Vocabulary: Inclined Plane – Sliding Objects

📖 **Vocabulary**

- Acceleration - the change in *velocity* per unit time.
    - Acceleration is calculated by dividing the change in velocity by the elapsed time: $a = \Delta v / \Delta t$.

- Coefficient of friction – the ratio of the force of *friction* between two bodies to the force pressing the bodies together.
    - The greater the coefficient of friction is, the greater the resistance to motion.
    - The symbol for coefficient of friction is μ.

- Conservation of energy – the principle that the total energy in a closed system remains constant.

- Friction – a force that opposes motion.
    - Friction arises because of contact between a moving object and the materials it is moving over or through.
    - The friction between two objects is given by the coefficient of friction.

- Gravitational potential energy – *potential energy* that depends on an object's position within a gravitational field such as that exerted by Earth.
    - Gravitational potential energy is represented by several symbols: *GPE*, *PE*, or *U*.
    - On Earth, an object's gravitational potential energy depends on the object's weight and height above Earth's surface.
    - The formula for gravitational potential energy is *GPE = wh* or *GPE = mgh.*

- Inclined plane – a slanted surface, such as a ramp, along which objects can be moved to a different height.

- Kinetic energy – energy of motion.
    - Kinetic energy is represented by the symbol *KE* or simply *K.*
    - The formula for kinetic energy is $KE = mv^2 \div 2$.

- Potential energy – the energy an object has because of its position or shape.
    - Potential energy that is dependent on an object's position above Earth is known as gravitational potential energy.
    - Potential energy that is dependent on an object's shape (such as a stretched rubber band) is known as *elastic potential energy*.

- Velocity – the speed and direction of a moving object.