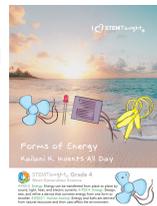


These pages are taken from the G4 "Energy Comes in Many Forms" journal.



Energy can be stored

Most devices can store energy that can easily be used later. Sometimes it is hard to tell if an object has stored energy in it because the object may not be doing anything yet, but it has the potential to do something in the future. If energy is stored in something, we call it **potential energy**. Here are some examples of potential energy:

Gravitational potential energy

Any object that you lift off the ground has the potential to fall. If something can fall it has gravitational potential energy. It takes energy to lift an object. As you lift an object off the ground you are converting your arm's energy into gravitational potential energy which is stored in the object you lifted. The higher up an object is, the more potential energy it has stored in it.



A roller coaster high in the air has energy stored in it. The roller coaster speeds up as it falls.



Rivers flow downhill. Falling water speeds up as it falls.



Balanced rocks have the potential to fall.



An acorn has the potential to fall because it is high up off the ground.



Spring potential energy

What do a balloon, a mouse trap and a bouncy ball have in common? They can store energy using their springiness! If you use energy to compress or stretch a springy material, that energy can be released later.



A ball is compressed the moment it hits the ground. It releases its stored energy and bounces high in the air.



A bow stores energy when you stretch back its string. It releases its energy when you let go.



A mouse trap stores energy when you stretch back its spring. It releases its energy when it is triggered.



A balloon stores energy when you inflate it. Its stretchy skin can release the energy later when it is popped.





Chemical potential energy

Energy can be stored in chemicals. This energy can be released later when those chemicals react to release their energy.



Gasoline can store a lot of energy. When gasoline is burned, it releases its energy.



Fireworks store chemical energy as gunpowder and produce sound and light in beautiful explosions.



Food contains chemical energy that we use to live and grow.



A battery stores chemical energy. It produces electricity using acid to corrode metal inside it.

