**Physics Day 5**

**Friction**:

**Friction experiment**:

Measure the stretch of the rubber band when pulling a stack of books \_\_\_\_\_\_\_\_\_\_

Measure the stretch of the rubber band when books are on pencils \_\_\_\_\_\_\_\_\_\_

**Newton’s First Law or The Law of Inertia**:

1. **Car Crash**: The matchbox car has a gummy bear passenger riding along. The car crashes into the block. Predict what you think will happen to the passenger.

What happened?

2. **Coin & Card**: Place the coin on top of the card. Place the card on the cup. What do you think would happen if you flick the card straight forward (not up)?

What happened?

3. **Marble and Pie Plate**: You will be sending the marble around edge of pie plate. What do you think will happen when it reaches the cut out portion?

What happened?

4. **Cargo**: Place the pig in the center of the bed of the toy truck. What do you think will happen if the truck accelerates quickly forward?

What happened?

What will happen if the truck slowly accelerates and then goes a steady speed?

What happened?

What will happen if the truck stops suddenly?

What happened?

Can you explain each of these experiments using Newton’s first law?