Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_ **Week 6** Distance Learning

**DESCRIBING FORCES**

***Use the resources on Mr. Hanna’s website to complete the following assignment.***

**VOCABULARY:**

1. FORCE -
2. NET FORCE -
3. UNBALANCED FORCES –
4. BALANCED FORCES –
5. APPLIED FORCE –
6. GRAVITY –
7. NORMAL FORCE –
8. FRICTION –

**SHORT ANSWER:**

1. How are forces described (two pieces of information)?
2. Of the four fundamental forces…
   1. Which one is the strongest?
   2. Which one is the weakest?
   3. Which one is responsible for most of the “every-day” forces we observe (*such as pushing or pulling*)?
   4. Which one is responsible for radioactive decay in atoms?
   5. Which one is responsible for holding nuclei together (*keeping protons so close together despite their similar charges*)?
3. How do balanced forces affect motion? How do unbalanced forces affect motion?
4. Which objects exert a gravitational force on the objects around them?
5. What two variables affect the strength of the gravitational force between two objects?
6. If gravity is pulling down on you now as you are sitting on your seat, why aren’t you falling down? (*include the concepts of balanced/unbalanced forces in your answer, as well as the forces responsible*)
7. What two variables affect the friction force between two objects?
8. Which direction does the friction force act compared to the motion of the object?

**PRACTICE:**

1. Draw a force diagram of a box resting (*not moving*) on the floor. What is the net force?
2. Draw a force diagram of the same box being slid across the floor at a **constant speed** (*be careful here…ask yourself, “Is the motion changing? What does that mean about the forces?”*). What is the net force?
3. Are the forces balanced or unbalanced in #17 and #18 above? How can you tell?
4. What would happen to the box in #18 if it was not experiencing balanced forces (*if the applied force pushing it forward was stronger than the friction force*)?