

# Potential vs. Kinetic ENERGY

Scientists define energy as the ability to get work done. The work can be anything from breathing to riding a bike to taking a nap. All energy can be in one of two states: potential or kinetic.



**POTENTIAL ENERGY** is stored energy, energy ready to go. A race car at the starting line of a race, a bicycle on top of a hill, and students waiting to go home from school are all examples of potential energy.

**KINETIC ENERGY** is energy at work. A race car speeding around a corner, a bicycle cruising down a hill, and students running home from school are examples of kinetic energy.



This boy riding a bicycle up a hill has **kinetic energy**. He is in motion and is at work to get to the top of hill. He is also building up **potential energy**, energy to be released on his way back down the hill.

As the boy is stopped at the top of the hill, he has only **potential energy**, or stored energy. He is not doing any work.

As the boy rides down the hill, he has both **kinetic** and **potential energy**. He is doing work, and assisting him in his descent is gravity, a force that is helping him release his stored energy.