

Renewable and Non-Renewable Sources of Energy

Grade 5



Every day, millions of tons of fossil fuels are burned. Consequently, the thermal energy of the earth increases.

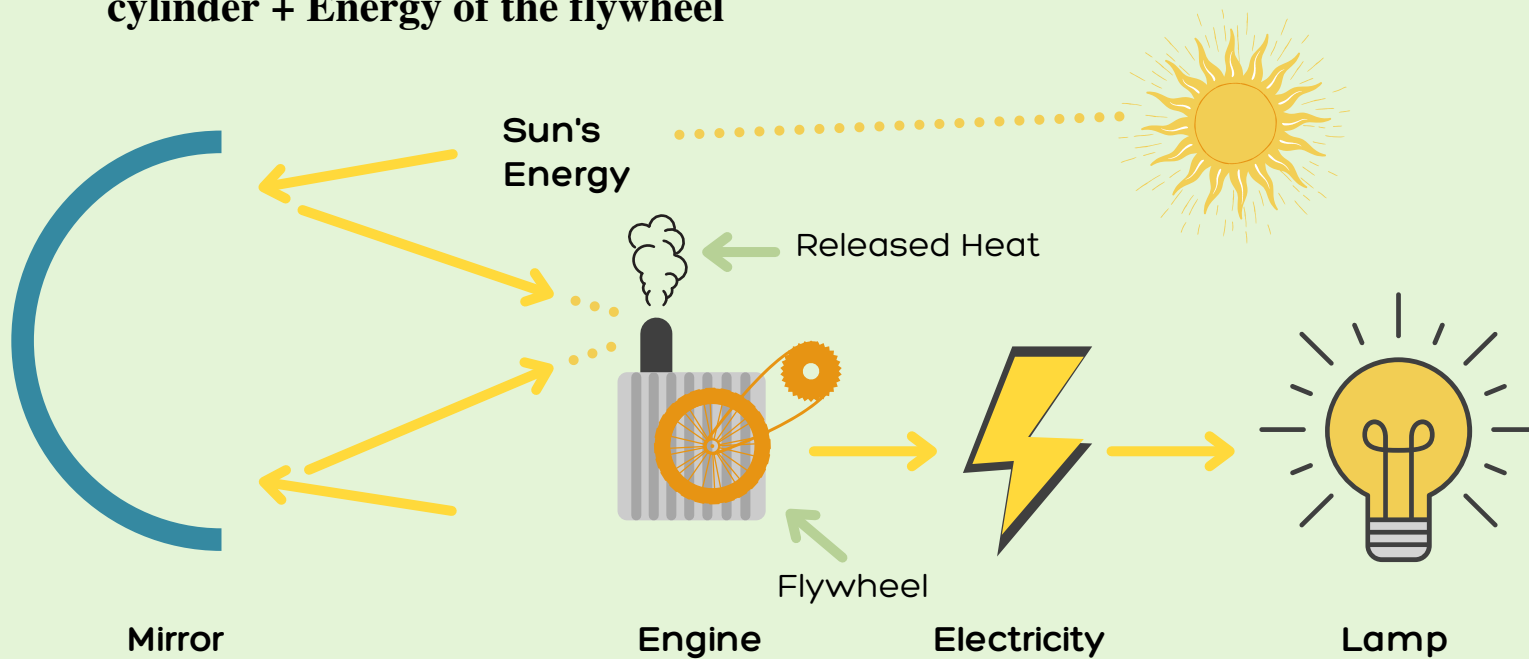
When we use the heat from the sun no extra heat is produced and no gases or pollutants are released.

Solar, geothermal, hydroelectric, wind and biomass are renewable sources of energy.

In this setup, the sun's **radiation energy** is reflected and concentrated through the use of a concave mirror. The concentrated heat is then absorbed by an engine and changed into **rotational energy** (kinetic energy) in the yellow flywheel. The flywheel then rotates a generator to produce electrical energy.

Conservation of energy for the dual-axis sun tracker with Stirling engine:

Sun energy received by the dish = Heat released at the engine cylinder + Energy of the flywheel



EXERCISE:

Identify the forms of energy involved when the dual-axis tracker works with dish and Stirling engine

Identify the forms of energy involved when the dual axis tracker works with PV panels

