Reading



1 Make a list of the things you need electricity for. Which are the most important for you and which are the least important? Compare your answers as a class.

2 Where does electricity come from? Match the types of power with the methods used to produce it.

1 solar power	**a** by capturing sunlight
2 wind power	**b** by burning oil, coal or gas
3 hydroelectric power	**c** by splitting uranium atoms
4 nuclear power	**d** by using running or falling water
5 fossil fuel power	**e** by using the movement of the air
6 geothermal power	**f** by using steam from under the ground

3 Read the text quickly. What is kinetic energy?



Powered by play

It's a typical Saturday afternoon. You're listening to music on your MP3 player, your sister's surfing the web, perhaps your parents are watching TV. Later, you try to text your friends to make arrangements for the evening, but your mobile phone's not working. You forgot to charge it! No problem. Just plug it in and it's ready to use. And then … disaster! Because of road works in the area, your electricity has been disconnected. For the next hour or two, you're twiddling your thumbs. 1 ☐ How annoying!

Welcome to the world of disadvantaged communities. 2 ☐ Areas that have no access to public utilities such as electricity are known as off-grid. You may have been off-grid while camping, for example, but while that can be a fun adventure, living off-grid permanently is not.

In many African countries, large parts of the population are living off-grid with no access to electricity. Over 1.3 billion people worldwide do not have access to electricity. They are forced to use kerosene lamps and wood-burning stoves in their homes. 3 ☐ In fact, breathing in the fumes from one kerosene lamp is the same as smoking two packets of cigarettes a day.

Solar technology can deal with some of these problems by converting light from the sun into energy. 4 ☐ Another solution – though currently on a smaller scale – is kinetic energy. The term is derived from the Greek word 'kinesis', meaning motion. From planets to atoms, all moving things have kinetic energy. It is energy that is possessed by an object due to its motion. The heavier something is and the faster it moves, the more kinetic energy it has.

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4 **Six sentences have been removed from the article. Choose from the sentences A-G the one which fits each gap (1-6). There is one extra sentence which you do not need to use.**

A These, however, are harmful to the environment and kill nearly two million people a year.

B It is also very difficult to have them installed in places where the people would rather use the land for planting crops.

C Inside it there is a mechanism that captures the energy from the rolling and bouncing that occurs during a football game.

D For you, a lack of electricity is a temporary inconvenience, but for many people in developing countries it's a way of life.

E However, this solution is generally too expensive for communities in the developing world.

F Just thirty minutes of play can generate enough electrical power for three hours of light.

G You wish they would hurry up and finish because it's now dark and you can't even read a book to pass the time.

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When you are doing this kind of task, the missing sentence may explain an idea in the text. For example, which sentence fits gap 5 by explaining how the Soccket generates the electricity mentioned before the gap that is then stored in the battery mentioned after the gap?

5 **Replace each word in bold with a word from the text that means the same.**

1 If you don't pay your phone bill, they will **cut off** your phone. (para 1) _____

2 Do you know how to **change** miles into kilometres? (para 4) _____

3 The new college will **create** 500 new jobs for local people. (para 5) _____

4 I need a lot of room to **keep** all of my books, CDs and DVDs. (para 5) _____

5 Fred's going to help me **put in** the new washing machine. (missing sentences) _____

6 These photos **catch** the mood of the isolated villages I visited. (missing sentences) _____

6 **How has technology changed the way we communicate? Look at these items. What can we now use instead of them?**





Using this law of physics, the company Uncharted Play developed the Soccket – a special football that combines play and technology to generate electricity. 5 ☐ It stores it into a battery which gives families in developing countries a power source for lighting and cooking to replace kerosene lamps and wood-burning stoves.

Uncharted Play have also produced a lamp that can be used as a normal tabletop lamp or as a torch. The lamp is charged by attaching it to the Soccket. 6 ☐ Dozens of these lamps can be charged from a single Soccket. Children living in communities that are off-grid can play with a single Soccket ball as a team and still have their own personal light for reading and homework each night.

Energy is essential for people's well-being. In developing countries, technology can create clean energy that improves people's quality of life and also protects the environment.



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