**Integrated Science Force Word Problems**

1. Alyssa started a food fight by throwing a 0.5 kg burrito at Zach. She put a lot of force into it, so the food accelerated at 3 m/s2. How much force was used to throw the food?

1- 4-

2- 5-

3-

1. Donnovan shot a 2 kg arrow accelerating it at 15m/s2 . How much force did this require?

1- 4-

2- 5-

3-

1. Nick’s 5 kg book rests on a table. How much force is it exerting on the table? (Hint: think about acceleration due to Earth’s gravity.)

1- 4-

2- 5-

3-

**Gravity in Solar System Problems**

1. The acceleration from gravity on the moon is 1.6 m/s2. How much less force would Mr. A, who has a mass of 120kg, apply standing on the moon when compared to the earth?

1- 4-

2- 5-

3-

1. Masen decided to travel to Mars on an exploration mission. The acceleration from gravity on Mars is 3.71m/s2 . What is Masen’s weight on Mars if he has a mass of 48kg?

1- 4-

2- 5-

3-

1. Josh is traveling to explore Saturn, which has 10.44m/s2 acceleration from gravity. Josh has a mass of 75kg, and his spacesuit has a mass of 125kg to handle the forces of space travel. What will Josh’s total weight be on Saturn?

1- 4-

2- 5-

3-