

Using the sun to heat water

Solar energy from the Sun can be used to heat water.

Your task:

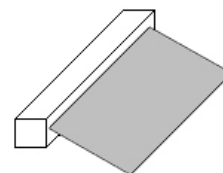
Set up an investigation that uses solar energy to make 200 mL of cold tap water heat up as a) much as possible in 30 minutes. You will need to measure the initial water temperature. You may use some, or all of this equipment:



Black can



White can



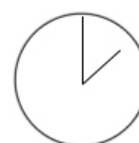
Aluminium foil
(300 mm × 500 mm)



Thermometer



Cardboard to mount the
aluminium
(300 mm × 20 mm)



Clock to time 30 minutes



Sunny place



Shady place

- b) Complete the table below to identify the gear you used and the reason why you used this gear.

Gear chosen	Reason for use

- c) Measure the temperature rise of the water.

Initial temperature _____ °C

Final temperature _____ °C

Temperature rise _____ °C