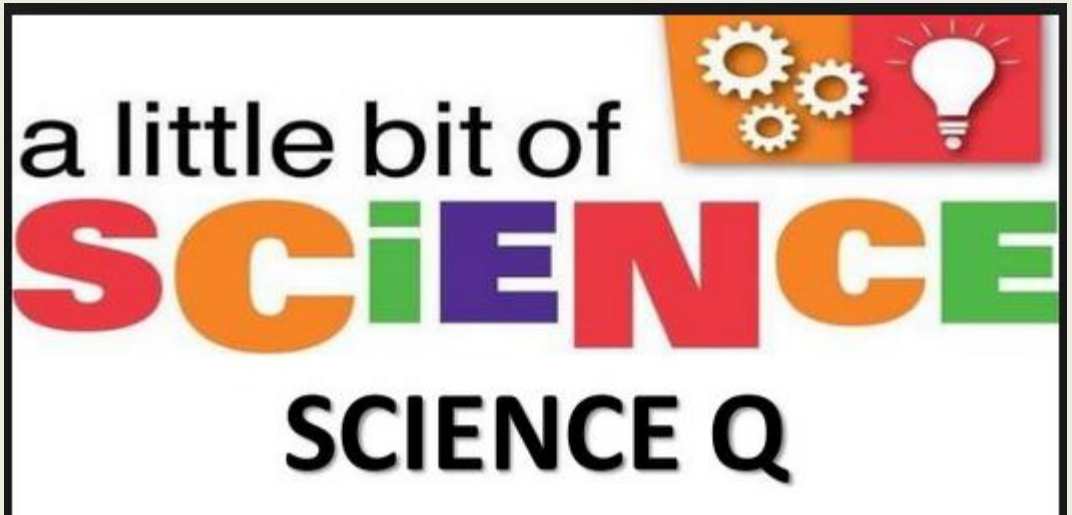
LIST 3 good memories you have from Thanksgiving and then DRAW your favorite holiday food!

- However, Thanksgiving isn't complete without the food, and if I had to pick a favorite I'd probably pick the TOAST!

Bell 2 Bell

- We work what in this class?!?!?!
  - **BELL 2 BELL**
- Every single precious SECOND of academic instructional time is thus utilized in this classroom!
- You students will thus be vocally quizzed EVERY DAY until I DISMISS you at the end of class (with a positive greeting and a thank-you of course!).





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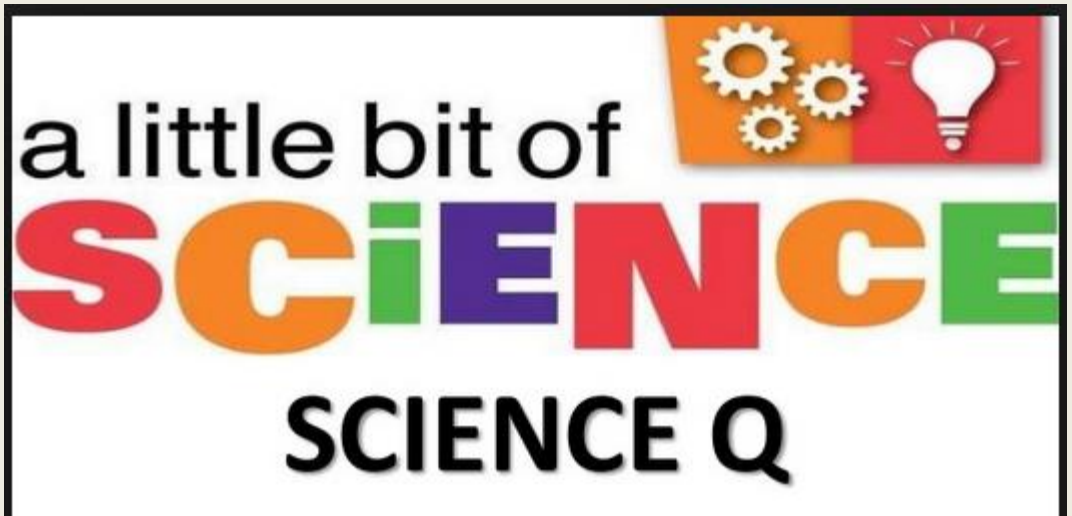
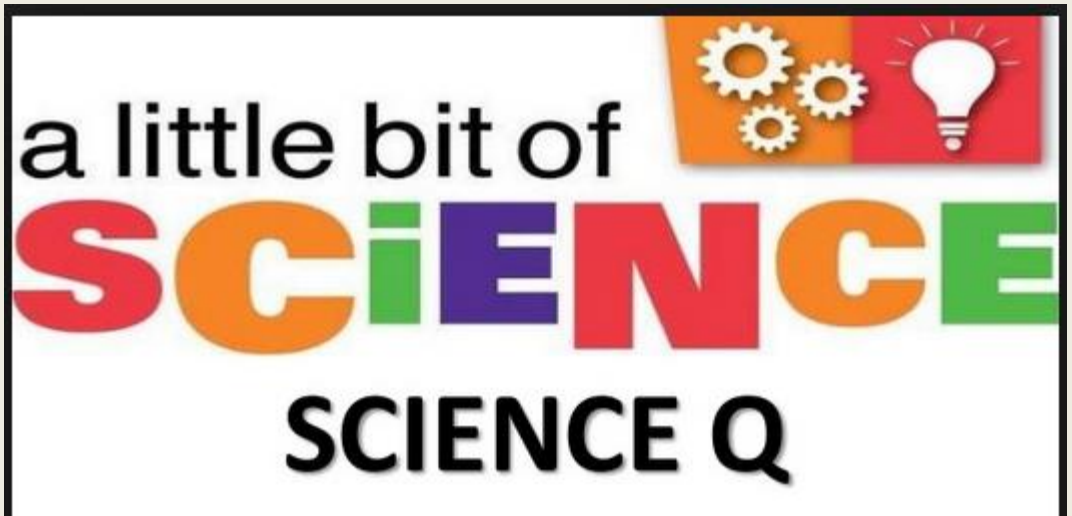
- Let us begin!



Bell 2 Bell

- “What is the first thing we always do when we enter Mr. Floyd’s?”
- “How many points is the DO NOW worth?”
- “What is the second thing we always do when we enter Mr. Floyd’s?”
- “What are the two categories of grades Mr. Floyd uses?”
- “Who is Mr. Floyd? What kind of teaching system does he use?”
- “How does Mr. Floyd give you opportunities to earn extra credit?”
- “Compare and Contrast Quantitative and Qualitative!”



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- Tomorrow you will DEMONSTRATE how to ENHANCE your senses with a scientific device!
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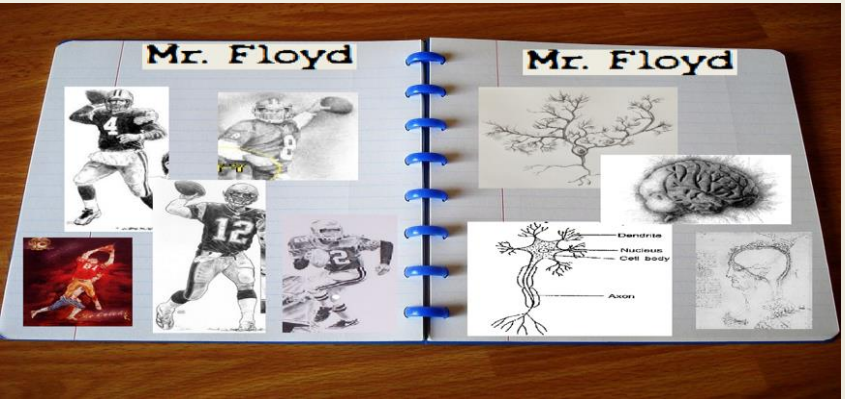

KNOW SCIENCE

Exploring Today... Innovating Tomorrow!

WEDNESDAY, NOVEMBER 28th

DO NOW

- In your notebooks, to be checked, solve this problem…

There are 36 inches in 1 yard. These are units of length!

Know:

$$36in = 1yd$$

Asked: How many yards are in 180 inches?

TODAY'S PLAN

1. Do and review the **DO NOW** and **Qualitative Prompt (QP)**!
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TODAY'S ACADEMIC OBJECTIVE

Today you will BEGIN your CONQUEST of Science by EXAMINING what you already know!

DO NOW – Units of Length

There are 36 inches in 1 yard. These are units of length!

Know/Given:

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Asked: How many yards are in 180 inches?

What is KA^2 format? This is an example of a "1-pointer" on a DO NOW!

- **Know:**

$$36in = 1yd$$

$$\frac{36in}{1yd} \qquad \frac{1yd}{36in}$$

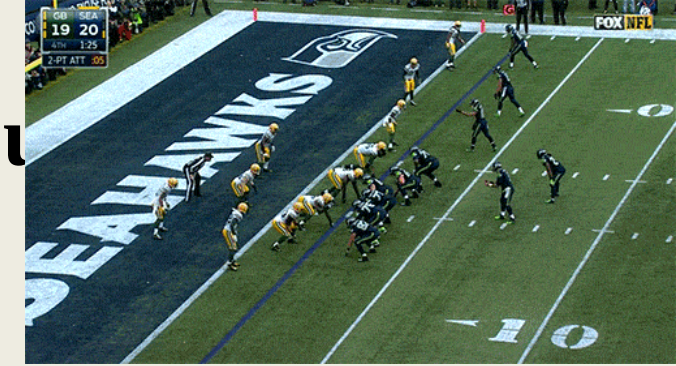
- **Asked:** How many yards are in 180 inches?
- **Answer:** $\mathbf{180\cancel{in} * \frac{1yd}{36\cancel{in}} = 5yd}$

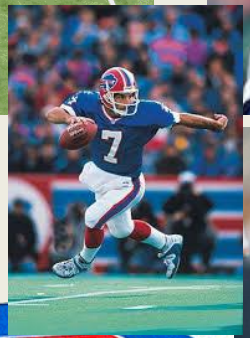
DO NOW – Never Forget to Listen to Akila!

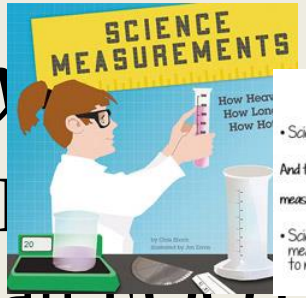
- To solve these problems, just multiply by the fraction with the units you want on top and "*Let the Units Guide You*"!
  - Example: $\mathbf{84\cancel{in} * \frac{1ft}{12\cancel{in}} = 7ft}$

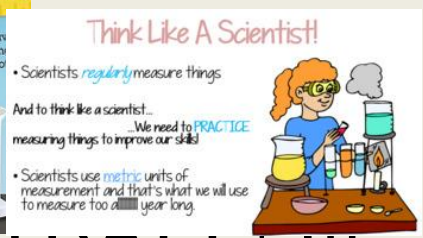
DO NOW – Translating Our Answer

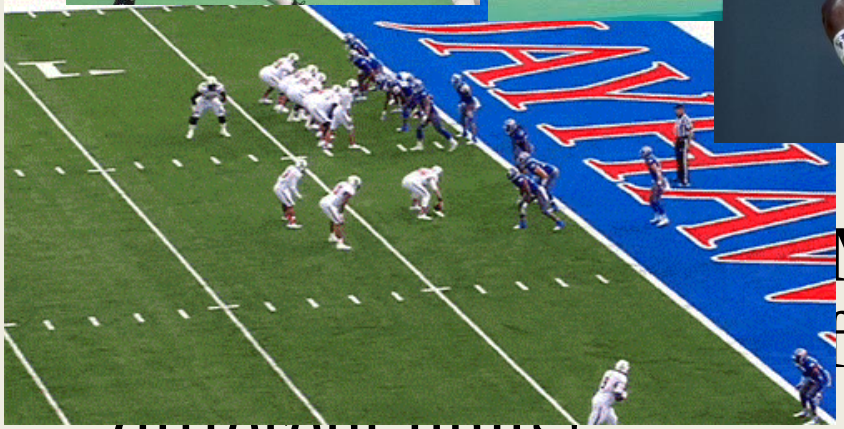
- **Answer:**
- $$\mathbf{180\cancel{in} * \frac{1yd}{36\cancel{in}} = 5yd}$$
- **$ci Fact →** 5 yards is the LENGTH need to score on this special scoring play in Canadian FOOTBALL! In the NFL this play only need 2 yards though!
- ***Remember students, MEASUREMENT is a key skill in science to we must familiarize ourselves with many different units!

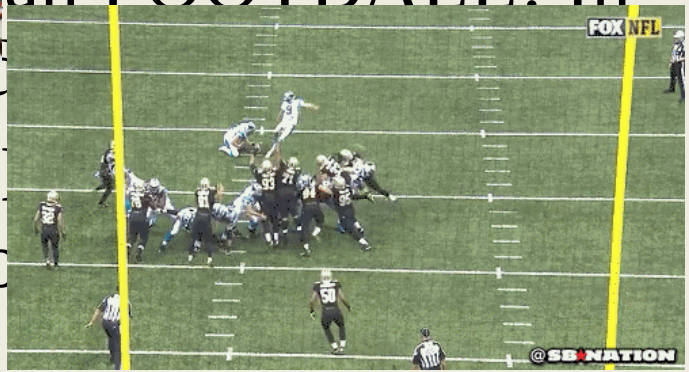












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Today you will BEGIN your CONQUEST of Science by EXAMINING what you already know!

Today's Qualitative Prompt

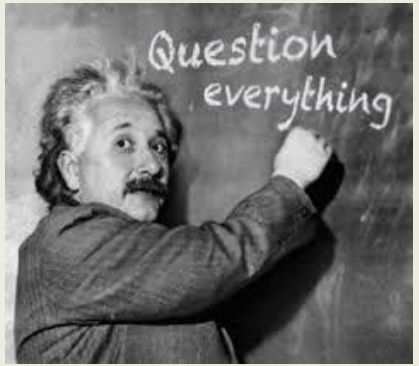
WRITE 2 things you know about SCIENCE, 1 QUESTION you have about the world, and one IDEA to make OUR class better!

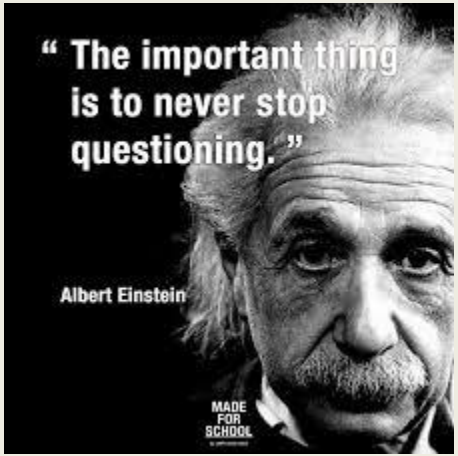
- Students, you've already been studying science for a few years, so I KNOW that you know something about it!

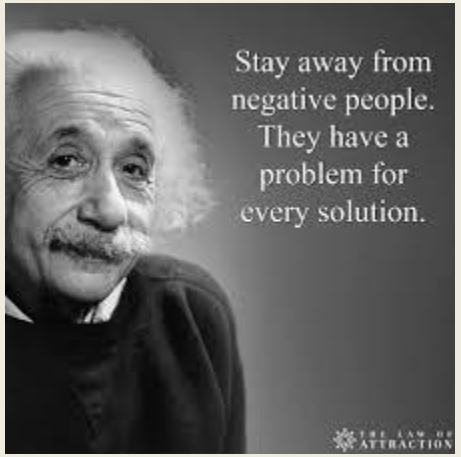
Today's Qualitative Prompt

WRITE 2 things you know about SCIENCE, 1 QUESTION you have about the world, and one IDEA to make OUR class better!

- You likely have A LOT more questions than answers about our world though, but let me assure you that this is a very GOOD thing!







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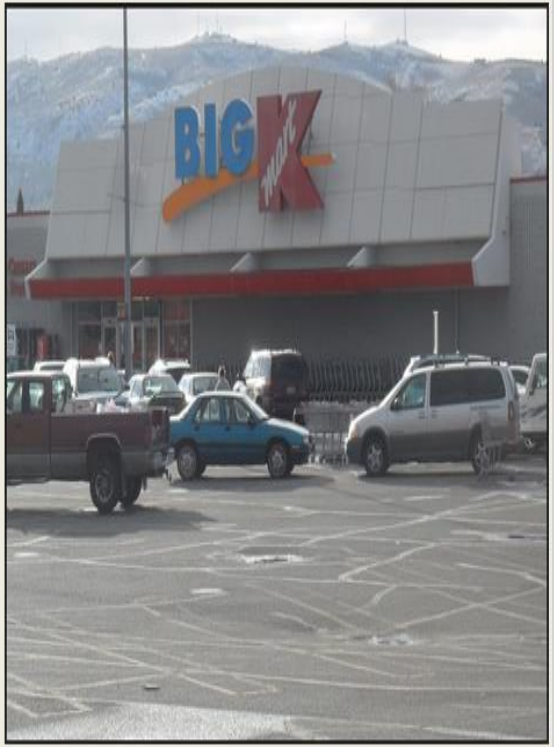
- You likely have A LOT more questions than answers about our world though, but let me assure you that this is a very GOOD thing!

Parking Lot Questions

- Did you ask a rockin' question in class but, due to time constraints, was Mr. Floyd not able to get you an answer?
- DON'T WORRY! Just park your question in the Parking Lot and I PROMISE that I will answer it eventually!



Today's Qualitative Prompt

WRITE 2 things you know about SCIENCE, 1 QUESTION you have about the world, and one IDEA to make OUR class better!

- Thus, you likely have a few suggestions for how to improve our class as well, and I assure you that your voice WILL be heard!

Have It Your Way At "The Idea Club"

- Do you have a rockin' idea for how to improve the academic experience in our classroom?
- DON'T WORRY! Just park your suggestion at "The Idea Club" and I, Mr. Floyd, PROMISE that I will consider it eventually!

Bell 2 Bell

- We work what in this class?!?!?!
  - **BELL 2 BELL**
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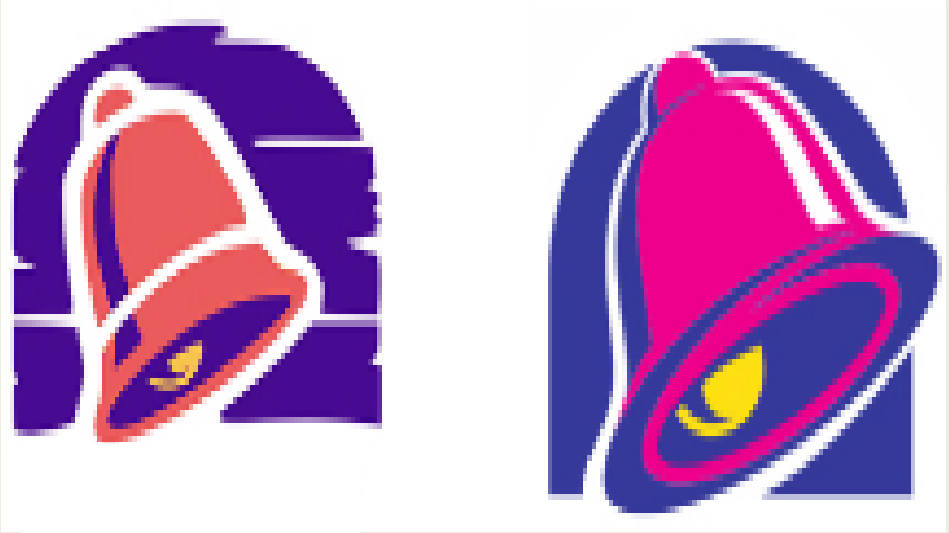

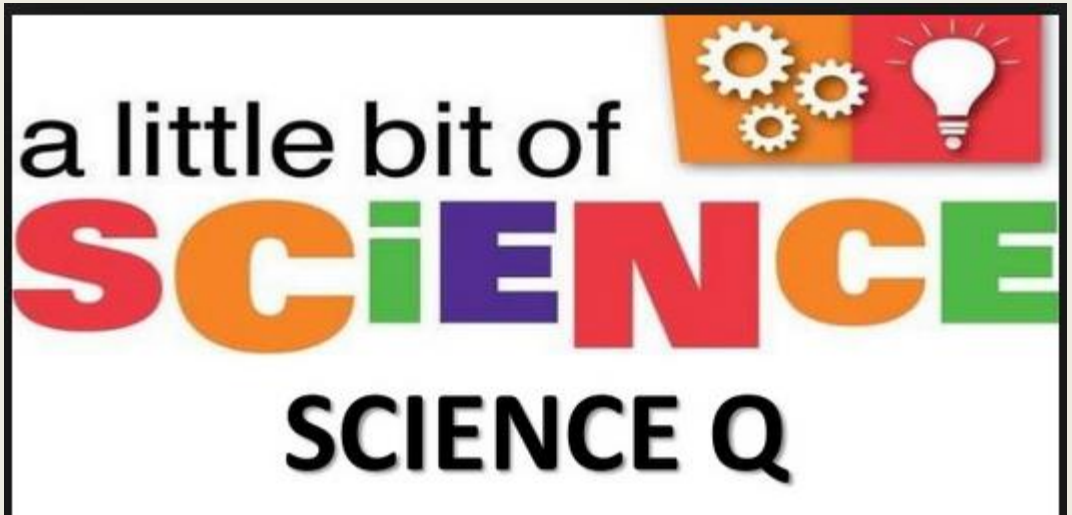

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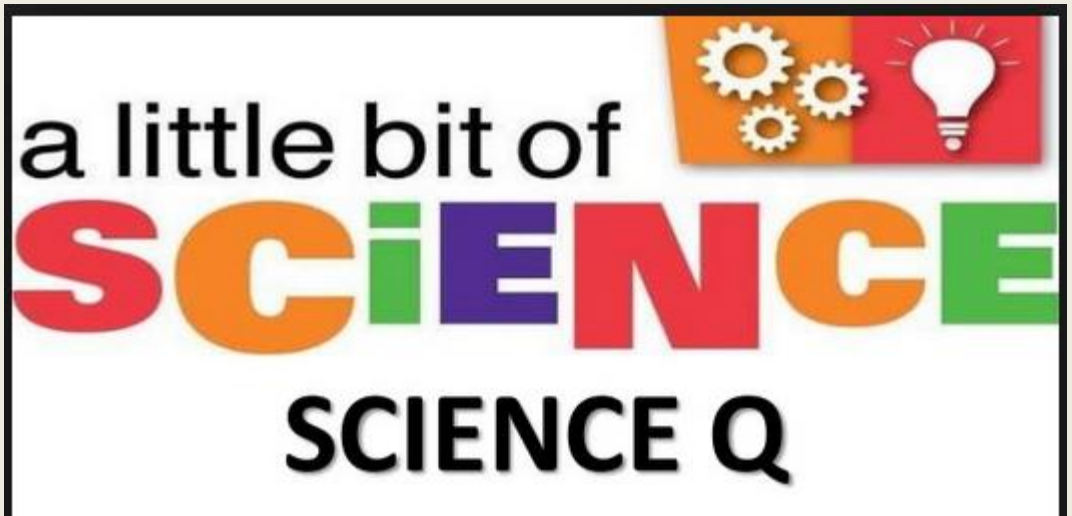

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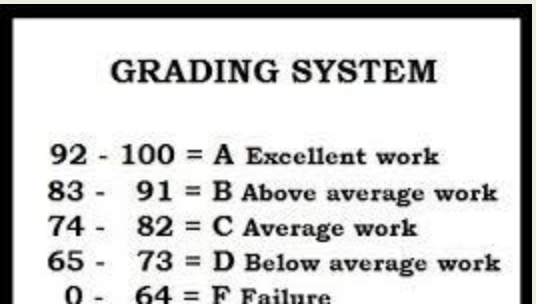
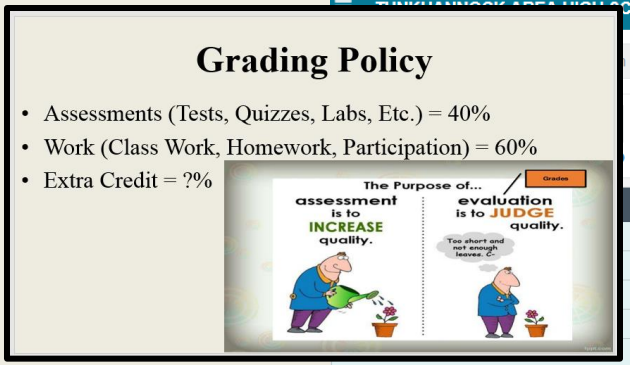
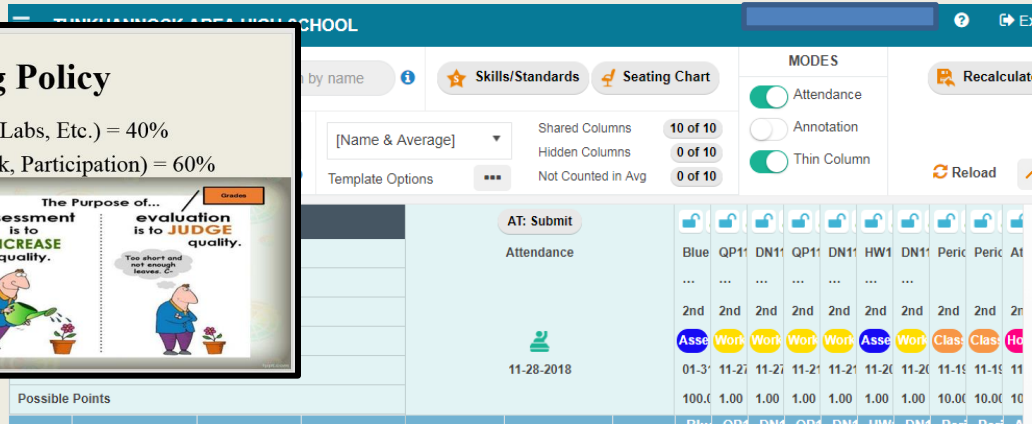






THURSDAY, NOVEMBER 29th

DO NOW

Know: Scientists use many instruments to help them study our world.

Asked: Which of the following tools would a scientist most likely use to see very small things?

A: Barometer

B: Microscope

C: Telescope

TODAY'S PLAN

1. Do and review the **DO NOW** and **Qualitative Prompt (QP)**!
   - Today's **QP** = LIST and SKETCH as many different scientific tools and devices that you can think of!
2. Open books, WORK on today's **AO!**
3. ***HW** = Finish sketching and labeling the Microscope!

TODAY'S ACADEMIC OBJECTIVE

Today you will DEMONSTRATE how to ENHANCE your senses with a scientific device!

DO NOW – How Can I See Small?

- **Know/Given:** Scientists use many instruments to help them study our world.

- **Asked:** Which of the following tools would a scientist most likely use to see very small things?

What is KA^2 format? This is an example of a “1-pointer” on a DO NOW!

- **Know:**
  - Scientists use many instruments to help them study our world.

- **Asked:**
  - Which of the following tools would a scientist most likely use to see very small things?

- **Answer:**
  - **B:** Microscope

DO NOW – Translating and Concluding Our Answer!

- **Answer:**
  - **B:** Microscope
- **$ci Fact** →Barometers are devices for measuring atmospheric PRESSURE, while Telescopes help scientists see things that are far away! Microscope it is then, but does anyone know who invented this device?!

What is a barometer?

- An instrument measuring atmospheric pressure (the weight of the air in the atmosphere)

What is a Telescope?

- Long tube with mirrors & lenses, designed to make distant objects look near.

Who Invented the Microscope?

- Some scientists have credited ***Zacharias Janssen*** of the Netherlands for inventing the optical microscope in the early 1600's.

- ***Anton van Leeuwenhoek***, a Dutch biologist, has gotten more of the glory since his 18th century single-lens microscopes worked better and were more widely used. He was also the first to discover bacteria and protozoans.

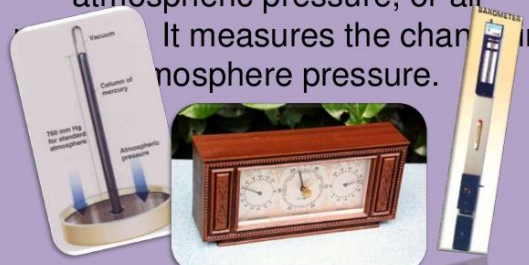
From www.howstuffworks.com (History of the Microscope)

Leeuwenhoek

- **$ci Fact →Baro**

What its used for?

A barometer is used to help forecast the weather by measuring atmospheric pressure, or air
It measures the chan in
mosphere pressure.



History

Hans and Zacharias Janssen of Holland in the 1590's created the "first" compound microscope

Zacharias Jansen
1588-1631

The "First" Microscope

2. Early Microscopes

(c) Robert Hooke

- an English physicist
- improved on Leeuwenhoek's microscope design
- Hooke wrote the book *Micrographia*, the first book to describe observations made through a microscope

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Today you will DEMONSTRATE how to ENHANCE your senses with a scientific device!

Today's Qualitative Prompt

LIST and SKETCH as many different scientific tools and devices that you can think of!

- Students, the human senses and abilities can only take us so far, so to push our limits of perception scientists invented A LOT of different devices!

Today's Qualitative Prompt

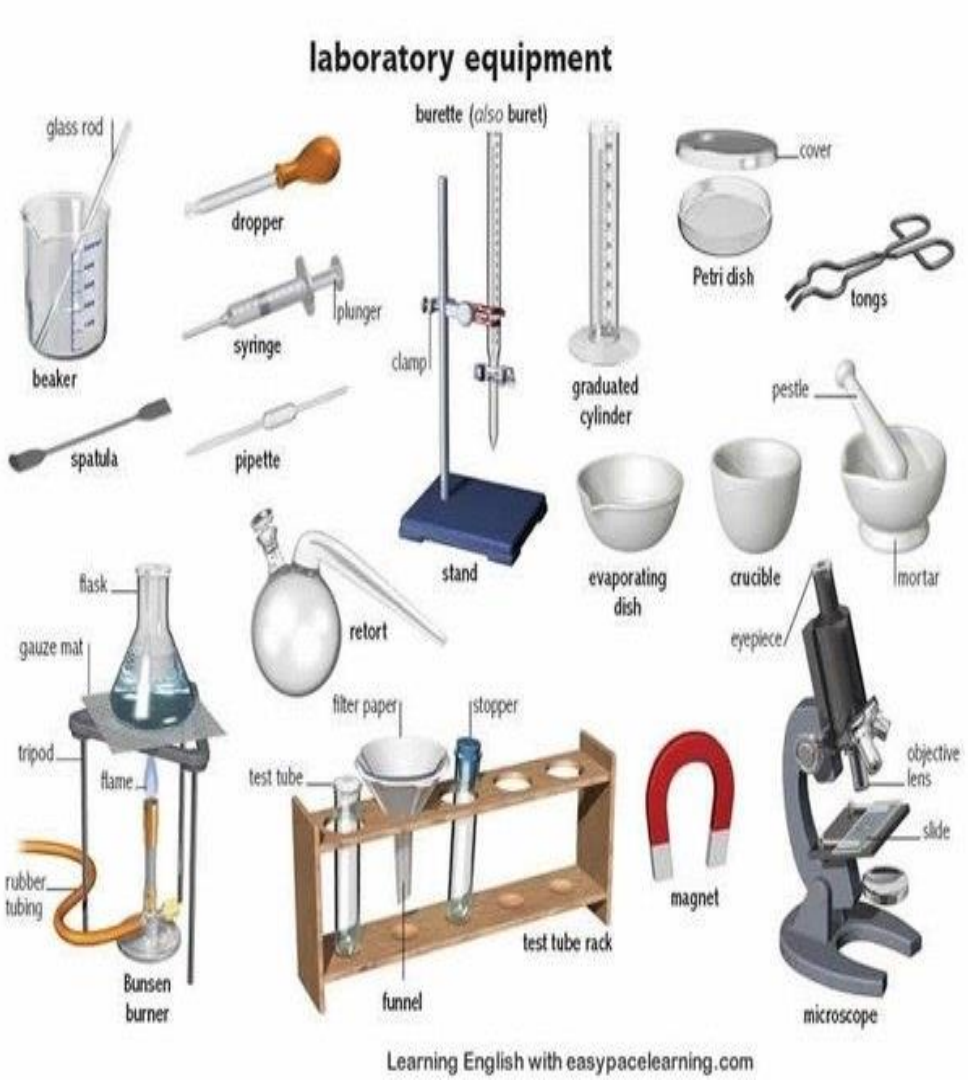
LIST and SKETCH as many different scientific tools and devices that you can think of!

- Some of these devices are quite complicated, such as computers, robots, VR, space stations, and the Hoover Dam!

Today's Qualitative Prompt

LIST and SKETCH as many different scientific tools and devices that you can think of!

- However, many scientific items are fairly commonplace, such as the Graduated Cylinder, Beaker, Balance, Scale, Test Tube, Pipet, and Microscope!



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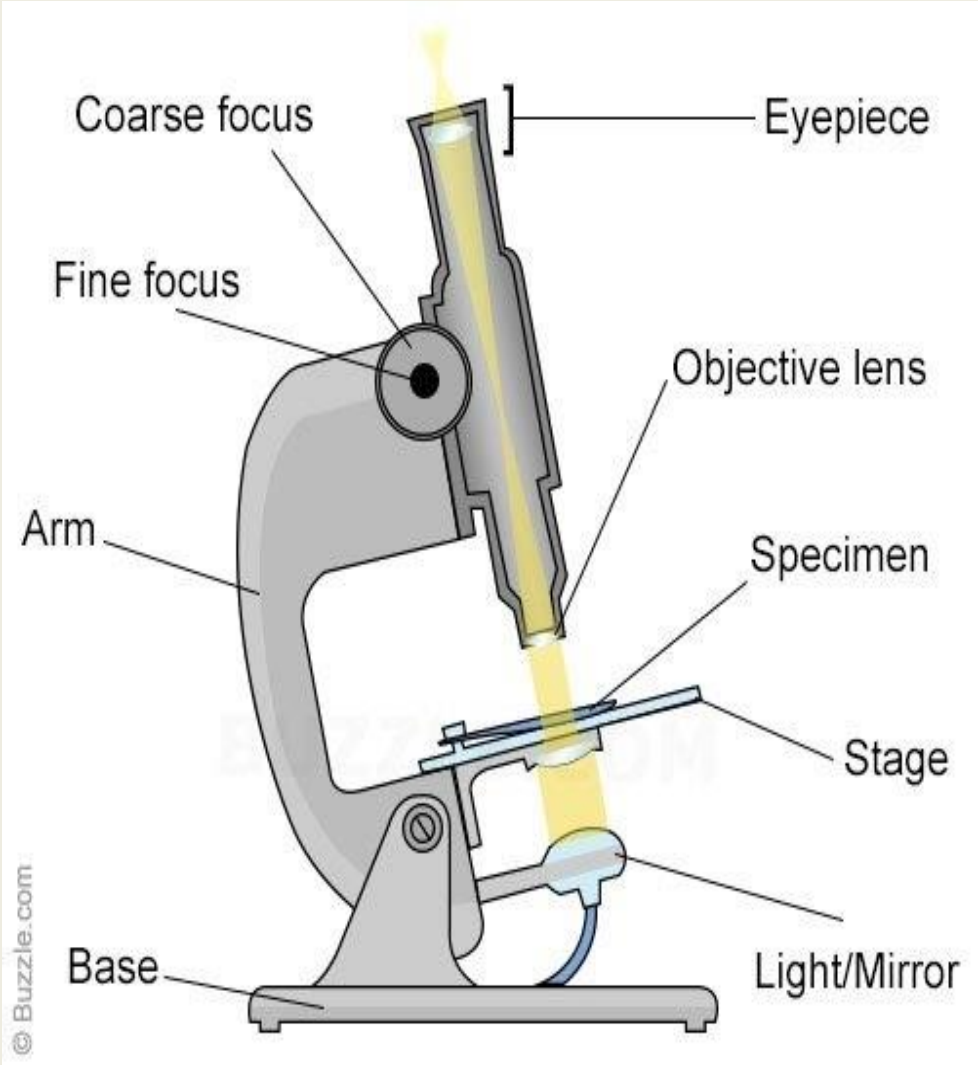

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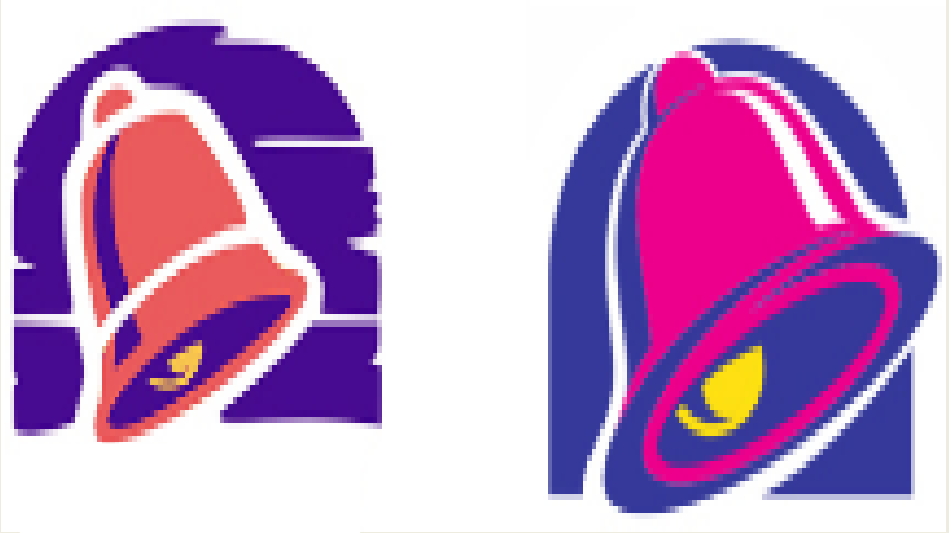

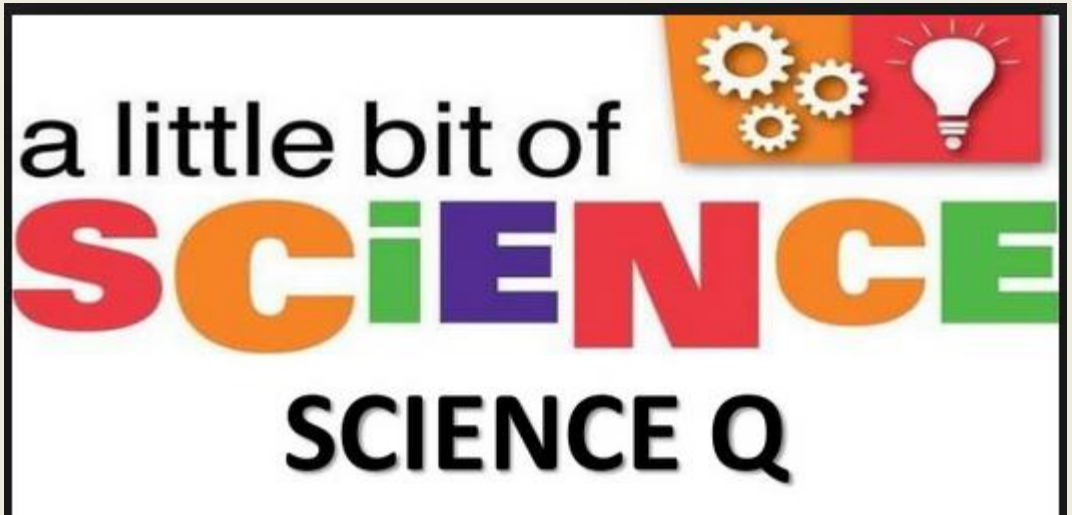

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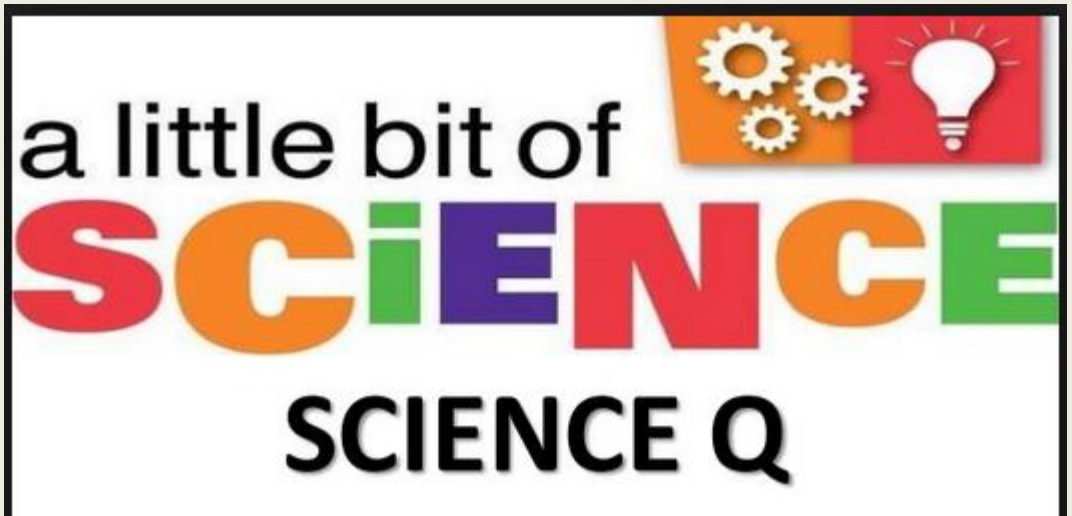
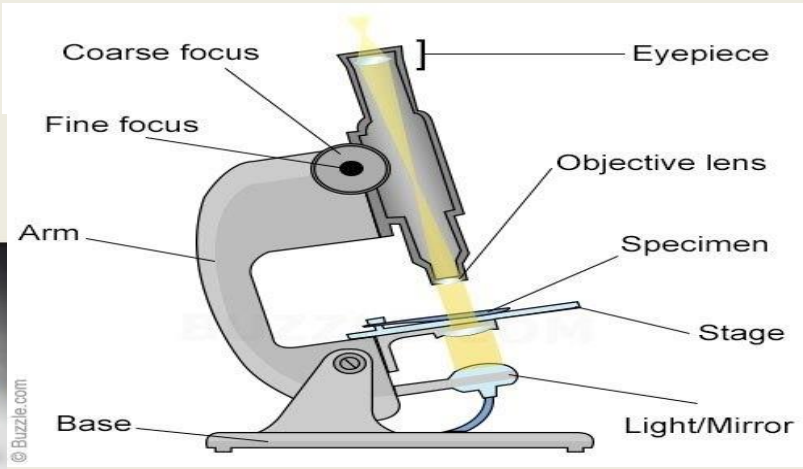


Tomorrow's Academic Objective and Plan

- Tomorrow you will USE a microscope in order to LOCATE "missing things" as part of a Science Scavenger Hunt!
- *HW = Finish sketching and labeling the Microscope!



FRIDAY, NOVEMBER 30th

DO NOW

- In your notebooks, to be checked, solve this problem…

There are 1000 microns in 1 millimeter. These are units of length!

Know:

$$1000\mu m = 1mm$$

Asked: How many microns are in 84 millimeters?

TODAY'S PLAN

1. Do and review the **DO NOW** and **Qualitative Prompt (QP)**!
   - Today's **QP** = What are some things that you could only FIND using a microscope? EXPLAIN your ideas!
2. Open books, WORK on today's **AO!**
3. ***HW** = Finish HW Problems and Questions!

TODAY'S ACADEMIC OBJECTIVE

Today you will USE a microscope in order to LOCATE "missing things" as part of a Science Scavenger Hunt!

DO NOW – Units of Length

There are 1000 microns in 1 millimeter. These are units of length!

- **Know:**

$$1000\mu m = 1mm$$

- **Asked:** How many microns are in 84 millimeters?

What is KA^2 format? This is an example of a "1-pointer" on a DO NOW!

- **Know:**

$$1000\mu m = 1mm$$

$$\frac{1000\mu m}{1mm} \qquad \frac{1mm}{1000\mu m}$$

- **Asked:** How many microns are in 84 millimeters?
- **Answer:** $\mathbf{84\cancel{mm} * \frac{1000\mu m}{1\cancel{mm}} = 84,000\mu m}$

DO NOW – Never Forget to Listen to Akila!

- To solve these problems, just multiply by the fraction with the units you want on top and "*Let the Units Guide You*"!
  - Example: $\mathbf{84\cancel{in} * \frac{1ft}{12\cancel{in}} = 7ft}$

DO NOW – Translating Our Answer

- **Answer:**

$$\mathbf{84\cancel{mm} * \frac{1000\mu m}{1\cancel{mm}} = 84,000\mu m}$$

- **$ci Fact** → Another word for the "micron" is the "micrometer", since "micro-" is just a prefix meaning 10^{-6} (one millionth)! Does anyone know what that weird little symbol ($\boldsymbol{\mu}$) is called though?!

Common Prefixes used with SI Units			
Prefix	Symbol	Meaning	Order of Magnitude
giga-	G	1 000 000 000	10^9
mega-	M	1 000 000	10^6
kilo-	k	1 000	10^3
hecto-	h	100	10^2
deka-	da	10	10^1
	base unit	1	10^0
deci-	d	0.1	10^{-1}
centi-	c	0.01	10^{-2}
milli-	m	0.001	10^{-3}
micro-	μ	0.000 001	10^{-6}
nano-	n	0.000 000 001	10^{-9}

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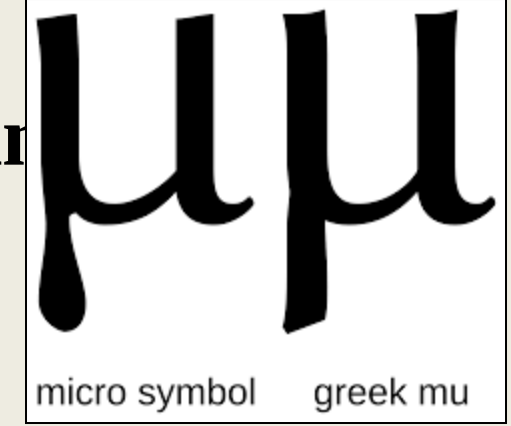

- **SCI Fact** → Another word for the "

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FRIDAY, NOVEMBER 30th

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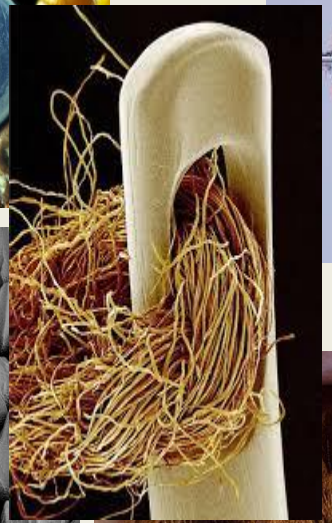
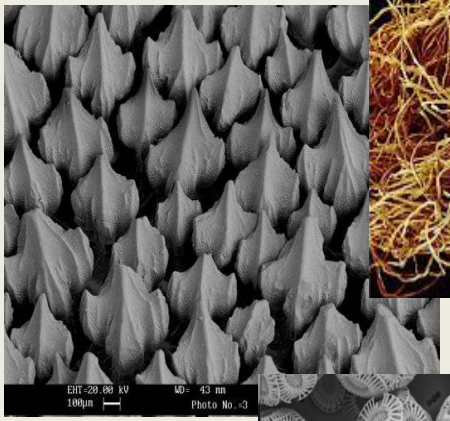
TODAY'S ACADEMIC OBJECTIVE

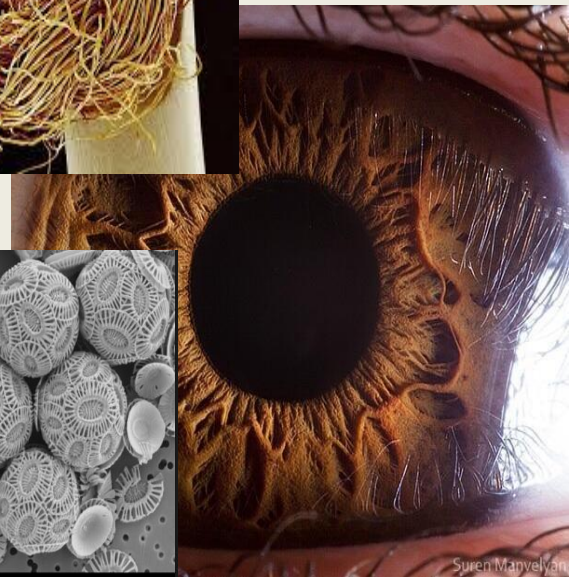
Today you will USE a microscope in order to LOCATE "missing things" as part of a Science Scavenger Hunt!

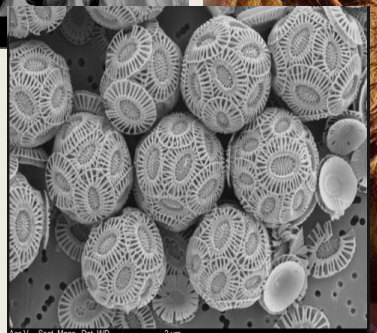
Today's Qualitative Prompt

What are some things that you could only FIND using a microscope? EXPLAIN your ideas!

- Students, there is "more than meets the eye" to everything around us!





Today's Qualitative Prompt

What are some things that you could only FIND using a microscope? EXPLAIN your ideas!

- Hidden GEMS are everywhere, since a whole "universe" of microscopic entities are hidden out of plain sight, waiting to be FOUND!

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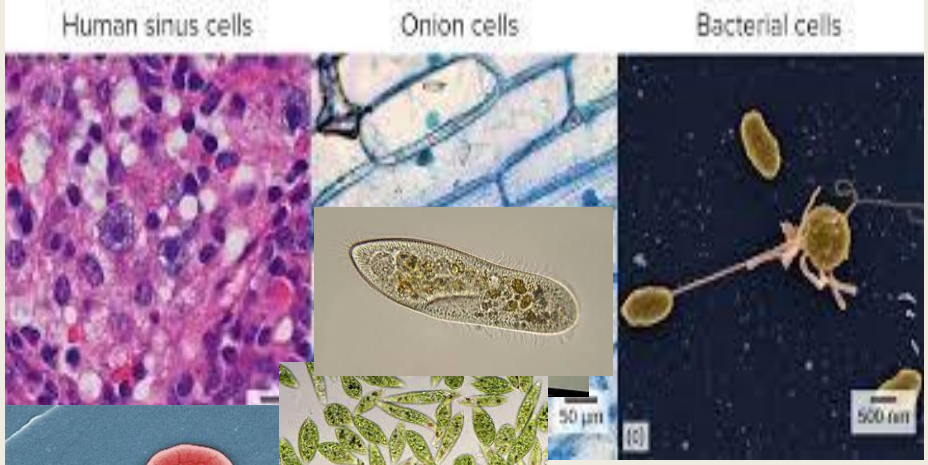
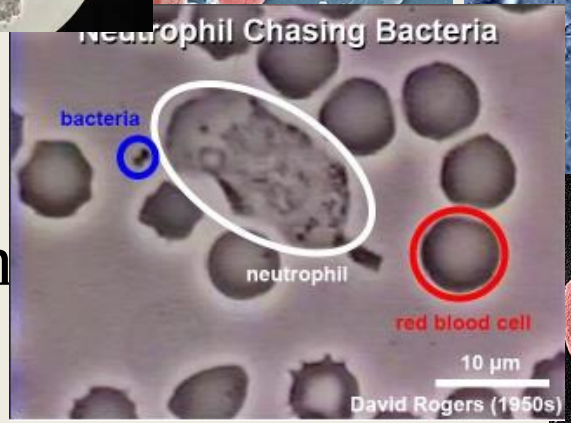
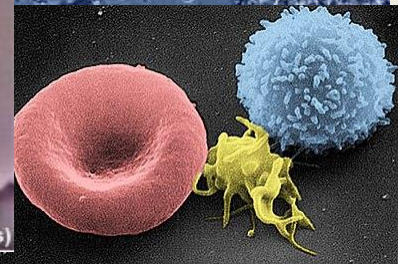


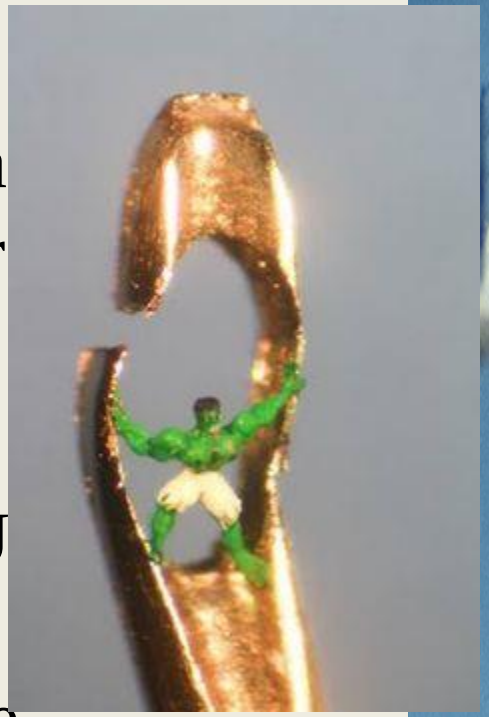


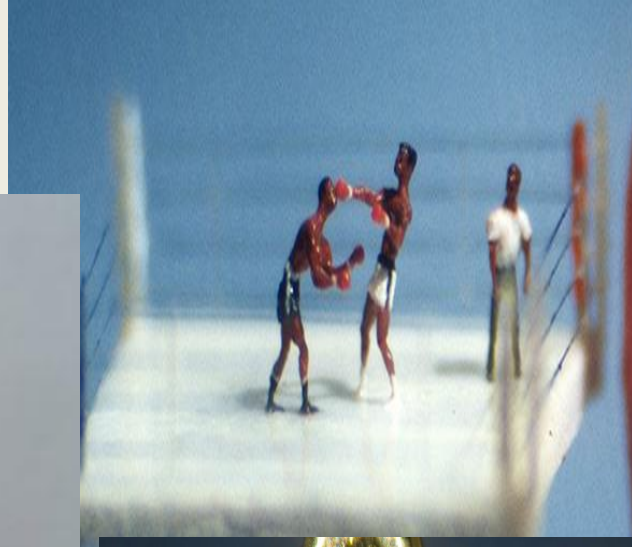


Today's Qualitative Prompt

What are some things that you could only FIND using a microscope? EXPLAIN your ideas!

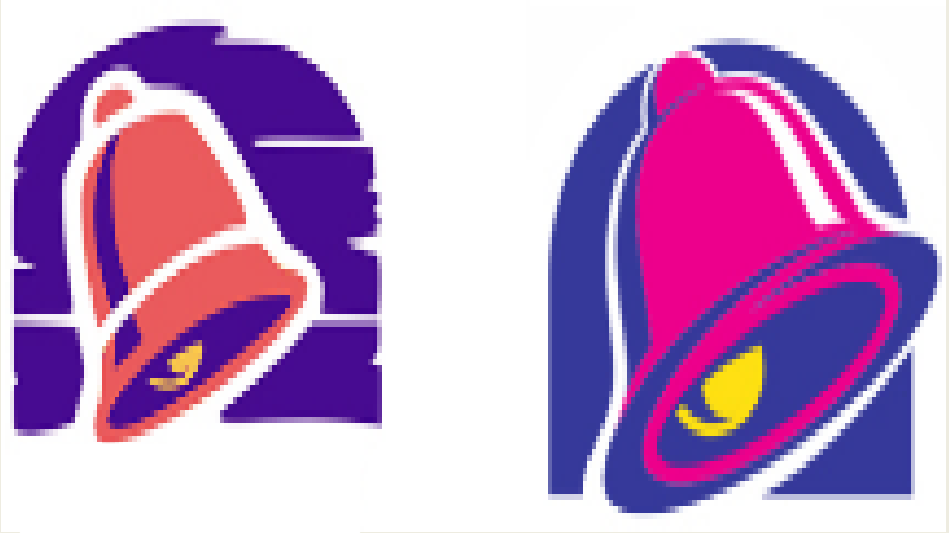
- Thus, using a microscope can often end up with YOU wondering if your world is the size of a pin to someone else!

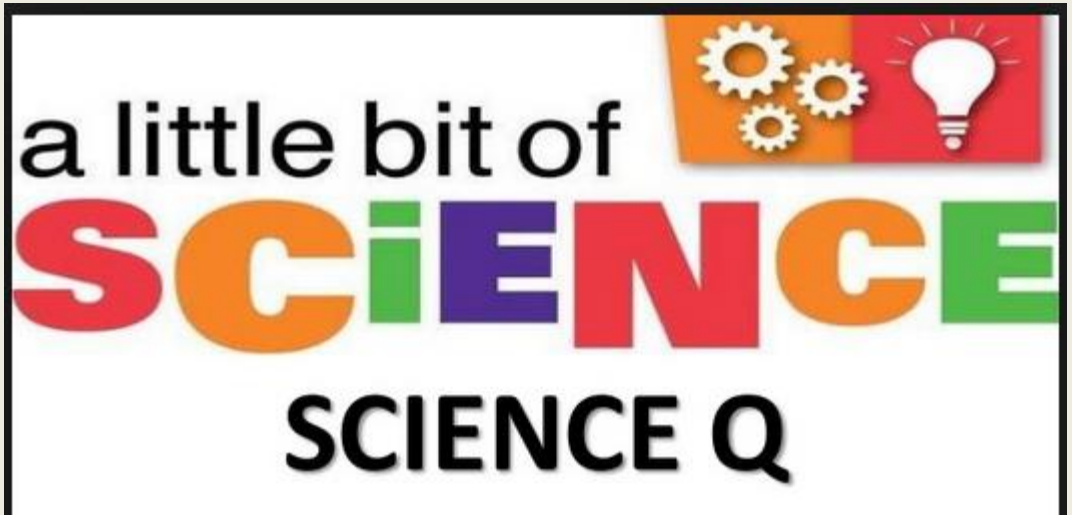




Bell 2 Bell

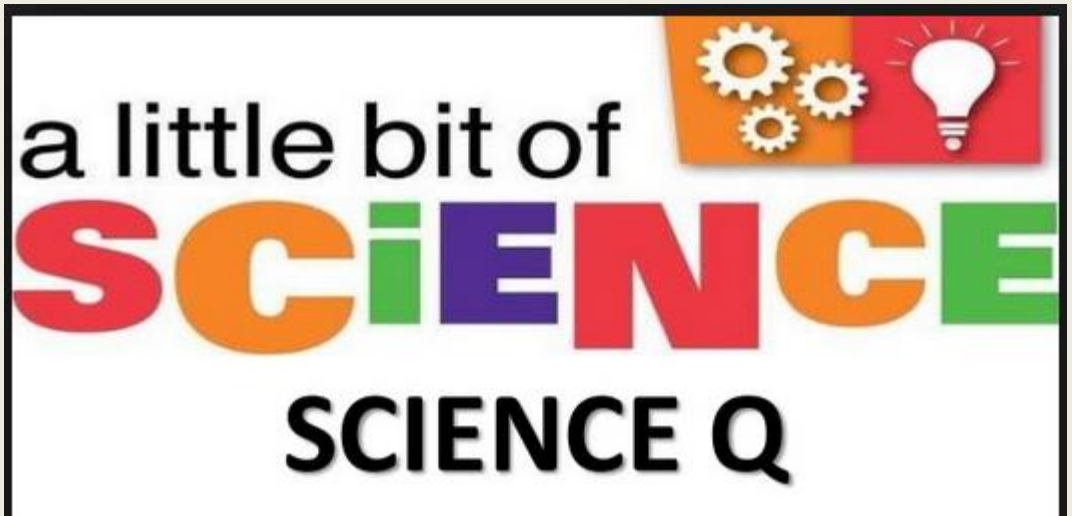
- We work what in this class?!?!?!
  - **BELL 2 BELL**
- Every single precious SECOND of academic instructional time is thus utilized in this classroom!
- You students will thus be vocally quizzed EVERY DAY until I DISMISS you at the end of class (with a positive greeting and a thank-you of course!).





Bell 2 Bell

- We work **BELL 2 BELL** in Mr. Floyd's class!
- I will thus quiz you about the science we learned today until the very end!
- Let us begin!



Tomorrow's Academic Objective and Plan

- Tomorrow you will DEMONSTRATE how to ENHANCE your senses with a scientific device!
- *HW = Finish Scope Huntin' Lists!

Specimen #	Sketch	What is it?