



Name _____

Mass vs. Weight

Learning Target: I can distinguish mass and weight.

Mass vs. Weight Video

Directions: Watch the video and answer the questions listed below.

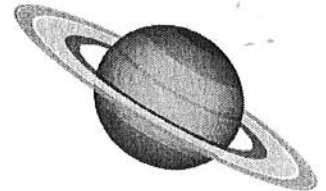
- Weight and Mass are the same. The only difference is the units. (True or False)
- An object that has a mass of 4 kg on the earth has a mass of 2.13kg on the moon. (True or False)
- Our weight varies depending on where we are. . (True or False)

What's My Weight?

Directions:

1. Enter your weight in the space provided for your weight on earth and record it in the space below.
 2. Fill in what your weight would be on the other planets that have stars ★ by them.
- Based upon the pattern shown, make a prediction and write down what you think your weight would be on the other planets.

- Jupiter - (142,800 km) in diameter _____ ★
Saturn - (120,536 km) in diameter _____ ★
Uranus - (51,118 km) in diameter _____
Neptune - (49,528 km) in diameter _____
Earth - (12,756 km) in diameter _____ ★
Venus - (12,104 km) in diameter _____
Mars - (6790 km) in diameter _____ ★
Mercury - (4,878km) in diameter _____



Click Here for some cool facts about Gravity

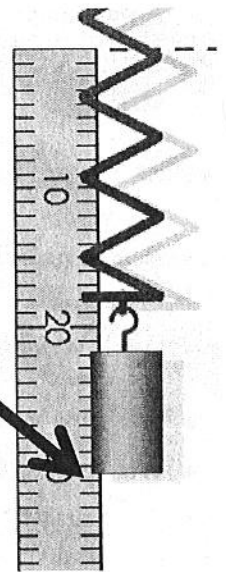
1. Click on this link to help you answer the questions below.
2. Right a rule about the relationship of a planet's size and its gravity. _____

3. Right a rule about a planet's size and an object's weight. _____

4. Right a rule about how gravity relates to an object's weight. _____

Masses and Springs

1. Place a 100 kg mass on spring #1.
2. Allow the spring to stop bouncing and then use the ruler to measure distance from the dotted line to the bottom of the mass and record it in the chart below(See diagram)
3. Now switch the location to the moon and record the distance to the bottom of the mass and record it in the chart below.
4. Switch to earth and repeat process



| ORBITAL | DISTANCE FROM DOTTED LINE TO BOTTOM OF MASS |
|----------|---|
| JUPITER | |
| MOON | |
| EARTH | |
| PLANET X | |

5. Which of the orbitals has the most gravity?
 - a. Jupiter
 - b. Moon
 - c. Earth
 - d. Planet X
6. Which of the orbitals is the biggest?
 - a. Jupiter
 - b. Moon
 - c. Earth
 - d. Planet X
7. Which of the orbitals would a person weigh the most on?
 - a. Jupiter
 - b. Moon
 - c. Earth
 - d. Planet X
8. Planet X is bigger than the moon. (True or False)