

English in Mind Second edition

Level 4 Unit 13

Lesson Plan

A small bite for a monkey ... a giant leap for mankind

THE INDEPENDENT

AIMS

- to read extensively and study a text related to the Unit theme
- to practise reading for gist and detailed comprehension
- to understand words in context
- to revise and practise passive voice
- to understand use of relative pronouns
- discussion and debate
- (further work) research and writing

Total time (approx): 1 hr 40 mins

(Note: Some exercises can be set for homework)

Lead-in

- 1 Students work in pairs or small groups. Distribute copies of page 1. Ask students if they can identify any of the people in the photos. They may well recognise Stephen Hawking and Neil Armstrong. Ask them to complete the task, matching the photos to the captions. Remind them of Neil Armstrong's famous words (in L1 if necessary) as he first stepped onto the moon, 'One small step for man; one giant leap for mankind.' Evidently the author considers this breakthrough experiment to be as exciting as landing on the moon. The monkey is being used for research that will help the people in A and C, both of whom have lost the use of their arms and legs. Check understanding of the following: *prosthetic limbs*, *motor neuron disease*, *paralysed*, *muscle*, *robotic arm*.

Key: A2 B4 C1 D3

Time: 5 mins

Reading comprehension

- 2 Ask the students to read through the article quickly. Warn them that there is some difficult vocabulary that will be looked at later. They should try to understand the gist of the article sufficiently to answer the questions in Exercise 1 (above) and Exercise 2. When they have finished reading, give them a little time to compare their answers in their pairs / small groups before discussing their choices as a class.

Key: b (This is the original subtitle for the article.)

Time: 7–8 mins

- 3 This exercise requires more detailed reading and is best done in pairs. Ask students to work through the questions, discussing what the correct answer might be in each case, then helping each other to find evidence in the text to support it. Allow them to feedback and justify their answers to the class before giving them the correct ones.

Key: 2T 3T 4F 5T 6T 7F 8F 9T 10F 11T 12F

Time: 20 mins

Vocabulary: words in context

- 4 This exercise focuses on everyday, non-technical vocabulary that may not be familiar. The words are printed in *italics* in the text to help students to locate them easily. Encourage students to find the words in the text first and try to work out the meaning from the context before matching them to the definitions given. The exercise can be done individually or in pairs.

Key: 2e 3g 4k 5b 6l 7j 8a 9c 10f 11d 12i

Time: 12 mins

- 5 Exercise 5 is designed to help students with more scientific/technical vocabulary. Paragraph numbers are given for ease of location. Again, they should use the context to help them identify the correct words or phrases. The exercise can be done individually or in pairs.

Key:

- 2 automated devices
- 3 brain-machine interface
- 4 brain patterns
- 5 joystick
- 6 practical behavioural act
- 8 neural activity
- 9 implanted
- 10 sensory information

Time: 10 mins

Grammar (1): passive voice

- 6 The grammar in Exercise 6 relates well to Unit 2. It may also prove useful as revision for higher levels. The passive infinitive may be new to them but is easily explained (*to be + past participle*).

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Examples of the passive voice in a range of different tenses are taken from the text. Students are asked to identify the tenses in each case. This is a quick exercise which can be done individually. After checking the answers, ask them why there are so many passives in this type of text. It is, of course, because we are more interested in the process or the result of the action than in the agent (the person(s) doing it). This is typical of a scientific report of this kind.

Key: 2a 3b 4f 5a 6e 7c 8c 9e

Time: 5 mins

- 7 If necessary, remind students of the rules for making passives by referring them to page 13 of English in Mind 4. If this is not available, use the examples given in Ex. 6 above to show the pattern: **vb to be (in appropriate tense) + past participle**. Students work through the exercise individually, deciding in each case whether it is necessary to include the agent in the passive sentence. They can discuss their decision and check their sentences in pairs, before the answers are checked in class.

Key:

- 2 New technologies are being developed to help in their experiments.
- 3 Many exciting discoveries about brain function have recently been made.
- 4 Very little about the brain had been understood before the invention of computers.
- 5 People who are paralysed will be helped by this research.
- 6 A lot more research on the brain needs to be carried out.

Time: 10 mins

Grammar (2): relative pronouns

- 8 The use of relative pronouns is dealt with in English in Mind Second edition, Unit 1. This exercise is designed to raise students' awareness of their use as a device for constructing complex sentences. They have been highlighted in bold print in the text and paragraph numbers are given for ease of location. Students may work individually or in pairs to find the appropriate relative pronoun in the text. Make sure that they identify the whole phrase referred to. If

you are short of time, ask students to underline the phrases in the text, rather than copy them out.

Key:

- 2 robotic machines
- 3 Dr Schwartz
- 4 the brain's complicated electrical activity
- 5 the motor centre of their brain
- 6 sports training
- 7 the animal knows how hard to grip an object

Time: 10–15 mins

Discussion

- 9 Put students into groups to discuss these final questions before opening up the discussion to the class. Allow the students to use their imaginations and express their opinions freely.

Time: 15 mins

Further work

- 10 The following are suggestions for further work, based on the discussion questions in Exercise 9.
- a. **Mini-project.** Students work in groups to come up with futuristic ideas for useful machines operated by thought control. After discussing and planning their ideas, they prepare a poster with a detailed drawing and make a presentation to the class, explaining who the machine is designed for and how it works. The class can vote on the best design.
 - b. **Research and writing.** Using the Internet, books or other resources, students find out more about the difficulties experienced by disabled people, both physical and mental, and the help available to them. They can then research and write a profile of a remarkable disabled person (e.g. sportsman, scientist, politician), explaining how he or she has managed to achieve success in life despite being disabled.

This article first appeared on Thursday, 29 May 2008, at www.independent.co.uk/news/science/a-small-bite-for-a-monkey-a-giant-leap-for-mankind-835851.html

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