COMPARING MASS WITH CANDY

Make a balance scale to compare your candy.

The materials you will need are:

- Ruler or yardstick
- String
- 2 Clothespins or binder clips

1. Tie a string to the center of a ruler or yardstick so that it hangs level, indicating that it is balanced on both sides
2. Choose two different pieces of candy (in the wrapper). Try to choose at least one that doesn't have the weight listed on it.
3. Predict which candies will have a greater mass.
4. Clip a piece of candy on each end of the ruler, making sure the distance from the end is the same on both sides
5. Hold the string and observe. Is one side lower than the other? Which piece of candy has a greater mass?

*The candy with the higher mass will tilt downward because the earth's gravity is pulling on it with a larger force.

Challenge:

- Find two candies that:
    - are the same mass but different size
    - are the same size but different mass.
    - have the same mass as just one of another kind of candy
- Can you make two candies with different masses balance just by changing their position on the ruler?

The difference between mass and weight:

Mass is a measure of how much "stuff" we are made of (atoms and molecules). Our mass is the same no matter where in the universe we are. Weight measures how hard gravity is pulling on us. If we go to the moon, our weight will be less because the moon's gravitational pull is less. By placing the candy on a balance scale, we are comparing the mass because both objects are in the same gravitational field. Do you think it would look the same if you were on the moon?