

Explain a real-world example of how friction increases an object's speed.

Explain a real-world example of how friction decreases an object's speed.

Write the formula for speed:

Velocity is speed AND \_\_\_\_\_ in which an object is traveling.

Velocity can be changed by:

Write the formula for acceleration:

When an object's velocity decreases, the object experiences \_\_\_\_\_.

**Newton's 1<sup>st</sup> Law of Motion:** An object will travel in a straight line at a \_\_\_\_\_ until a \_\_\_\_\_ changes its motion. An object at \_\_\_\_\_ will stay at \_\_\_\_\_ until a \_\_\_\_\_ causes it to move.

The \_\_\_\_\_ the mass, the greater the inertia.

**Newton's 2<sup>nd</sup> Law of Motion:** If you apply a force to an object, the object \_\_\_\_\_ in the \_\_\_\_\_ of the force.

Give an example of negative acceleration (deceleration).

Factors that determine an object's acceleration:

- 1.
- 2.

If all objects accelerate at the same rate when falling, why don't they hit the ground at the same time?

**Newton's 3<sup>rd</sup> Law of Motion:** For every action, there is an \_\_\_\_\_ and \_\_\_\_\_ reaction.

Forces always occur in \_\_\_\_\_.

Give a real-world example of Newton's 3<sup>rd</sup> Law of Motion.

# Forces/Motion Guided Reading Notes

A force is a \_\_\_\_\_ or a \_\_\_\_\_ on an object.

List the 3 ways we measure motion:

- 1.
- 2.
- 3.

Why do the planets orbit the sun?

The \_\_\_\_\_ the mass of an object, the \_\_\_\_\_ the gravitational force between the two objects.

The \_\_\_\_\_ the distance between two objects, the \_\_\_\_\_ the gravitational force.