

Activity 1.1: Transforming energy

Let's transform some energy!

First, you need to understand the energy forms you'll experience in this activity. You'll find them listed in the table below.

Discuss the energy forms in this table as a class to try and figure out what each one is.

Energy forms

Gravitational potential
Elastic potential
Kinetic
Electrical
Light
Thermal
Sound

Energy transformations happen all around the world, every minute of the day. You can explore some everyday examples right here in the classroom.

Ready?

It's time to test out some everyday energy transformations in rōpū of four. Then, see if you can correctly fill in the blanks with the energy form you start with, and the energy form, or forms, you end up with.

Energy transformation tests

Example

A rollercoaster travels down a hill.

Gravitational potential energy (cart at the top of the coaster) → Kinetic energy + sound energy + thermal energy (cart travelling downhill)

Test 1

Hold a ruler at the edge of a table, with half of it hanging off the side. Flick the side that's not on the table.

→ (flicked ruler)

Test 2

Place your hands together, palm to palm. Then, rub them firmly and quickly against each other.

→ + (hands rubbing)

Test 3

Turn off the classroom lights. Then, turn them back on.

(Lights off) →

+

+ (Lights on)

Test 4

Hold a pencil above the floor. Then, let go.

(pencil held above the floor)

→

(pencil dropping)

→

(pencil hitting the floor)

Test 5

Blow up a balloon and hold the end with your fingers. Then, let go.

(Blown up balloon)

→

+

(Released balloon)

Can you think of any other everyday energy transformations?

Write down your own examples in the box below:

