

# Wednesday, September 12, 2018

## Your Learning Goal:

After students learn the different parts of an electronic balance, they will practice using it to find the masses of 7 objects with 100% accuracy. Additionally, they will practice how to accurately predict the mass of common objects.

Table of Contents: Mass Mania – 4R & 4L

Catalyst: (4L) Explain the image



### Homework:

Observation &  
Inference

DUE Tuesday/  
Wednesday

### Agenda:

1. Catalyst
2. Mass Mania
3. Reflection

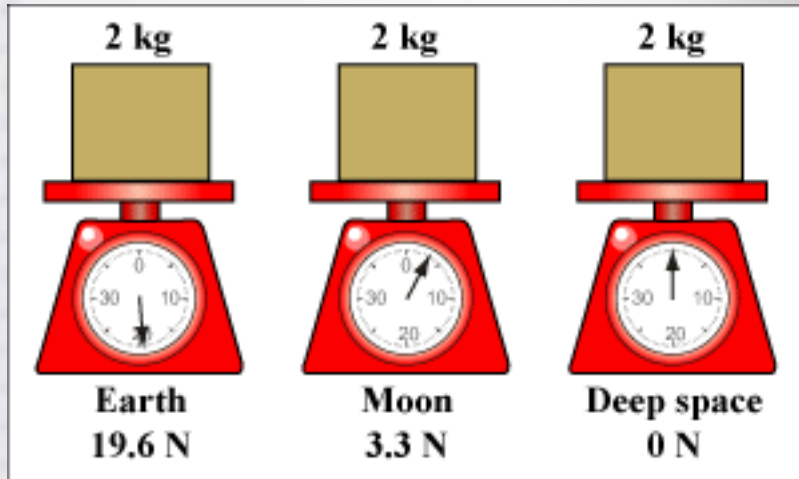
# Table of Contents

<u>Date</u>	<u>Assignment</u>	<u>Pg #</u>
8/24/18	Marshmallow Challenge	1 L+ R
8/30/18	Observation vs. Inference	2 L+ R
9/4/18	Rules of the Ruler	3 L+ R
9/12/18	Mass Mania *	4 L+ R

9/11/18

## Catalyst:

Explain the image below



4L

9/11/18

## Mass Mania

\* What is the electronic balance used for?

*Skip 6 lines*

• Parts of the Electronic Balance:

• Display Screen -

*Skip 3 lines*

• On/Off Button -

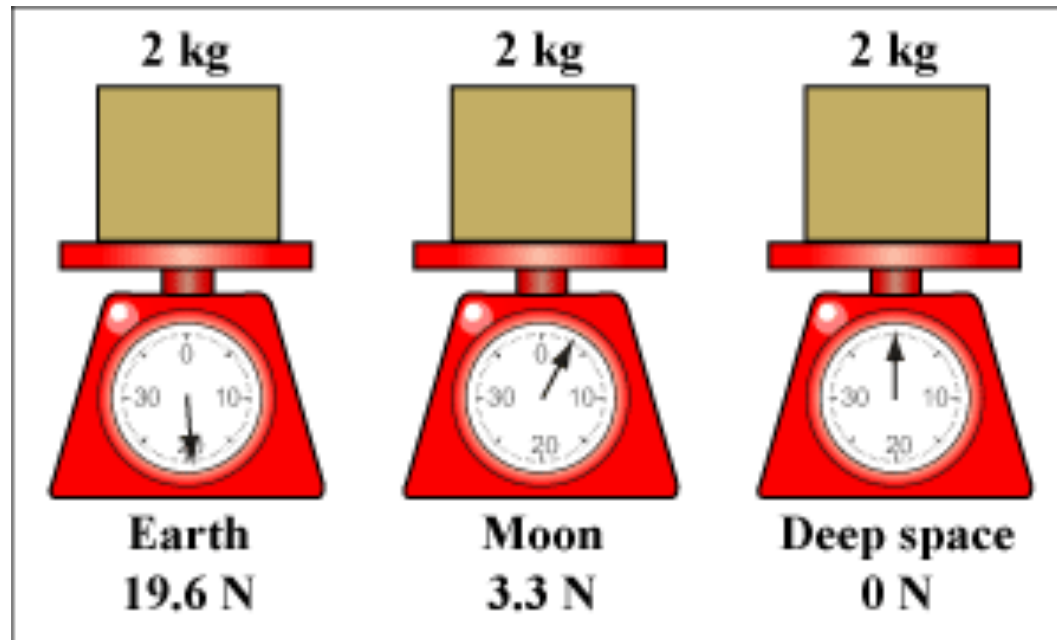
*Skip 3 lines*

• Unit Button -

4R

# Catalyst: **4L**

Explain the Image Below





# \* What is the **electronic balance** used for?

- The electronic balance is used to *measure* the mass of an object. The matter that something contains.
- Weight is the pull of gravity on an object (and will change depending on location).
- The unit for mass is grams (g).



**4R**

# \* Parts of the Electronic Balance



Unit Button –  
Touch to change  
the unit to grams  
(g).

Display Screen –  
Shows you the  
amount of mass.  
Always wait until  
the numbers stop  
changing.

On/Off Button –  
Push once to  
turn on, hold  
down to turn off.  
Also makes the  
balance go back  
to zero.

**4R**

9/12/18

## Catalyst:

I think it is/is not possible to measure how much "stuff" is inside an object without opening it because ...

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## LEAF:

4L

9/12/18

## Mass Mania

\* What is the electronic balance used for?

- The electronic balance is used to measure the mass of an object.
- The unit for mass is grams (g).

• Parts of the Electronic Balance:

- Display Screen - Shows you the amount of mass. Always wait until the numbers stop changing.

- On/Off Button - Push once to turn on, hold down to turn off. Also makes the balance go back to zero.

- Unit Button - check to make sure its in grams (g). Touching it will change the unit.

4R



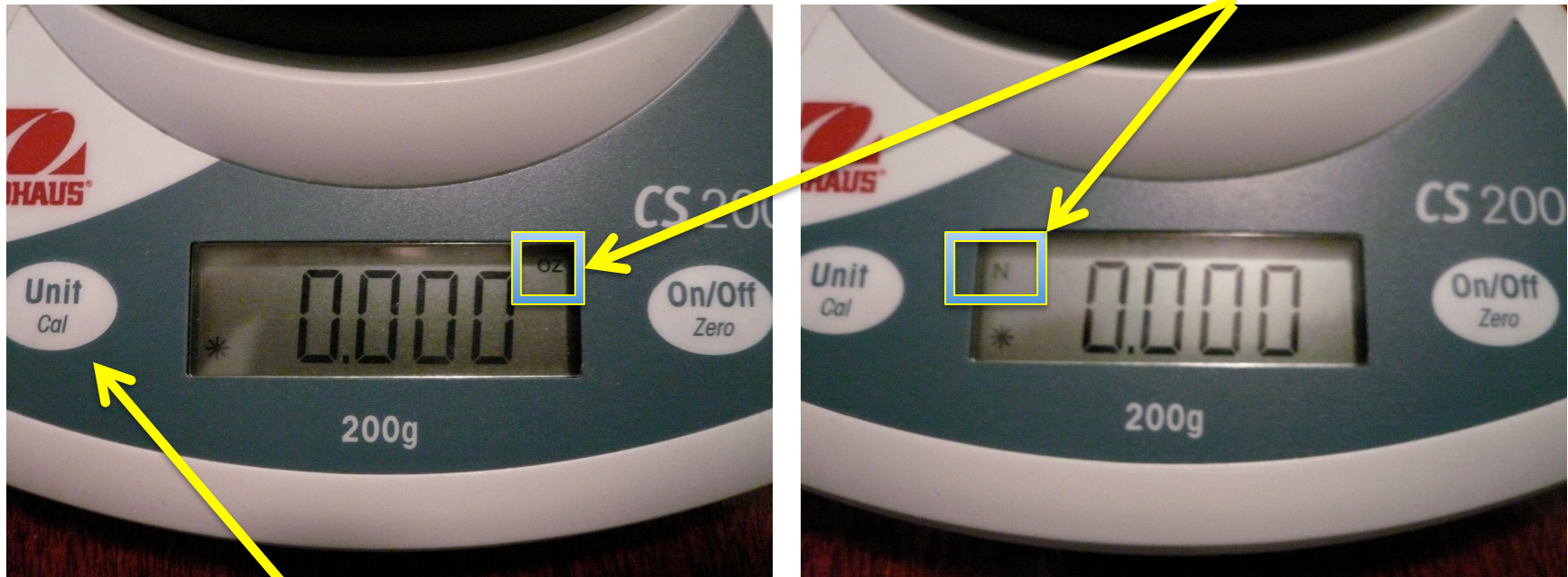
# How to use the Electronic Balance



- Push the **On/Off Button** one time and the numbers should appear. The **display** should read **0.0 g**.
- If the display has a different number like 0.1 or 0.2 hit the **Zero button** make the balance go back to zero.

# What if my display doesn't read 0.0 g?

If your balance has 0.000 then your units of **measurement** are incorrect!



Press the **Unit Button** until the units change to **grams (g)**.  
This should give you the correct units for measuring **mass**.

# MASS MANIA

- Activity 1 Pre-lab:
  - Select four **SMALL!** single objects that you want to find the known mass for.
  - Write down the objects you selected before you place them on the balance. Remember, you are measuring mass so make sure the balance is measuring in the metric units of grams (g).
  - Once the object is on the balance, *record* the Mass of the Single Object in grams (g).

# MASS MANIA

- Activity One

- Select objects that you think will combine to equal the Target Mass required.
- Write down the objects you selected before you place them on the balance. Remember, you are *predicting* so don't change your combination if it is wrong, just try to get more accurate as you go.
- Once the objects are on the balance record the Measured Mass in grams (g).

# MASS MANIA

- Activity Two

- For the next activity, *measure* the mass of three plastic Easter eggs and record the data in your table on the worksheet.
- After you *measure* the mass of the eggs put the eggs in order from *highest mass* to *least mass*.
- *Explain* which egg had the most matter based on what you've learned about mass so far.

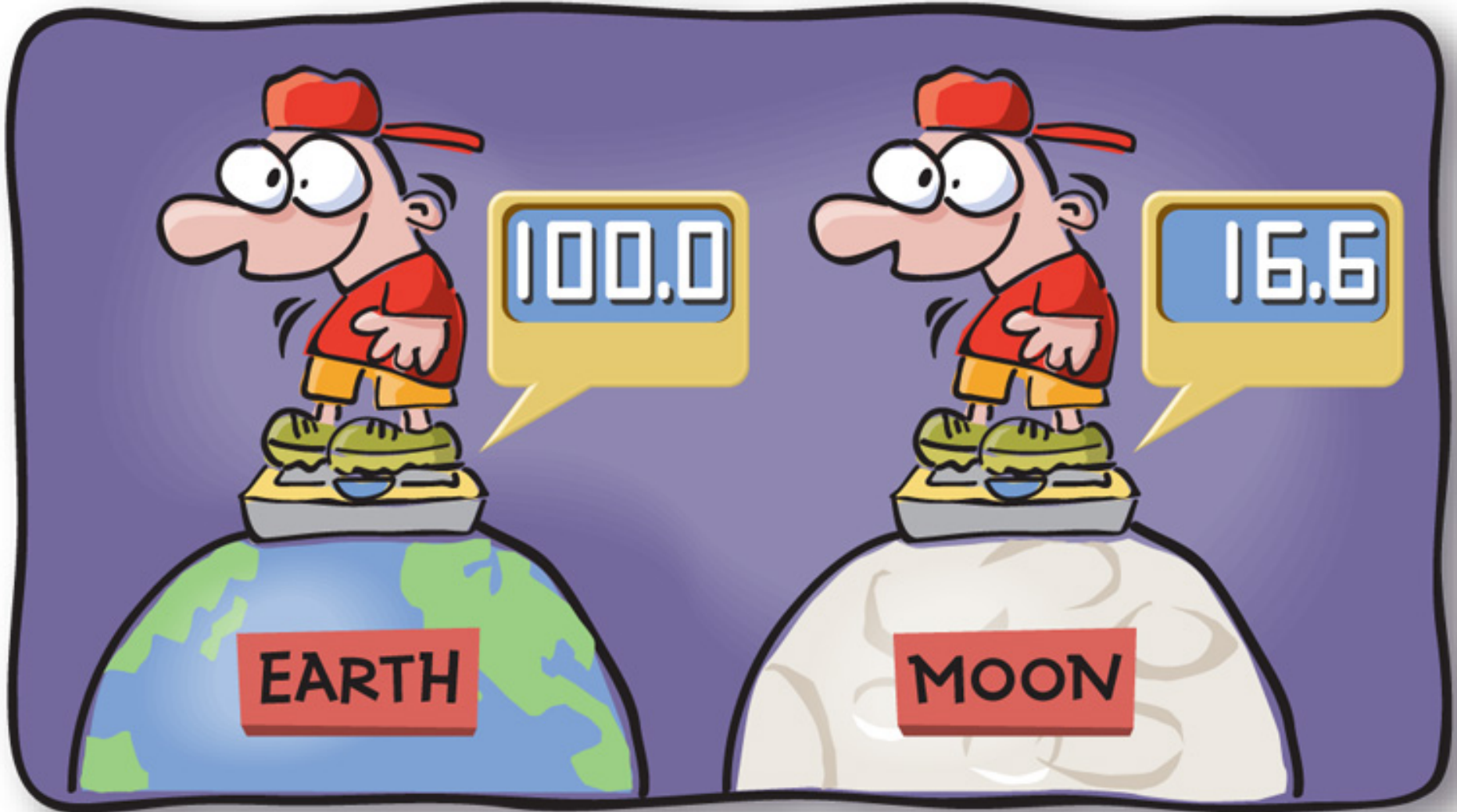


# MASS MANIA

- Activity Three

- For the final activity you have a reading. Using what you have learned about mass, *explain* why there is a *difference* in the mass for the 3 eggs.

# Mass vs. Weight



# LEAF 4L

**Lead:** Where you state the topic of your paragraph.

The mass of \_\_\_\_\_ and the mass of \_\_\_\_\_ were different because.....

**Evidence:** Observable and quantifiable data that a writer uses to support a claim. (Use your numerical data to support your lead)

**Analysis/Warrant:** Certain rules that connect evidence back to claims—how the evidence supports the claim. (What characteristics make the mass of these objects different?)

**Finisher:** Restating your claim in a new way to provide closure for your argument. (How are the mass and weight of your objects different? Why?)

9/11/18

## Catalyst:

Measuring mass is different from measuring the weight of an object because...

**LEAF:** Describe how the mass and weight of two of the objects you measured are different and why.

The mass of \_\_\_\_\_ and the mass of \_\_\_\_\_ were different because.....

**4L**

9/11/18

## Mass Mania

\* What is the electronic balance used for?

- The electronic balance is used to measure the mass of an object.
- The unit for mass is grams (g).

• Parts of the Electronic Balance:

• Display Screen - Shows you the amount of mass. Always wait until the numbers stop changing.

• On/Off Button - Push once to turn on, hold down to turn off. Also makes the balance go back to zero.

• Unit Button - DO NOT TOUCH, it will change the unit.

**4R**