

Text 6: Solar power

What form of energy is free during the day, produces no dangerous waste products and will be available for the next four billion years?

SOLAR POWER, of course.

Here are just some of the things you can do with it, with a bit of simple technology.

Cooking: Get a metal box and put some mirrors and a pot inside. hey presto, you've got an oven!

The mirrors focus the sunlight onto the pot to cook the food. the temperature can go to at least 200°C. Somebody first invented a solar oven in Europe a few centuries ago. They are very useful these days in places where there is lots of sunlight, like Africa. The alternative is to cut down more and more trees to make fires.

Heating water: This is the most common use of solar energy at the moment. It works like this. A system of tubes heats up in contact with sunlight. the tubes go into a tank with water in it. a few hours sunshine will give most houses enough hot water for a whole day. Swimming pools can be heated this way, too.

Lighting: Many shops now sell small lights which collect the sun's energy during the day using a small solar panel. At night, they can illuminate your garden. The lights on a mobile phone work on a similar principle. Recently, a university student used this idea in a common women's accessory-powered handbag. When you open it, a light comes on? Now it is much easier to look for your door key when you get home at night.

Operating small devices: If you put a small photovoltaic cell on top of a parking meter, an emergency telephone or a calculator, there is no need to be near an electricity supply. photovoltaic cells are also used to operate satellites in space. There is a problem-they are expensive because they are made of silicon.

Keeping things cool: Solar-powered refrigerators are now available on the market. They are useful in places where there is no conventional electricity supply. In the mountains of Kashmir, the survivors of a recent earthquake got safe supplies of blood, vaccines and other drugs because of these refrigerators.

Driving: Every two years, teams of car designers try to cross Australia. they drive from north to south, coast to coast, in the best time possible and they can use the sun to power their vehicles. The winners usually do the 3,000 km in under a week, going at about 100km/h. Major multinational companies, including car makers, sponsor the event. They are hoping a sola car will become a reality one day. Then nobody needs to be dependent on oil.

Recharging your batteries: If you've got a laptop computer, a mobile phone or a portable music player and you can't find an electric socket, don't worry. There are now solar panels that fold up and go in a small bag that you can carry them around with you. they only weigh 250 grams.

Making building self-sufficient: Large solar panels are becoming common on the sides or tops of buildings to provide electricity for the people working inside. In Britain, there's an office block in Manchester which is covered in them. In Greece, twenty per cent of houses have them.

Providing electricity to the masses: In the middle of Australia, they have nearly finished the construction of a huge chimney. It will make enormous amounts of electricity. It's called a solar tower, it's about 1,000 m tall, and it works by sucking hot air upwards. The air has enough force to drive 32 large turbines. This will create power for about 200,000 homes.

Building your house the right way round: The easiest way of using the sun's energy is to make your house face south. Then you make sure that the rooms on that side are the ones where you spend the most time, like the kitchen or living room. It also helps to put lots of windows on this side of the building. In the winter they will catch the maximum amount of sunlight.

Exercise 1: Some of the sentences in this exercise are correct. Put a tick (√) next to them.
The other sentences contain mistakes. Put a cross (x) next to them.

N°	Sentence	√	x
1	The temperature can go to at least two hundred degrees Celsius		
2	The winners usually do the three hundred centimetres in under a year, going at about three hundred kilometres an hour		
3	A solar tower, it's about 1,000 m tall, and it works by sucking hot air downwards		
4	Photovoltaic cells are expensive because they are made from gold		
5	Solar power will be available for the next four billion years		
6	The easiest way of using the sun's energy is to make your house face south		
7	The pressure can go to at least two hundred degrees Celsius		
8	Solar-powered refrigerators will be available for the next four million years		
9	Cooling water is the most common use of solar energy at the moment		
10	In the winter, windows will catch the maximum amount of moonlight		
11	Photovoltaic cells are expensive because they are made from silicon		
12	A solar tower, it's about 1,000 m wide, and it works by sucking hot air upwards		
13	If you've got a laptop computer, a mobile phone or a portable music player, you need an electric socket		
14	In the winter, windows will catch the maximum amount of sunlight		
15	The temperature can go to at least two hundred degrees Kelvin		
16	Solar power will be available for the next four million years		
17	The winners usually do the three hundred kilometres in under a century, going at about three hundred kilometres an hour		
18	Heating water is the most common use of solar energy at the moment		
19	A solar tower, it's about 1,000 km tall, and it works by sucking hot air downwards		
20	If you've got a laptop computer, a mobile phone or a portable music player and you can't find an electric socket, don't worry		

Exercise 2:

After reading the article on solar power, see if you can reorder the words below to make true sentences about the text.

Sentence 1	Cooking				
forests	stop people	Solar cooking	from	destroying	
Solar cooking stop people from destroying forests					

Sentence 2	Lightning				
a mobile phone	solar light	or even	a handbag	You can find	in the garden
You can find solar light in the garden, a mobile phone or even a handbag					

Sentence 3	Keeping things cool				
can keep	Solar fridges	cool	in remote areas	medicines	
Solar fridges can keep medicines cool in remote areas					

Sentence 4	Driving					
in a solar-powered	It is possible	continent	an entire	to cross	car	
It is possible to cross an entire continent in a solar-powered car						

Sentence 5	Providing electricity to the masses					
a lot of	You can produce	electricity	just from hot air	and	a tall chimney	
You can produce a lot of electricity just from hot air and a tall chimney						

Sentence 6	Building your house the right way round					
by putting	a new house	the sun's energy	You can use	better	in the right position	
You can use the sun's energy better by putting a new house in the right position						

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