**Name _____ Date _____**

**Newton's 1st Law of Motion in Action!**

**Activity 1: Move the Washer**

1. Gather 4 little washers, 3 big washers, 1 clothespin and 2 pieces of string.
2. Tie a piece of string around the big washer and another piece of string around the little washer.
3. Next stand up the clothespin and balance 2 little washers on it. Place the washer with the string attached next and the last washer on top.
4. Now pull out the washer with the string.
5. Try and get the washers to stay balanced and the one with the string tied to it out of them without letting them all fall. Everyone should try and do this until they succeed!
6. Repeat steps 3-5 with the big washers.

**Questions: Answer in Complete Sentences!!!**

1. **Describe** what happened when you pulled on the string of the big and little washer when you got it to work correctly? How did you get it to work correctly? Which was more difficult, big or little washer? Why?

2. How does Newton's 1st Law of Motion explain this action? Explain why.

3. What are you doing when you **pull** on the string? What is this called? Describe in detail!

**Activity 2: HMMM…Abe in a balloon…who would have ever thought?**

1. Place a penny in the balloon.
2. Blow up the balloon and tie the end of it.
3. Begin rotating the balloon so that the penny begins to spin along the inside of the balloon. Keep rotating and observe what happens. **DO NOT STOP ROTATING THE BALLOON TO ANSWER THE QUESTION!**
4. Write your observation of the balloon and penny here **IN DETAIL!**

5. **NOW STOP THE BALLOON,** but keep it in the same position and observe what happens to the penny.
6. What does the penny continue to do? Write your observation here **IN DETAIL.**

7. How does Newton's 1st Law of motion describe this action? Use this law to explain the penny's behavior. **Use detail and words we have discussed!**

**Activity 3: HOLY COW! A SCREECHING BALLOON! NO WAY!**

1. Place the hexagon washer inside the balloon.
2. Blow up the balloon and tie the end of the balloon.
3. Begin rotating the balloon so that the washer beings to spin around the inside of the balloon. Keep rotating and observe what happens. **DO NOT STOP ROTATING THE BALLOON TO ANSWER THE QUESTION!**
4. Write your observation of the balloon and nut here **IN DETAIL!**

5. **NOW STOP THE BALLOON,** but keep it in the same position and observe what happens to the washer.
6. What does the hex nut continue to do? Write you observation here **IN DETAIL!**

7. How does Newton's 1st Law of Motion describe this motion? Use this law to explain the washer's behavior. **What makes the noise? Use detail and words we have discussed!**