

You Can Produce Electricity!

CD2 16 ~ 21

♪16 **1** In 1988, a plane called *Daedalus* flew 115 kilometers between the Greek islands of Crete and Santorini. It is a very short flight for today's planes, but this plane did not have any engines. The power for the plane came from the pilot; he used his legs like someone riding a bicycle to make the plane go forward. In a time before modern machines, people built huge structures like the Great Wall of China using the power of their bodies. Today, that power is back.

♪17 **2** In a small village in Malawi, Africa, children shout excitedly ^(ア)as they play on a merry-go-round play pump. It is the favorite meeting place for all the village children. As they spin around and around, a pump uses ^(イ)their movement to bring water up from under the ground.

^(ウ)In Africa, getting clean water is a problem for many people. They may be many kilometers away from rivers, and river water is not always clean. Getting clean water from under the ground can be difficult, because pumps with engines are expensive to use and they often break. These merry-go-round "play pumps" mean that villages and schools can have clean and safe drinking water—and the children can have fun too!

1 Daedalus
ダイダロス (元々はギリシア神話に登場する人の名前。技能と発明にたけていた)
Crete クレタ島
Santorini
サントリーニ島 (いずれも地中海にある島)

the Great Wall of China
万里の長城
be back 戻る

2 Malawi マラウイ
merry-go-round play pump
メリーゴーランド型ブレイポンプ (写真を参照)

problem
厄介な問題、困難な事



♪18 **3** When you run, you have a lot of energy which comes from the movement of your body. When you suddenly stop, your body loses ^(エ)this energy. And this energy can be used for other purposes. We already have watches and small medical devices which can use energy that we make when we move. In the future, people like police officers and soldiers may wear devices on their legs to "catch" this lost energy and keep it in batteries. They could use the power for computers, radios, or other devices.

♪19 **4** In December 2008, most people walking across Hachiko Square, Tokyo, probably did not notice four yellow squares on the ground ^(オ)as they hurried to work. The squares were made of ^(カ)special materials that make electricity when they change shape. When people stepped on the squares, the shape of the materials changed and they produced electricity. The squares were only there for twenty days, but in ^(キ)that time they produced enough power to make a TV work for 1,400 hours! Imagine putting these squares under all the roads in Tokyo. One day, we may turn our streets into power stations!

♪20 **5** Moving people can produce a lot of energy, but what about people who cannot move around—sick people or people sitting on trains? Even when we are resting, our bodies produce enough energy to power two laptops! Most of this energy is heat. Now people are developing medical devices which get their power by changing body heat into electricity. Soon doctors will use them to do things like getting information about their patients' blood, for example. ^(ク)This will be useful in places like Africa, where many villages do not have electricity.

♪21 **6** We can use body ⁽¹⁾heat in other ways too. Every day, 250,000 people use Stockholm's Central Station. ^(ク)They eat and drink, carry heavy bags, and run to catch trains—and a lot of ⁽²⁾heat is produced as they do these things. Inside the station, ⁽³⁾heat pumps take ⁽⁴⁾heat from the air and use it to ⁽⁵⁾heat water for a building close to the station. It is a great way to get free energy—all you need is a lot of people!

3
medical device
医療機器
police officer 警察官

lost
(この文脈では) 行き場を失くした

4
square 四角形のもの
(ここでは広場)

power = electricity
energy もほぼ同じ意味で使われている。

power station
発電所

5
energy = electricity

rest 休憩する (この文脈では「動いていない」の意味)

power
(他) ~を動かす
laptop
ノートパソコン

heat pump 熱ポンプ