

NAMES:
PERIOD:

DATES:
NEWTON'S LAWS INVESTIGATIONS

INVESTIGATE THE FOLLOWING, it is better to be accurate and thorough than it is to completely finish everything: It is also important to be neat and calm.

Object At Rest:

Observe Newton's First Law by placing a coin (washer) on a card sitting on a cup/beaker.

Remove the index card by pulling it away quickly. Observe what happens.

Try it again by flicking the card.

What other examples of Newton's First Law can you demonstrate?

Object In Motion:

Choose a location where you can push a dynamics cart so that it rolls for a distance.

Place a toy or doll on the cart, and push it so it rolls into the wall.

Try it again with the toy secured.

Observe what happens. Try to observe whether it is constant velocity or acceleration.

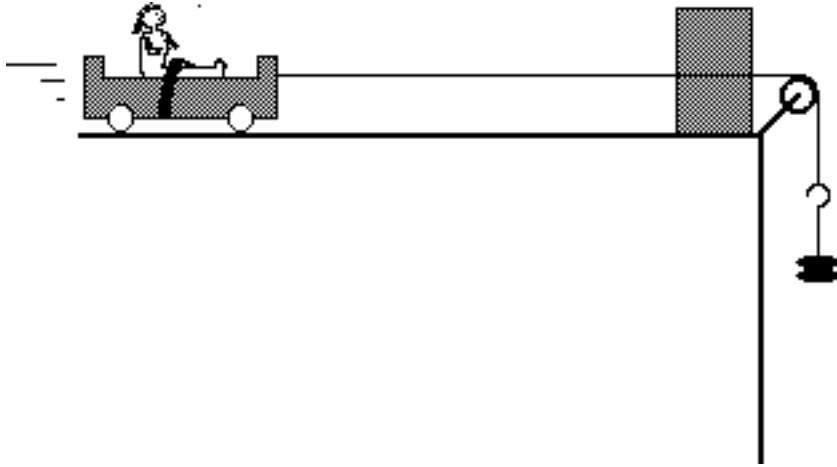
Newton's Second Law.

Try a dynamics cart on a ramp with a string attached and weights on the end.

Let the weights go, making careful observations. Try to observe whether it is constant velocity or acceleration.

Try to see how different weights affect it.

Observe what happens.



Newton's Third Law

Set up two dynamics carts with a spring loaded plunger in between.

Release the spring and observe what happens.

Try with different masses on each cart. Make careful observations. Try to observe whether it is constant velocity or acceleration.

Find the effect of different masses (at least 3) on the acceleration and force, using a spring scale. (Blocks, carts with weights, ramps, scales)