

Vocabulary: Air Track

Vocabulary

- Air track – a triangular track that is perforated with holes that emit air.
 - One or more gliders can float on a cushion of air as they move over the air track.
 - An air track is used to study motion with minimal friction.
- Approach velocity – the rate at which two objects are approaching one another.
 - For objects moving on the same track, the approach velocity is equal to the difference in the objects' velocities: $approach\ velocity = v_1 - v_2$.
- Conservation of energy – the principle that the total energy in a closed system remains constant.
- Conservation of momentum – the principle that the total *momentum* in a closed system remains constant.
- Elasticity – a measure of how much *kinetic energy* is preserved in a collision.
 - The symbol for elasticity is k .
- Kinetic energy – energy of motion.
 - Kinetic energy is represented by the symbol KE or simply K .
 - The formula for kinetic energy is $KE = mv^2 / 2$.
- Momentum – a measure of how difficult it is to stop a moving object.
 - Momentum is represented by the symbol p .
 - Momentum is the product of an object's mass and velocity: $p = mv$.
 - If mass is measured in kilograms (kg) and velocity is measured in meters per second (m/s), the units of momentum are kilograms-meters per second (kg•m/s).
- Separation velocity – the rate at which two objects are moving away from one another.
 - For objects moving on the same track, the separation velocity is equal to the difference in the object's velocities: $separation\ velocity = v_2 - v_1$.
- Velocity – the speed and direction of a moving object.
 - Motion to the right is considered positive and motion to the left is negative.

