

PING PONG POPPER

Purpose

To apply elastic potential energy and convert it to kinetic energy while building and designing an original game.

Materials

Plastic cup
Balloon
Tape
Construction paper
Scissors
Ping Pong ball

Procedure

Watch instructional video.

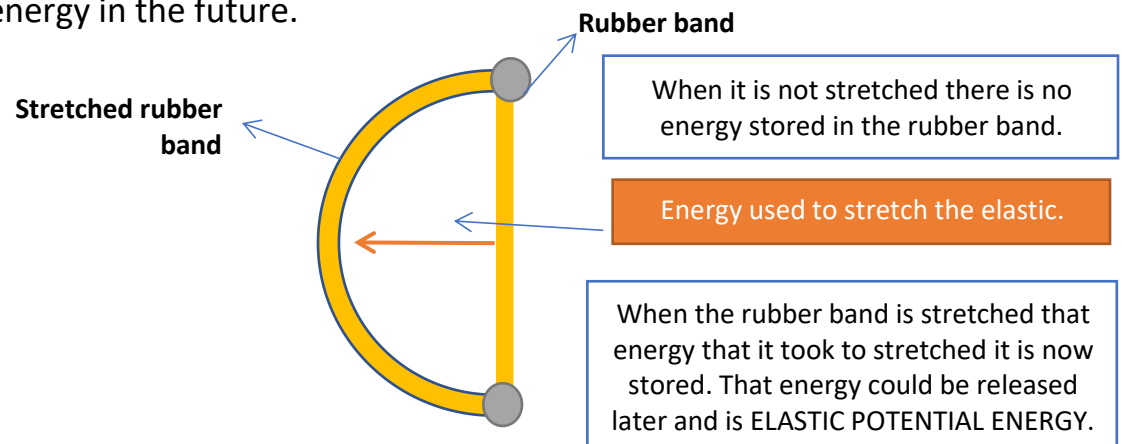
Key Terms and Knowledge

Potential Energy - The energy that an object has because of its position. This energy is stored and has the future ability, the potential to be released later. This means that the energy is not currently being used or released, but it could be in the future.

Elastic Potential Energy - The energy stored in an object because of stretching or compression

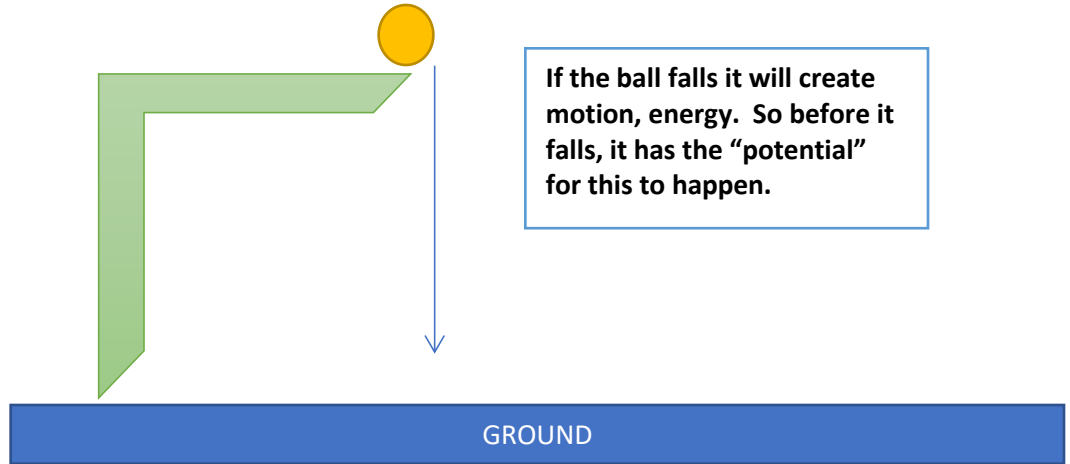
For example, when an object such as a rubber band is stretched it takes energy to change its shape. That energy is now stored in the object. Now rubber band has the potential to release that energy in the future.

EXAMPLE 1



In this second example the potential energy this object has is based on its position. The ball is on top of a cliff. If the ball falls, it will create Kinetic energy, so just the fact that it is high gives it potential energy.

EXAMPLE 2

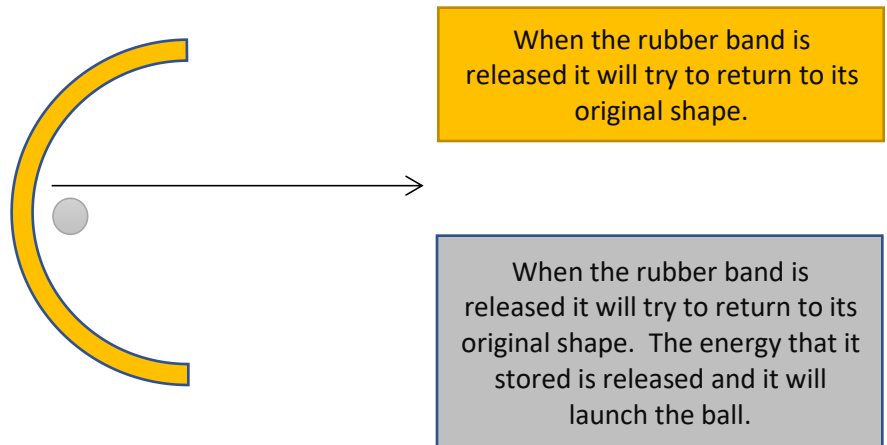


Kinetic Energy - is the energy that an object has because it is moving.

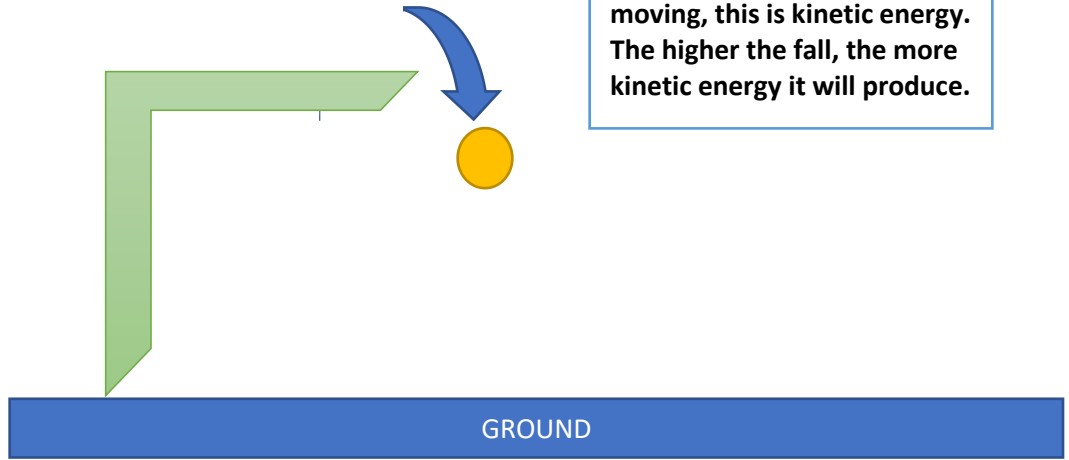
When potential energy is released, that energy is converted into motion, that motion is kinetic energy.

The amount of kinetic energy created is going to be directly related to the potential energy the object stored.

EXAMPLE 1



EXAMPLE 1



When the ball falls it is now moving, this is kinetic energy. The higher the fall, the more kinetic energy it will produce.