



Building an energy chain

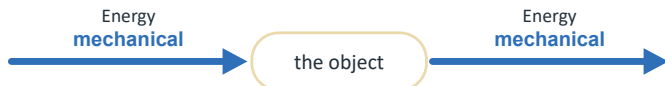
Show where the energy comes from, what it goes through, and in what form.



1 Transfer or conversion?

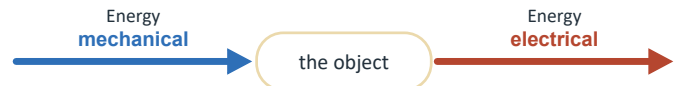
Compare the form of the energy before and after it: that is the whole rule.

Same form → transfer



The energy changes place, not form.

Different form → conversion



The object is a converter.

2 The method in 4 steps

1 Find the reservoir.

Where the energy starts: the wind, the petrol, the food, the Sun.

2 Follow the objects it goes through, in order.

One box per object, joined by arrows, from left to right.

3 Label every arrow.

Energy followed by its form. Never the form on its own.

4 Compare the forms around each object.

You then know which are transfers and which are conversions.

3 The forms of energy

mechanical movement, height

thermal temperature

chemical matter

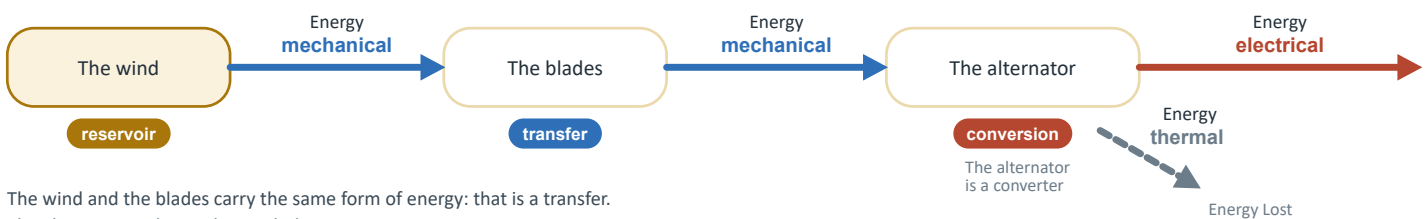
electrical current

light radiation

nuclear nuclei

Mechanical energy covers kinetic energy (speed) and potential energy (height, deformation).

4 A worked example: the wind turbine



The wind and the blades carry the same form of energy: that is a transfer.
The alternator makes it electrical: that is a conversion.

5 Do / Avoid

Do

- ✓ Write "Energy" before every form.
- ✓ Start the chain at the reservoir.
- ✓ Compare the forms around each object.

Avoid

- ✗ Writing "electrical" on its own on the arrow.
- ✗ Starting halfway, without saying where the energy comes from.
- ✗ Calling an object a converter when it changes nothing.



Check before handing it in

- ✓ My chain starts at a reservoir
- ✓ Every arrow says "Energy" and its form
- ✓ The objects are in order
- ✓ I have marked where there is a conversion

