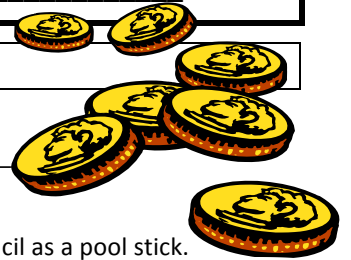


Newton's First Law of Motion is often referred to as the **LAW OF INERTIA**:

The **Law of Inertia** states that the tendency of a body is to maintain its status quo.

OR: A body at rest will stay at _____ and a body in motion will stay in _____, in the _____ direction and the _____ speed as before, unless acted upon by another _____.



Your Problem: Demonstrate the force of INERTIA using coins:

___ 1. Use pennies or all similar coins. Describe your coins here (year and/or type or color).

Coin1 _____; Coin2 _____; Coin3 _____; Coin4 _____

___ 2. Place your Coin1 and Coin2 on the images below.

___ a) **Practice FIRST** by "bumping" Coin1 into Coin2. Flick coin1 with your finger or use a pencil as a pool stick.

___ b) **When you have a straight example**, Record your results by drawing around each coin, where it stops.

___ c) Number the ending location **in color**.



ANALYZE:

___ 3. ___ a) Coin2 stays at rest until acted upon by _____.

___ b) The force of Coin1 is transferred to _____.

___ c) Coin2 would keep going, but instead slows and stops, due to another force, the force of _____.

___ 4. **Predict first.** Draw and number your prediction **in pencil**.

___ 5. **NOW**, try it. (Practice to get a straight example.) Then, number and **color** the results. Include a Key if needed.



Now Stack your Coins:

___ 6. Arrange and stack four similar coins on the images below, using your Coin 2 as the base of the stack.

___ 7. **Predict** what will happen when you "bump" coin1 with coin2. Draw your prediction below in pencil.

___ 8. **Practice** flicking Coin1 into Coin 2 until you can do it flat and straight.

___ 9. **RECORD ACTUAL** observations below using the COIN NUMBERS and COLOR. Add a Key if needed.



___ 10. Try more coins or different types of coins. Add to & label the drawing. Draw and number the results. (Use the back??)



ANALYZE AND CONCLUDE:

___ 11. Coins numbered _____ demonstrated that "**a body at rest will stay at rest....**".

___ 12. Coin # _____ demonstrated the result of the force of _____ as it slid against the paper and then _____.

Coins # _____ demonstrated _____ when sliding against another coin and then _____.

___ 13. Coins # _____ & # _____ demonstrated the transfer of _____ when coin # _____ into coin # _____.

The result was that coin # _____ and coin # _____.