

A solar heating system

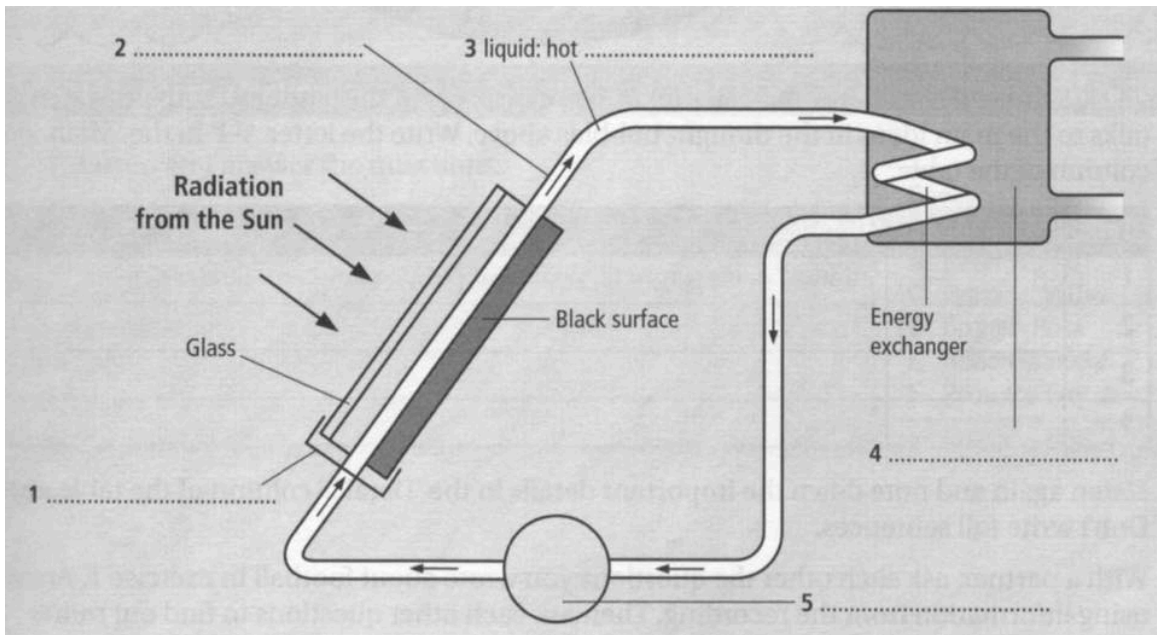
AUDIO - open this URL to listen to the audio:

<https://goo.gl/lk1zzL>

Questions 1-5

Look at the diagram of a solar heating system and see what parts you will need to label.

Listen to a talk about solar energy and complete the labels as you listen.



Write **NO MORE THAN THREE WORDS** for each answer.

1.....

2.....

3.....

4.....

5.....

Solution:

1. solar panel
2. copper pipe(s)
3. oil or water
4. water tank
5. pump

Audioscript:

Harnessing the Sun's energy - that is, using the sun to generate power - can be difficult, but these days increasing use is being made of the energy from the sun, particularly to heat homes and provide hot water. Have a look at this diagram, which represents solar panels fixed to the roof of a house. It is typical of any system which uses a solar panel to provide hot water.

So how does it work? Well... energy from the Sun travels to the Earth in the form of radiation. This can be visible radiation - which is another way of saying 'light'. We also receive invisible radiation, which is known as infra red. A lot of this radiation passes through the glass at the front of the solar panel - here on the roof - and hits the surface at the back. This surface is black, because black is good at absorbing radiation, and so the black surface becomes hot. Energy in the form of heat is conducted along the back of the solar panel to these copper pipes. Now... these pipes are filled with a liquid which in turn becomes hot. This can be either oil or water, though oil is usually used. The oil expands and rises up the pipe into the energy exchanger, which is located - up here - in the water tank. Sometimes we have to use a pump as well, to help the liquid along. It's a remarkably efficient system, when you think about it.