

Hibernation on demand (Sat 23 Apr, 2005)

WARM-UPS

CHAT: Talk in pairs or groups about: hibernation / mice / squirrels / metabolism / breathing / sleep / voyages to other planets / science fiction / medicine... For more conversation, change topics and partners frequently.

SCIENCE FICTION BRAINSTORM: Spend one minute writing down all of the different words you associate with science fiction. Share your words with your partner / group and talk about them.

SPACE JOURNEY: Students A have spent five years on a space rocket to Saturn, half spent in hibernation. They loved rocket life (and hibernation). Get together and discuss all the great things you experienced. Students B are simple humans and want to know all about life on the rocket. Make a list of questions for the students who lived on the rocket. Students A and B pair up and talk about the journey into space.

ANIMAL FUNCTIONS: Hibernation is important for many animals. Which of the following animal abilities would you like too have?

hibernation / living as long as tortoises (150 years) / the sonar of a bat / the speed of a cheetah / the hearing of a dog / flight / breathing underwater like fish / changing colors like a chameleon / others?

THE FUTURE: What will the future be like? Look at the following list. Think about how possible you think each item is. When will it happen? What will be the benefits? Talk with your partner and see if he/she agrees with you. Change partners and repeat the activity, using the ideas you previously heard and talked about.

DISCOVERY

- a. Downloading skills into directly the brain (like in the Matrix movies)
- b. Cars that can fly though the air.
- c. Backpack jets that allow us to fly.
- d. A cure for all diseases.
- e. Time travel
- f. Living on other planets
- g. Being able to live to be 200 years old
- h. Artificial intelligence
- i. Cloning to bring back dinosaurs
- j. World's energy needs provided by air and water

POSSIBILITY

- Never
- Not in my lifetime
- By the end of the century
- No time soon
- Within the next fifty years
- Before the decade's out
- One day
- I'll live to see it

PRE-READING IDEAS

WORD SEARCH: Look in your dictionaries / computer to find collocates, other meanings, information, synonyms ... of the 'science' and 'fiction'.

TRUE / FALSE: Look at the article's headline and guess whether these sentences are true or false:

- a. Scientists have successfully put a man into hibernation. T / F
- b. The body temperature of a mouse fell to below freezing. T / F
- c. One day, astronauts could be put to sleep for long voyages into space. T / F
- d. Humans may have an unused ability to hibernate. T / F
- e. Hospital patients will be able to buy time using their credit cards. T / F
- f. Testing on humans starts in five years' time. T / F

SYNONYM MATCH: Match the following synonyms from the article:

- | | | |
|-----|----------------|----------------|
| (a) | just like | negative |
| (b) | slow down | in the future |
| (c) | fell | reduce |
| (d) | side | basically |
| (e) | one day | the same as |
| (f) | in short | extreme |
| (g) | severe | cardiac arrest |
| (h) | cardiac arrest | dropped |

PHRASE MATCH: Match the following phrases from the article (sometimes more than one combination is possible):

- | | | |
|-----|--------------------------|----------------------------|
| (a) | Scientists in America | per minute |
| (b) | slow down | in five years' time |
| (c) | 120 breaths | transplants |
| (d) | side | the metabolism |
| (e) | long journeys to | deaths from cardiac arrest |
| (f) | Testing on humans starts | have succeeded |
| (g) | organ | other planets |
| (h) | help prevent | effects |

QUIZ READ: Test your general knowledge and common sense. Circle which word you think is correct from the words in bold:

Hibernation on demand

BNE: Scientists in America have succeeded in making **mice** / **elephants** hibernate, just like squirrels in winter. A technique was used to slow down the **digestion** / **metabolism** of the mice to ten percent of its normal rate. Their breathing went from 120 breaths per minute to fewer than ten. Body temperature also fell from 37 to 11 degrees Centigrade. The mice awoke without having any **front** / **side** effects. Researchers believe this technique of “hibernation on demand” could one **day** / **minute** improve the treatment of disease in humans. It could even put astronauts to sleep for long journeys to other **suburbs** / **planets**. Mark Roth, researcher at the Fred Hutchison Cancer Research Center, says this is not science fiction: “it will change the way medicine is practiced, because we will, in **long** / **short**, be able to buy patients time.” Testing on humans starts in five years’ time. If the tests are successful, there will be great benefits. Patients waiting for **piano** / **organ** transplants or experiencing severe blood loss will have more time if they are put into hibernation. The treatment could also help prevent deaths from **cardiac** / **police** arrest and cancer.

HOMEWORK:

- 1. VOCABULARY EXTENSION:** Choose several of the words from the text. Use a dictionary or Google’s search field (or another search engine) to build up more associations / collocations of each word.
- 2. INTERNET:** Search the Internet and find information on animals that hibernate. Share your findings with your class next lesson.
- 3. HIBER-SALON:** It is the year 2030. You are the owner of a hibernation salon. It is the latest fashion. Write an advertisement explaining the services and benefits of your hiber-salon. Try to “sell” your salon in your next class.
- 4. 2100:** Write an article about how technology in the year 2100 will make our daily lives different from today. Compare your ideas with your classmates in your next lesson.

DISCUSSION:

- a. Did you like reading this article?
- b. Was there something you read that excited you?
- c. What do you think of the research in the article?
- d. Do you like science fiction?
- e. Do you think science fiction always becomes science fact?
- f. Is human hibernation a good idea?
- g. Would you like to hibernate for the weekend or the winter?
- h. Would you like to go on a long space voyage?
- i. Do you think hibernation for humans is dangerous?
- j. What animals do you know of that hibernate?
- k. Do you think we will be able to copy all animal skills?
- l. Are you interested in medicine and scientific research?
- m. Would you volunteer to test hibernation in humans?
- n. What do you think medicine will be like fifty years from now?
- o. How could hibernation be useful in our everyday lives?
- p. Would you like to be a scientist?
- q. Did you like this discussion?
- r. Teacher / Student additional questions.

TEXT

Hibernation on demand

BNE: Scientists in America have succeeded in making **mice** hibernate, just like squirrels in winter. A technique was used to slow down the **metabolism** of the mice to ten percent of its normal rate. Their breathing went from 120 breaths per minute to fewer than ten. Body temperature also fell from 37 to 11 degrees Centigrade. The mice awoke without having any **side** effects. Researchers believe this technique of “hibernation on demand” could one **day** improve the treatment of disease in humans. It could even put astronauts to sleep for long journeys to other **planets**. Mark Roth, researcher at the Fred Hutchison Cancer Research Center, says this is not science fiction: “it will change the way medicine is practiced, because we will, in **short**, be able to buy patients time.” Testing on humans starts in five years’ time. If the tests are successful, there will be great benefits. Patients waiting for **organ** transplants or experiencing severe blood loss will have more time if they are put into hibernation. The treatment could also help prevent deaths from **cardiac** arrest and cancer.