



Exploring Energy

What Is Energy?

[exploding water heater video](#)

Energy

The ability to make things happen.
Motion, heat, light and sound are
clues that energy is present.

Which of these items have energy?
What is your evidence?

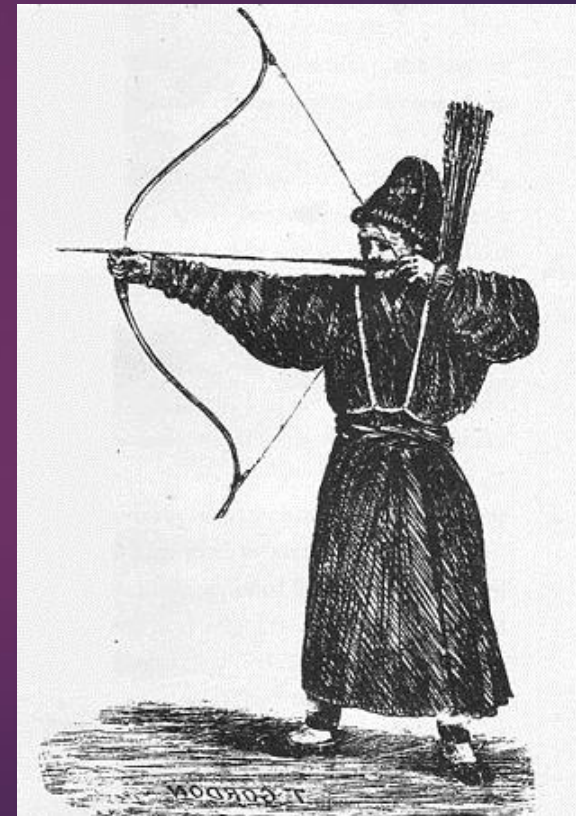


Potential Energy

Energy that is stored.

When a bow is pulled back, it has potential energy.

What is another example of something that has potential energy?



Potential Energy

Examples

What is another example of something that has potential energy?



Kinetic Energy

Energy of motion.

When a pulled bow is released, the moving arrow has kinetic energy.

Synonyms for **kinetic** are active and lively.

What is another example of something that has kinetic energy?



Kinetic Energy

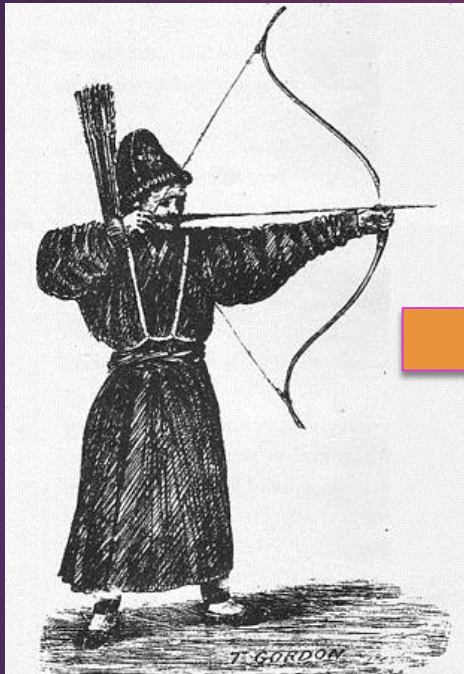
Examples

What is another example of something that has kinetic energy?

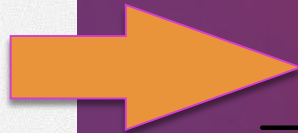


Energy Transfer

Energy can be transferred from one type to another type.



potential energy



kinetic energy

The image features a dark purple background with a light gray base. On the left, a tall white rectangular stand holds a blue ball at its top. To the right, a shorter white rectangular stand holds a red ball at its top. A pink rectangular bar is visible in the top right corner.

Which has more potential energy?

The blue ball is higher up, so it has more potential energy.

Who has more kinetic energy?

Tanya - 3 miles per hour



Tamara - 6 miles per hour



Tamara has more kinetic energy.

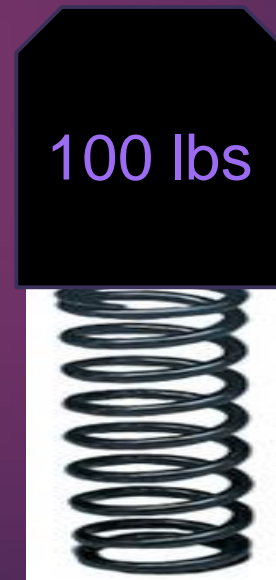
Which has more potential energy?

spring 1

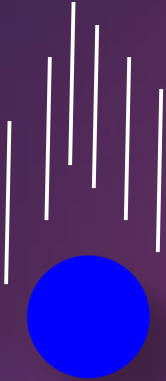


Spring 2 is more compressed,
so it has more potential energy.

spring 2



Which has more energy?



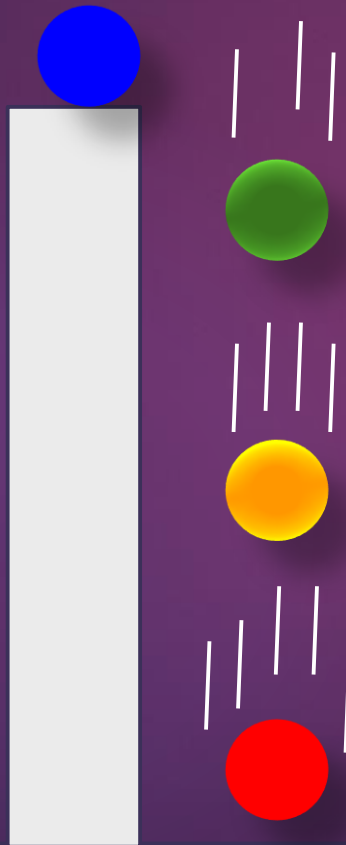
The balls are at exactly the same height.



Both balls have the same amount of potential energy.

The blue ball has more kinetic energy.

How is the energy transferred?




All potential

A little kinetic, a
lot of potential

Some kinetic,
some potential

All kinetic



Write a description of what happened in the exploding water heater video.

Use the concepts we learned today:

- energy
- potential energy
- kinetic energy
- transfer of energy