

# TECHNOLOGY: NEWS ARTICLE 1

 *Listen and fill in the blanks.*

The world's first flying car \_\_\_\_\_  
March 18. Its name is the Transition, because it can  
switch between the road and the sky. The car that  
looks like a \_\_\_\_\_ car took off  
from a small airport in New York. The "roadable  
aircraft" is from a Boston based company called  
Terrafugia, which means "escape from land" in  
Latin. The designer and Terrafugia CEO Carl Dietrich  
\_\_\_\_\_ decade working on the project.  
In 2006 he won a \$30,000 design award from the  
Massachusetts Institute of Technology. He said his  
inspiration \_\_\_\_\_ about America's  
crowded highways and airports. Dietrich said: "This  
flight \_\_\_\_\_ freedom in aviation.  
It's what enthusiasts have been striving for since  
1918."

The two-seater Transition \_\_\_\_\_  
airports and drive on any road. The US government  
said it is officially a light sport aircraft and not a car.  
The flying car has wings \_\_\_\_\_ on  
the road. It is around 5.8 metres long and 2 metres  
wide. Terrafugia hopes to start selling the Transition  
in 2011. The selling \_\_\_\_\_ \$150,000  
and \$200,000. There are already more than forty



orders for it. Dietrich is excited about the Transition's  
future. He told reporters: "This breakthrough changes  
the \_\_\_\_\_. Travel now becomes a  
hassle-free integrated land-air experience." It is not  
yet clear whether traffic police or air traffic control  
\_\_\_\_\_, perhaps hundreds or  
thousands, of flying cars.

# ***Vocabulary***

Give the synonyms of the following words:

1. transition
2. enthusiasts
3. striving
4. hassle
5. breakthrough

# ***Discussions***

1. What do you think of the idea of cars that can fly?
2. What are the risks and benefits of flying cars?
3. Do you think “Transition” is a good name for the new flying car?
4. Do you think flying car will solve congestion on roads and at airports?
5. Do you like reading about new breakthroughs and inventions?
6. How would a flying car change your lifestyle?
7. What do you think of the expression “roadable aircraft”?
8. Do you think governments would have to rethink power lines?
9. Do you think people would still get angry with other drivers in the sky?
10. Who should regulate the flying cars, the police or air traffic controllers?

# Teacher's Guide

The world's first flying car took to the skies on March 18. Its name is the Transition, because it can switch between the road and the sky. The car that looks like a plane that looks like a car took off from a small airport in New York. The "roadable aircraft" is from a Boston based company called Terrafugia, which means "escape from land" in Latin. The designer and Terrafugia CEO Carl Dietrich has spent the past decade working on the project. In 2006 he won a \$30,000 design award from the Massachusetts Institute of Technology. He said his inspiration was to do something about America's crowded highways and airports. Dietrich said: "This flight is a symbol of a new freedom in aviation. It's what enthusiasts have been striving for since 1918."

The two-seater Transition can take off and land at airports and drive on any road. The US government said it is officially a light sport aircraft and not a car. The flying car has wings that fold up for use on the road. It is around 5.8 metres long and 2 metres wide. Terrafugia hopes to start selling the Transition in 2011. The selling price will be between \$150,000 and \$200,000. There are already more than forty orders for it. Dietrich is excited about the Transition's future. He told reporters: "This breakthrough changes the world of personal mobility. Travel now becomes a hassle-free integrated land-air experience." It is not yet clear whether traffic police or air traffic control will handle the dozens, perhaps hundreds or thousands, of flying cars.

## Answer Key

1. transition - change
2. enthusiasts - fans
3. striving - aiming
4. hassle - problem
5. breakthrough - discovery

# TECHNOLOGY: NEWS ARTICLE 2

 *Listen and fill in the blanks.*

New Zealand police are hunting \_\_\_\_\_.  
received nearly US\$8 million by mistake from their bank. The couple applied to Westpac Bank for a NZ\$10,000 overdraft. Bank employees \_\_\_\_\_. They deposited NZ\$10 million into their customers' bank account instead of giving them the loan facility. The couple probably thanked \_\_\_\_\_. They took the money and ran. The pair, an Asian man and his New Zealand girlfriend, left the country immediately. However, they \_\_\_\_\_ the money with them. New Zealand police have told Interpol about the couple leaving the country, \_\_\_\_\_ international manhunt for them. Westpac officials are keeping how much the \_\_\_\_\_.

The couple live in the town of Rotorua on New Zealand's north island. They \_\_\_\_\_ had money problems. They applied for the overdraft to help with their financial difficulties. Locals \_\_\_\_\_ note on the door of the gas station saying it had closed down. A banking lecturer, Claire Matthews from New Zealand's Massey University, told the local Newstalk ZB radio station that the couple's \_\_\_\_\_



out. She said: "They've taken funds that they're \_\_\_\_\_, that are not theirs....They've [really] become thieves." She said it would only be \_\_\_\_\_ before the police caught them. A Westpac Bank spokesman said the bank and police were \_\_\_\_\_ criminals.

# ***Vocabulary***

Give the synonyms of the following words:

1. manhunt
2. run out
3. hunting
4. deposited
5. funds

# ***Discussions***

1. What do you think of the mistake in the article?
2. What do you think will happen to the person who made the mistake?
3. Do you think this mistake will damage Westpac Bank's reputation?
4. Do you think the couple in this story are really thieves?
5. Has a bank ever made a mistake with your bank account?
6. What would you do if you saw \$10, 0000, 0000 in your bank account?
7. How often do you have money problems or experience financial difficulties?
8. What's the biggest mistake you've ever made in your life?
9. Are you lucky or unlucky with money? Why do you think so?
10. Have you ever had a loan or overdraft?

# Teacher's Guide

New Zealand police are hunting for a couple who received nearly US\$8 million by mistake from their bank. The couple applied to Westpac Bank for a NZ\$10,000 overdraft. Bank employees made a huge mistake. They deposited NZ\$10 million into their customers' bank account instead of giving them the loan facility. The couple probably thanked their lucky stars. They took the money and ran. The pair, an Asian man and his New Zealand girlfriend, left the country immediately. However, they did not take all of the money with them. New Zealand police have told Interpol about the couple leaving the country, so there is now an international manhunt for them. Westpac officials are keeping how much the couple took a secret.

The couple live in the town of Rotorua on New Zealand's north island. They ran a gas station which had money problems. They applied for the overdraft to help with their financial difficulties. Locals say the pair left a note on the door of the gas station saying it had closed down. A banking lecturer, Claire Matthews from New Zealand's Massey University, told the local Newstalk ZB radio station that the couple's luck would soon run out. She said: "They've taken funds that they're not entitled to, that are not theirs....They've [really] become thieves." She said it would only be a matter of time before the police caught them. A Westpac Bank spokesman said the bank and police were treating the couple as criminals.

## Answer Key

- |    |           |   |           |
|----|-----------|---|-----------|
| 1. | manhunt   | - | search    |
| 2. | run out   | - | finish    |
| 3. | hunting   | - | searching |
| 4. | deposited | - | put away  |
| 5. | funds     | - | money     |

# TECHNOLOGY: NEWS ARTICLE 3

 *Listen and fill in the blanks.*

Britain will \_\_\_\_\_ new ratings system for video games. Government officials have decided to use the PEGI (Pan-European Game Information) warning symbols so parents \_\_\_\_\_ buy their kids. There are eight easily recognizable icons, in addition to coloured \_\_\_\_\_ 3, 7, 12, 16 and 18 and over. The symbols will show if the game contains any bad language, discrimination, gambling, drugs, horror, sex, and dating. There \_\_\_\_\_ show the game is only online. Dr. Richard Wilson, an industry expert, said: “Game developers \_\_\_\_\_ PEGI system, as it makes classification easier.” The PEGI website says companies like Sony, Microsoft and Nintendo \_\_\_\_\_.

TIGA, the video \_\_\_\_\_, created the PEGI system. Its website says: “Interactive computer game playing is now a mass-market leisure activity, with millions \_\_\_\_\_ Europe. While most games are suitable for players of all ages there \_\_\_\_\_ suitable for older children and younger teenagers.” Alongside the new symbols PEGI will also \_\_\_\_\_ to parents. This will help to \_\_\_\_\_ of violence in games. Examples include “extreme violence,” the showing of “criminal techniques” and the “\_\_\_\_\_”. The system is now used throughout Europe. It is a model that shows how Europe can work together to protect children.



# ***Vocabulary***

Give the synonyms of the following words:

1. recognizable
2. suitable
3. leisure
4. officials
5. throughout

# ***Discussions***

1. Do you think the new ratings symbols are a good idea?
2. Are there any symbols missing from the eight made by PEGI?
3. Why do you think Sony, Microsoft and Nintendo support the symbols?
4. What do you think of the idea of video games that show criminal techniques?
5. Do you think this is a good example of Europe acting together?
6. Are you concerned about the dangers of video games?
7. Do you think video games can be good for kids?
8. Do you think playing video games is a good leisure activity?
9. Should games that have extreme violence or glamorize crimes can be banned?
10. How long should people play video games each day?

# Teacher's Guide

Britain will soon start using a new ratings system for video games. Government officials have decided to use the PEGI (Pan-European Game Information) warning symbols so parents know what games to buy their kids. There are eight easily recognizable icons, in addition to coloured signs that represent ages 3, 7, 12, 16 and 18 and over. The symbols will show if the game contains any bad language, discrimination, gambling, drugs, horror, sex, and dating. There is another symbol to show the game is only online. Dr. Richard Wilson, an industry expert, said: "Game developers will welcome the new PEGI system, as it makes classification easier." The PEGI website says companies like Sony, Microsoft and Nintendo support the symbols.

TIGA, the video game trade association, created the PEGI system. Its website says: "Interactive computer game playing is now a mass-market leisure activity, with millions of players throughout Europe. While most games are suitable for players of all ages there are many that are only suitable for older children and younger teenagers." Alongside the new symbols PEGI will also offer additional advice to parents. This will help to explain different types of violence in games. Examples include "extreme violence," the showing of "criminal techniques" and the "glamorization of crime". The system is now used throughout Europe. It is a model that shows how Europe can work together to protect children.

## Answer Key

1. recognizable - clear
2. suitable - right
3. leisure - free time
4. officials - representatives
5. throughout - across

# TECHNOLOGY: NEWS ARTICLE 4

 *Listen and fill in the blanks.*

Engineers at a U.S. laboratory may have discovered \_\_\_\_\_ problem of global warming. They have made a machine that can suck carbon dioxide from the air \_\_\_\_\_ liquid fuel. Researchers at the Sandia National Labs believe their creation can provide a sustainable form of renewable energy. \_\_\_\_\_ something from science fiction. In fact, the name \_\_\_\_\_ the most difficult thing to understand. It is the Counter-Rotating-Ring Receiver Reactor Recuperator, \_\_\_\_\_. Lead developer Rich Diver is excited about his project. He said sucking CO<sub>2</sub> from the environment could be an alternative to carbon sequestration. This \_\_\_\_\_ CO<sub>2</sub> deep underground.

Sandia calls the \_\_\_\_\_ by CR5 “Sunshine to Petrol”. The researchers say their invention is still 15 to 20 years away from \_\_\_\_\_. It is currently just a prototype - a small model of the real thing. A Sandia spokes woman said it “\_\_\_\_\_ of being able to reduce carbon dioxide emissions”. She added it would allow us “to keep using fuels \_\_\_\_\_”. It is possible that by 2030, cars



and airplanes \_\_\_\_\_ converted fuel. It will produce fuels such as methanol and gasoline. It will be interesting to see if this machine can actually lower our carbon footprint. Yes, it reduces carbon dioxide in the atmosphere, but \_\_\_\_\_ causes pollution when it burns.

# ***Vocabulary***

Give the synonyms of the following words:

1. convert
2. alternative
3. process
4. discovered
5. full

# ***Discussions***

1. What do you think of this article?
2. How does CO<sub>2</sub> damage the Earth?
3. Do you think the CR5 machine will save the planet?
4. What do you think of the name of the new machine?
5. Do you think governments should invest money on CR5?
6. What do you think is the answer to the problem of global warming?
7. Do you think science fiction always comes true?
8. What is the government doing to help your environment?
9. What do you think about your carbon footprint?
10. What do you think of the “Sunshine to Petrol” slogan?

# Teacher's Guide

Engineers at a U.S. laboratory may have discovered one answer to the problem of global warming. They have made a machine that can suck carbon dioxide from the air and convert it into liquid fuel. Researchers at the Sandia National Labs believe their creation can provide a sustainable form of renewable energy. Their device sounds like something from science fiction. In fact, the name of it is probably the most difficult thing to understand. It is the Counter-Rotating-Ring Receiver Reactor Recuperator, or CR5 for short. Lead developer Rich Diver is excited about his project. He said sucking CO2 from the environment could be an alternative to carbon sequestration. This is a method of burying CO2 deep underground.

Sandia calls the process carried out by CR5 “Sunshine to Petrol”. The researchers say their invention is still 15 to 20 years away from being in full operation. It is currently just a prototype - a small model of the real thing. A Sandia spokeswoman said it “holds a real promise of being able to reduce carbon dioxide emissions”. She added it would allow us “to keep using fuels we know and love”. It is possible that by 2030, cars and airplanes will run on the converted fuel. It will produce fuels such as methanol and gasoline. It will be interesting to see if this machine can actually lower our carbon footprint. Yes, it reduces carbon dioxide in the atmosphere, but its liquid fuel product causes pollution when it burns.

## Answer Key

- |    |             |   |            |
|----|-------------|---|------------|
| 1. | convert     | - | change     |
| 2. | alternative | - | substitute |
| 3. | process     | - | technique  |
| 4. | discovered  | - | found      |
| 5. | full        | - | complete   |

# TECHNOLOGY: NEWS ARTICLE 5

 *Listen and fill in the blanks.*

A U.S. university has \_\_\_\_\_ the Apple iPhone - as a musical instrument. Academics from the University of Michigan have joined \_\_\_\_\_ they call a 21st century orchestra. There are no traditional instruments, only 20 of Apple's best-selling mobile telephones. The project is \_\_\_\_\_ the university's music, computer science and engineering departments. They call themselves the Michigan Mobile Phone Ensemble and \_\_\_\_\_ "new, crazy, electronic ensemble music". They \_\_\_\_\_ concert on Wednesday, December the 9th. Each 'musician' will 'play' the notes and tunes that they programmed into their handset. The result will \_\_\_\_\_ of... music.

\_\_\_\_\_ iPhone orchestra is assistant professor Georg Essl. He is a musician and an engineer. On his course, he encouraged students to experiment with the iPhone's \_\_\_\_\_. They wrote special applications that used wireless radios, motion sensors and the touch screen to produce different noises. The \_\_\_\_\_ sound of the experimental new orchestra. Professor Essl was excited about \_\_\_\_\_ of music. He said: "We



can do interesting, weird and unusual things. This kind of technology \_\_\_\_\_, but it's a hot and growing area to use iPhones for artistic expression." He called the iPhone "a \_\_\_\_\_ for exploring new forms of musical performance". He didn't say when the orchestra would record its first CD.

# ***Vocabulary***

Give the synonyms of the following words:

1. academics
2. joined forces
3. handset
4. innovative
5. infancy

# ***Discussions***

1. What do you think of the i-Phone being a musical instrument?
2. Do you think this is a worthwhile thing to do at a university?
3. Do you think I-phone can really used for artistic expression?
4. What new function would you like someone to invent for your mobile?
5. How important is a mobile in the world?
6. Do you think mobile phones will replace laptop and desktop computers?
7. What things about mobile phones annoy you?
8. Do you think iPhone as a musical instrument will become popular?
9. Would you like to learn how to play the iPhone?

# Teacher's Guide

A U.S. university has found a new use for the Apple iPhone - as a musical instrument. Academics from the University of Michigan have joined forces to create what they call a 21st century orchestra. There are no traditional instruments, only 20 of Apple's best-selling mobile telephones. The project is a group effort from the university's music, computer science and engineering departments. They call themselves the Michigan Mobile Phone Ensemble and describe their work as "new, crazy, electronic ensemble music". They will hold their first concert on Wednesday, December the 9th. Each 'musician' will 'play' the notes and tunes that they programmed into their handset. The result will be an original piece of... music.

The brains behind the iPhone orchestra is assistant professor Georg Essl. He is a musician and an engineer. On his course, he encouraged students to experiment with the iPhone's advanced technologies. They wrote special applications that used wireless radios, motion sensors and the touch screen to produce different noises. The result is the hi-tech sound of the experimental new orchestra. Professor Essl was excited about this innovative form of music. He said: "We can do interesting, weird and unusual things. This kind of technology is in its infancy, but it's a hot and growing area to use iPhones for artistic expression." He called the iPhone "a very nice platform for exploring new forms of musical performance". He didn't say when the orchestra would record its first CD.

## Answer Key

1. academics
2. joined forces
3. handset
4. innovative
5. infancy

# TECHNOLOGY: NEWS ARTICLE 6

 *Listen and fill in the blanks.*

Most of the world's Internet users believe Internet \_\_\_\_\_ right. This is according to a new poll conducted for the BBC. A \_\_\_\_\_ 27,000 adults in 26 different countries found four out of five people believed access to the World Wide Web was a right everyone in the world \_\_\_\_\_. The chief of the International Telecommunication Union, Dr. Hamadoun Toure, told the BBC World Service: "The right to communicate \_\_\_\_\_. The Internet is the most powerful potential source of enlightenment ever created." Dr. Toure believes online access \_\_\_\_\_ everywhere, just like roads and water. In some countries, this has already happened. Finland and Estonia have \_\_\_\_\_ is a human right.

The survey also showed how the Internet \_\_\_\_\_ a vital part of our life, all across the world. Over 75 per cent of Japanese, Mexican and Russian people said they could \_\_\_\_\_. It is easy to see why. Almost everything we do in our life today, from communication, study, \_\_\_\_\_, needs the Internet. Without access to the Web, many people would feel helpless and powerless. Almost 80



per cent of \_\_\_\_\_ survey believe the Web had a positive impact, with nearly four fifths saying they have greater freedom. Other people were worried about \_\_\_\_\_ the Internet. One big surprise was that the majority of Germans felt it was not safe \_\_\_\_\_ their opinions online.

# ***Vocabulary***

Give the synonyms of the following words:

1. communicate
2. ignore
3. potential
4. enlightenment
5. impact

# ***Discussions***

1. Do you think that internet access is a human right?
2. Is Internet a source of enlightenment for you?
3. Do you think Internet access should become part of the United Nation's human rights?
4. Do you think Internet gives you greater freedom?
5. What are the dangers of internet?
6. In which areas of your life is the Internet vital?
7. How would your life be different without Internet?
8. How useful is Internet in your life?
9. How has the Internet changed the world?
10. What will the Internet look like in 10, 20, 50 years from now?

# Teacher's Guide

*Most of the world's Internet users believe Internet access is a basic human right. This is according to a new poll conducted for the BBC. A survey of more than 27,000 adults in 26 different countries found four out of five people believed access to the World Wide Web was a right everyone in the world needs and should have. The chief of the International Telecommunication Union, Dr. Hamadoun Toure, told the BBC World Service: "The right to communicate cannot be ignored. The Internet is the most powerful potential source of enlightenment ever created." Dr. Toure believes online access should be available everywhere, just like roads and water. In some countries, this has already happened. Finland and Estonia have laws saying access is a human right.*

*The survey also showed how the Internet is quickly becoming a vital part of our life, all across the world. Over 75 per cent of Japanese, Mexican and Russian people said they could not live without it. It is easy to see why. Almost everything we do in our life today, from communication, study, work and leisure, needs the Internet. Without access to the Web, many people would feel helpless and powerless. Almost 80 per cent of those who took the survey believe the Web had a positive impact, with nearly four fifths saying they have greater freedom. Other people were worried about the dangers of using the Internet. One big surprise was that the majority of Germans felt it was not safe for them to express their opinions online.*

## Answer Key

1. communicate - talk
2. ignore- disregard
3. potential - possible
4. enlightenment - learning
5. impact - effect

# TECHNOLOGY: NEWS ARTICLE 7

 *Listen and fill in the blanks.*

United Nations chief Ban Ki-moon showed the world \_\_\_\_\_ green transport on September 12 when he used a solar-powered taxi \_\_\_\_\_. The Solartaxi is the invention of Swiss engineer Louis Palmer. Mr Ban hoped his zero-emission commute would \_\_\_\_\_ alternative energy sources in our day-to-day life. He was very excited and positive about his carbon-neutral journey to work, saying: “\_\_\_\_\_ Solartaxi, one of the alternative sources of energy, can give some good messages to the people around the world that we need to be creative; we need to be practical; we \_\_\_\_\_ address these energy issues and also address the climate change issues.” The Secretary General added: “This is a fantastic experience. \_\_\_\_\_ another ride.”

The Solartaxi is currently on a worldwide tour to highlight \_\_\_\_\_ environmentally-friendly technologies. The tour’s climax will be in December, when the energy-saving \_\_\_\_\_ Poznan, Poland. The Polish city is hosting a conference on climate change. This gathering \_\_\_\_\_ preparations for a bigger meeting in Copenhagen in 2009, which will attempt \_\_\_\_\_ Kyoto Protocol. Mr Palmer was



very enthusiastic about Mr Ban’s trip in his Solartaxi. He said his taxi showed that there are solutions to reversing the damage humankind \_\_\_\_\_ planet. He congratulated the UN for its efforts: “As climate change doesn’t stop at borders, it’s a global problem and the UN is playing \_\_\_\_\_ the fight to stop global warming,” he said.

# ***Vocabulary***

Give the synonyms of the following words:

1. transport
2. invention
3. commute
4. alternative
5. practical

# ***Discussions***

1. What do you think the future of green transport is?
2. Do you think Ban Ki-moon's commute will raise awareness of alternative energies?
3. What do you know about the term “carbon neutral”?
4. What are the most serious climate change issues we need to address?
5. Do you think it would feel different riding in a solartaxi?
6. What other environmentally - friendly technologies do you know about?
7. What do you know about Kyoto Protocol? Has it worked?
8. What is the UN doing to fight global warming?
9. Has global warming affected your country or your life?
10. What is the most promising alternative energy?

# Teacher's Guide

United Nations chief Ban Ki-moon showed the world the future of green transport on September 12 when he used a solar-powered taxi to get to work. The Solartaxi is the invention of Swiss engineer Louis Palmer. Mr Ban hoped his zero-emission commute would promote the use of alternative energy sources in our day-to-day life. He was very excited and positive about his carbon-neutral journey to work, saying: "I hope that this Solartaxi, one of the alternative sources of energy, can give some good messages to the people around the world that we need to be creative; we need to be practical; we need to really address these energy issues and also address the climate change issues." The Secretary General added: "This is a fantastic experience. I hope I can enjoy another ride."

The Solartaxi is currently on a worldwide tour to highlight the need for more environmentally-friendly technologies. The tour's climax will be in December, when the energy-saving vehicle arrives in Poznan, Poland. The Polish city is hosting a conference on climate change. This gathering is part of preparations for a bigger meeting in Copenhagen in 2009, which will attempt to replace the Kyoto Protocol. Mr Palmer was very enthusiastic about Mr Ban's trip in his Solartaxi. He said his taxi showed that there are solutions to reversing the damage humankind is doing to the planet. He congratulated the UN for its efforts: "As climate change doesn't stop at borders, it's a global problem and the UN is playing a central role in the fight to stop global warming," he said.

## Answer Key

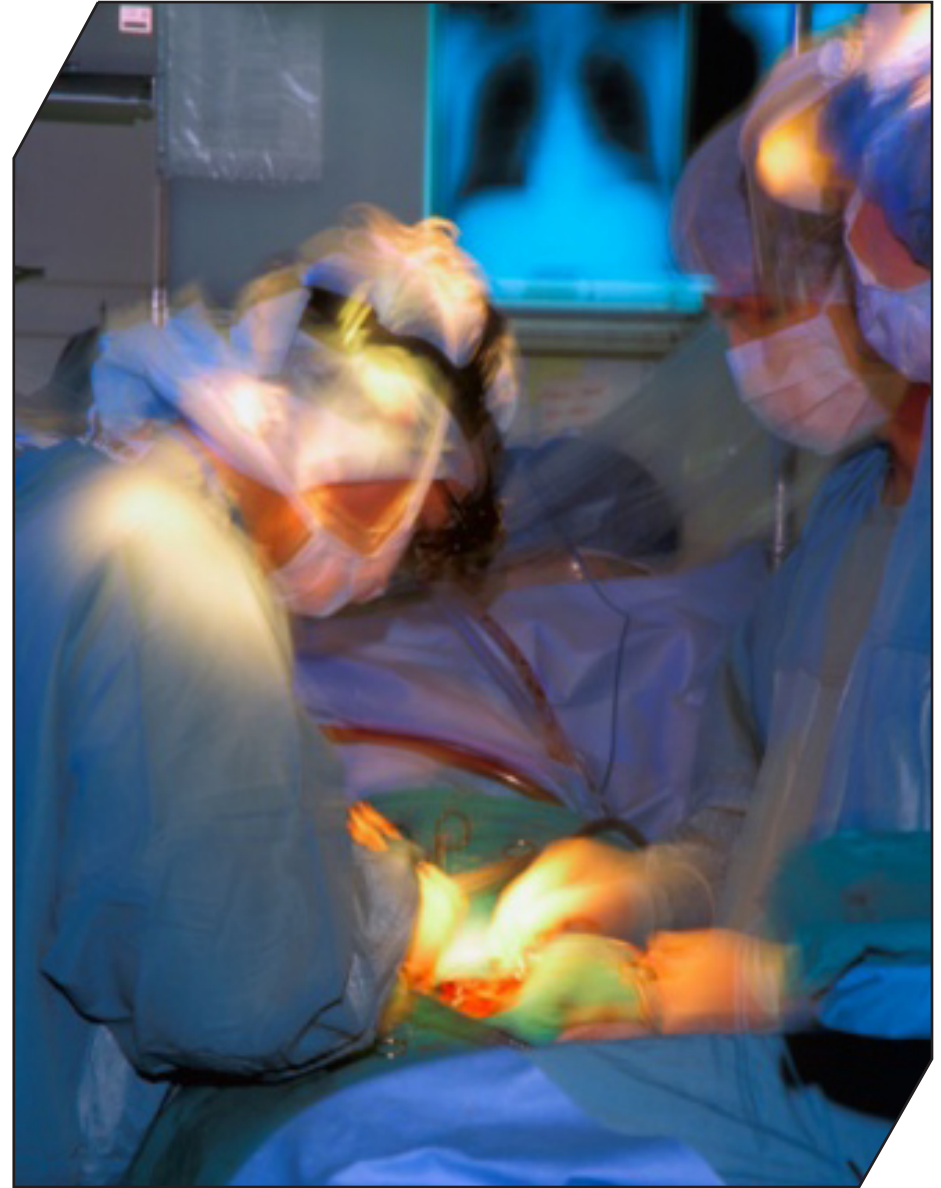
- |    |             |   |           |
|----|-------------|---|-----------|
| 1. | climax      | - | high spot |
| 2. | invention   | - | creation  |
| 3. | commute     | - | journey   |
| 4. | alternative | - | option    |
| 5. | practical   | - | sensible  |

# TECHNOLOGY: NEWS ARTICLE 8

 *Listen and fill in the blanks.*

Many people believe that when an organ transplant \_\_\_\_\_ the donor's personality travels with the organ. This is according to new research \_\_\_\_\_ organ donation. Professor Bruce Hood from the UK's Bristol University told a neuro-science conference that most people \_\_\_\_\_ receiving an organ from a killer. His test volunteers said they'd be very happy to receive an organ from a "good" person. Professor Hood said some of his patients \_\_\_\_\_ a part of the personality of their organ donors. He said this even included \_\_\_\_\_ and experiences of the donor. Other research has found that one in three organ transplant patients believe they have \_\_\_\_\_ donor's personality.

Britons generally have a \_\_\_\_\_ to organ donation. However, Professor Hood says his findings show many people are superstitious about transplants. He said this is \_\_\_\_\_ most logical people have many kinds of superstitions. He described a British teenager who was given a heart transplant \_\_\_\_\_. She was afraid that she would be "different with someone else's heart". Professor Hood said: "Most people \_\_\_\_\_ the thought of receiving a transplant from a murderer." He added: "Essentially \_\_\_\_\_ somehow take on the characteristics of the donor." Scientists say there is no \_\_\_\_\_ travels with a donated organ.



# ***Vocabulary***

Give the synonyms of the following words:

1. transplant
2. personality
3. organ
4. superstitious
5. donor

# ***Discussions***

1. Do you think parts of a donor's personality is transplanted along with the organ?
2. Do you think organ donation is a good thing?
3. Do you think people should be able to choose the donor if they need a transplant?
4. Do you have any superstitions about transplants?
5. Would you be willing to donate your organs after you die?
6. What do you think of giving someone transplant against their will?
7. Would you like a personality transplant?
8. Would you accept a killers heart if you need a heart transplant?
9. Do you think its possible for memories of the dead donor if they need a transplant?
10. Would you have a transplanted animal organ if it saved your life?

# Teacher's Guide

Many people believe that when an organ transplant takes place, parts of the donor's personality travels with the organ. This is according to new research into people's opinions of organ donation. Professor Bruce Hood from the UK's Bristol University told a neuro-science conference that most people are strongly against receiving an organ from a killer. His test volunteers said they'd be very happy to receive an organ from a "good" person. Professor Hood said some of his patients believed they now had a part of the personality of their organ donors. He said this even included things like the memories and experiences of the donor. Other research has found that one in three organ transplant patients believe they have some aspects of their donor's personality.

Britons generally have a very positive attitude to organ donation. However, Professor Hood says his findings show many people are superstitious about transplants. He said this is natural because even the most logical people have many kinds of superstitions. He described a British teenager who was given a heart transplant against her will. She was afraid that she would be "different with someone else's heart". Professor Hood said: "Most people were repulsed by the thought of receiving a transplant from a murderer." He added: "Essentially they believe they will somehow take on the characteristics of the donor." Scientists say there is no proof that personality travels with a donated organ.

## Answer Key

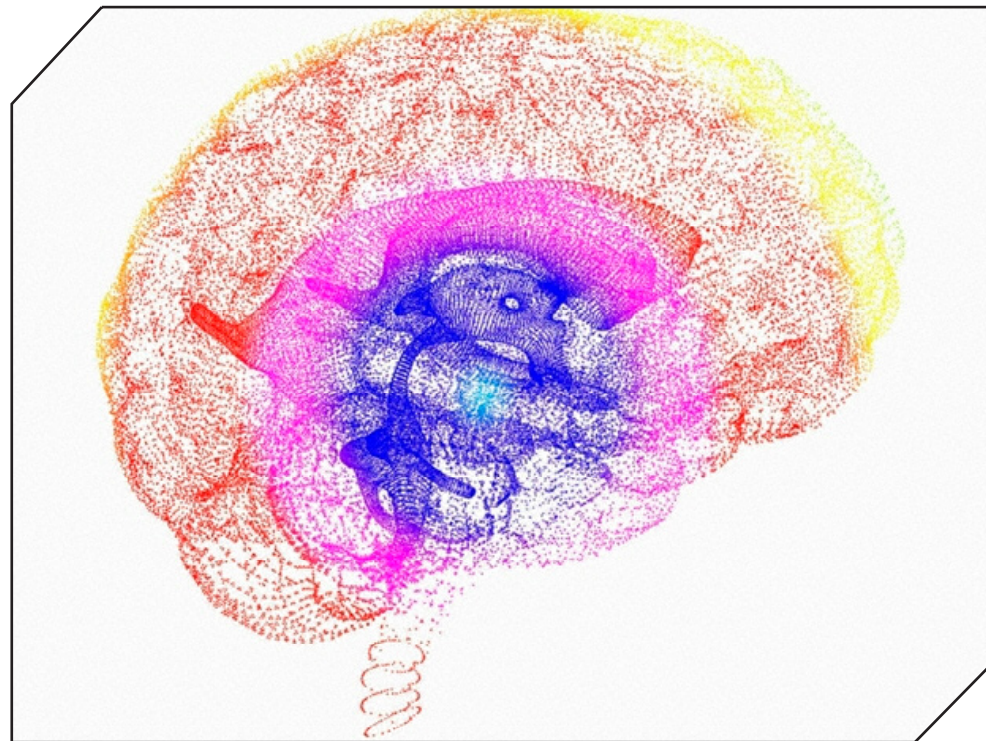
- |    |               |   |             |
|----|---------------|---|-------------|
| 1. | aspects       | - | features    |
| 2. | personality   | - | attitude    |
| 3. | organ         | - | part        |
| 4. | superstitious | - | belief      |
| 5. | donor         | - | contributor |

# TECHNOLOGY: NEWS ARTICLE 9

 *Listen and fill in the blanks.*

A top British professor \_\_\_\_\_-edge ideas conference he is \_\_\_\_\_ a replica human brain. Professor Henry Markham told the annual Technology, Entertainment, Design global conference that a working synthetic brain \_\_\_\_\_ next decade. He told his audience: “It is not impossible to build a human brain and we can do it in 10 years.” He set himself a challenge \_\_\_\_\_ he succeeded, he would “send a hologram to T.E.D. to talk.” Professor Markham is director of the Blue Brain project, which \_\_\_\_\_ mammals brains from laboratory data. He has already had success with creating parts of a rat’s brain. Markham said the human brain \_\_\_\_\_ was an “almost frightening organ”.

Professor Markham hoped his research \_\_\_\_\_ treatments for mental illnesses. He said: “There are two billion people on the planet \_\_\_\_\_ disorder.” Markham believes synthetic brain technology will reduce the need for experiments on animals. “We cannot \_\_\_\_\_ animal experiments forever,” he said. This will please many animal rights activists,



who \_\_\_\_\_ is cruel. He hopes to create a kind of “Noah’s Ark” of animal brain models. Professor Markham provided a simple explanation of his work: “\_\_\_\_\_ going and cataloguing a bit of the rainforest....But it is a bit more than cataloguing because you have to describe and discover \_\_\_\_\_ communication, the rules of connectivity.”

# ***Vocabulary***

Give the synonyms of the following words:

1. replica
2. synthetic
3. decade
4. cruel
5. cataloging

# ***Discussions***

1. Are you concerned about research into artificial body parts?
2. What could scientist do with an artificial brain?
3. Do you think brain transplants are a good idea?
4. How do you think personality and intelligence can be created in an artificial brain?
5. Do you think artificial brain will perform as well as a real brain?
6. Would you have treatment to make your more brainy?
7. Do you think the professor's research will lead to cures and treatments for those suffering from mental disorder?
8. Do you think research on animals is cruel and needs to be stopped?
9. Do you think professor Markham is creating a kind of monster?
10. What did professor mean when he called the brain “ an almost frightening organ”?

# Teacher's Guide

A top British professor has told a cutting-edge ideas conference he is close to building a replica human brain. Professor Henry Markham told the annual Technology, Entertainment, Design global conference that a working synthetic brain can be built in the next decade. He told his audience: "It is not impossible to build a human brain and we can do it in 10 years." He set himself a challenge by stating that if he succeeded, he would "send a hologram to T.E.D. to talk." Professor Markham is director of the Blue Brain project, which aims to engineer mammals' brains from laboratory data. He has already had success with creating parts of a rat's brain. Markham said the human brain was so complex, it was an "almost frightening organ".

Professor Markham hoped his research would lead to new treatments for mental illnesses. He said: "There are two billion people on the planet affected by mental disorder." Markham believes synthetic brain technology will reduce the need for experiments on animals. "We cannot keep on doing animal experiments forever," he said. This will please many animal rights activists, who say such research is cruel. He hopes to create a kind of "Noah's Ark" of animal brain models. Professor Markham provided a simple explanation of his work: "It's a bit like going and cataloguing a bit of the rainforest....But it is a bit more than cataloguing because you have to describe and discover all the rules of communication, the rules of connectivity."

## Answer Key

- |    |            |   |             |
|----|------------|---|-------------|
| 1. | replica    | - | copy        |
| 2. | synthetic  | - | man-made    |
| 3. | decade     | - | 100 years   |
| 4. | activist   | - | campaigners |
| 5. | cataloging | - | listing     |

# TECHNOLOGY: NEWS ARTICLE 10

 *Listen and fill in the blanks.*

Scientists in the USA say they are \_\_\_\_\_ developing materials that could make people invisible. Researchers at the University of California have found \_\_\_\_\_ humans and objects using special materials \_\_\_\_\_ around things. The findings, led by professor Xiang Zhang, were published in the journals 'Nature' and 'Science'. Zhang works at the Nanoscale Science and Engineering Centre at the university. His team developed \_\_\_\_\_ artificial "meta-materials" on a microscopic \_\_\_\_\_ measured in billionths \_\_\_\_\_. The researchers said the special "fishnet structure" of the nano-sized objects do not absorb or reflect light, which makes them seem invisible. They compared the light to "water \_\_\_\_\_ rock".

The new discovery \_\_\_\_\_ forward from earlier technology that only allowed \_\_\_\_\_ two-dimensional objects. In the future, scientists could make "invisibility clothing" to hide people \_\_\_\_\_. However, scientists are still a long way from designing and manufacturing invisibility cloaks. The U.S. military is \_\_\_\_\_ in developing this \_\_\_\_\_ technology to the



battlefield. The U.S. Army Research Office funded part of Dr. Zhang's research. The technology could also lead to more powerful microscopes that are able to \_\_\_\_\_ at living cells and even tinier objects. This means scientists could look at how \_\_\_\_\_ and how they grow.

# ***Vocabulary***

Give the synonyms of the following words:

1. artificial
2. concealing
3. extremely
4. funded
5. cloak

# ***Discussions***

1. What do you think of Professor Zhang's research?
2. Do you think invisibility is something only from science fiction?
3. What do you think of the idea of a two-hour invisibility pill?
4. What would you do if you could be invisible?
5. What uses could an invisibility cloak have?
6. How much would you pay for an invisibility cloak?
7. What kind of large objects might people want to hide?
8. Do you think this new discovery will help in fighting disease?
9. Do you think other countries will worry about America's invisibility technology?
10. What other huge steps forward have you read about recently?

# Teacher's Guide

Scientists in the USA say they are a step closer to developing materials that could make people invisible. Researchers at the University of California have found a way to cloak humans and objects using special materials that redirect light around things. The findings, led by Professor Xiang Zhang, were published in the journals 'Nature' and 'Science'. Zhang works at the Nanoscale Science and Engineering Centre at the university. His team developed a set of artificial "meta-materials" on a microscopic scale that is measured in billionths of a metre. The researchers said the special "fishnet structure" of the nano-sized objects do not absorb or reflect light, which makes them seem invisible. They compared the light to "water flowing around a rock".

The new discovery is a huge step forward from earlier technology that only allowed the concealing of two-dimensional objects. In the future, scientists could make "invisibility clothing" to hide people and large objects. However, scientists are still a long way from designing and manufacturing invisibility cloaks. The U.S. military is extremely interested in developing this idea to bring the technology to the battlefield. The U.S. Army Research Office funded part of Dr. Zhang's research. The technology could also lead to more powerful microscopes that are able to look more closely at living cells and even tinier objects. This means scientists could look at how viruses are formed and how they grow.

## Answer Key

- |    |            |   |          |
|----|------------|---|----------|
| 1. | artificial | - | enormous |
| 2. | concealing | - | smaller  |
| 3. | extremely  | - | nearer   |
| 4. | funded     | - | hiding   |
| 5. | cloak      | - | financed |