

## 7.1 Animal instinct

There have been many incidences of animals changing their behaviour before a natural disaster strikes. Perhaps the most famous recent incident was before the 2004 tsunami when many animals reportedly escaped without injury by running to higher ground before the wave arrived. Some scientists believe that animals have an early-warning sensory system which can detect disasters, such as earthquakes, before they happen. This may be due to the fact that animals have more sensitive hearing and smell than humans, and that they also have sensory organs that detect small tremors and changes that occur before a natural disaster.

In this lesson, Ss read about how animals can help warn us of natural disasters and how rats can be trained to help people in the event of a disaster. Through this context, Ss look at the grammar of relative clauses. They then listen to people giving explanations about how to do something before looking at language used to explain procedures. Ss finish the lesson by writing explanatory notes.

### OPTIONAL WARMER

Write *animal instinct* and *natural disaster* on the board. Organise Ss into two groups, A and B. Ss A brainstorm words they associate with animal instinct and Ss B words they associate with natural disaster. Ss then share the words they thought of with a student from the other group. Get feedback and write words Ss have thought of on the board in two lists.

## Reading

1a ▶ Ss match the words in 1–6 to the ends of the expressions in a)–f). Check answers with the class.

**Answers:** 1 natural (d) disaster 2 carried (c) to safety 3 animal (e) instincts 4 rescue (f) team 5 save (b) lives 6 invisible to (a) the human eye

b ▶ Tell Ss that these expressions are taken from the text on page 90. Ask Ss to discuss in pairs what they think the text is about, based on the expressions from Ex.1a. Get feedback.

c ▶ Ss read the text quickly to check their predictions.

2 ▶ Ss read the text again more carefully and answer questions 1–8. Ss compare answers with a partner. Check answers.

**Answers:** 1 The elephants suddenly became nervous and left their habitat. The flamingos suddenly flew to higher ground even though it was the breeding season. 2 They move away from the danger area. 3 The sharks were electronically 'tagged', so they could be observed. 4 Their senses are sharper and they can feel changes in the environment. 5 The technology isn't always available and doesn't always work. We have lost our 'animal instincts' with the advance of technology. 6 Similarities: they both smell people when they are sent to disaster areas. Differences: the

rats are smaller and can get into small spaces and crawl in damaged buildings more easily. 7 The rat's brain gives off a signal which is transmitted via a radio on the rat's back. 8 In destroyed buildings, places where there is no electricity source, places where there are a number of different smells.

3 ▶ Ss discuss questions 1–4 in groups. Get whole class feedback.

## Grammar

### OPTIONAL GRAMMAR LEAD-IN

Write the following sentences on the board: 1 *The cat that had a white ear was run over by the car. The cat that had a stripy tail was unhurt.* 2 *The cat, which was sitting in the sun at the time of the accident, was run over by the car.* Ask Ss how we know which cat was run over in number 1. (Because of the underlined information.) Tell Ss that this information is vital to the meaning of the sentences and that this clause is a defining relative clause. Elicit that in number 2 the underlined information is not vital to the meaning of the sentence and is a non-defining relative clause.

4 ▶ Ss read the Active grammar box and do the tasks. Check answers with the class.

### Active grammar

- 1 a) ... that were giving tourists rides ... b) ..., which should have been breeding at that time of year, ... c) ..., which were being observed by US biologists, ... d) ... that inhabit an Indian nature reserve, ... e) ... which can do this job. f) ..., whose noses don't work well. g) ... which we rely on ...
- 2 Defining relative clauses: a), d), e), g) Non-defining: b), c), f)
- 3 Defining
- 4 Before and after the non-defining relative clause
- 5 g) The preposition goes at the end. '... something which robots are not as good at' Informal English the preposition can go at the beginning ('at which robots are not as good').
- 6 'Of course there are already robots which can do this job, one of which looks and moves like a snake ...' *All/some/few/one/none/either/neither of which* can all come before *of which*

▶ Refer Ss to the Reference on page 101 and give them time to read through the notes.

5 ▶ Ask Ss to discuss the pairs of sentences 1–7 with a partner and decide if they have the same meaning, or if they are different and how they are different. Ss also spot the sentences which are incorrect.

**Answers:** 1 different: a) means ONLY those monkeys whose DNA is similar to humans are used in research (i.e. other monkeys are not used because their DNA is not similar to humans'), b) means that ALL monkeys may be used because all monkeys have similar DNA to humans. 2 b) is wrong because it needs to be a defining relative clause, therefore without the comma. 3 b) is wrong because there should be a comma after *seals*. It must be a non-defining relative clause (because all seals' blubber is used for fuel and food). 4 both are correct. 5 b) is wrong. You can't use *that* to begin a non-defining relative clause. 6 b) is incorrect as the word order is wrong. 7 both are correct but a) is more informal because of the use of the 'dangled' preposition at the end of the sentence.

## Person to person

**6a** ▶ Ss put the phrases in the box into the right sentences 1-4. Check answers with the class.

**Answers:** 1 Should hunting which is done only for sport and not for food be allowed? 2 Should zoos, which take animals from their natural habitat, be banned? 3 Should the Amazon Rainforest, which is being destroyed, be protected against industry? If so, how? 4 Should the use of fur for clothing, about which there has been much debate in the fashion industry, be banned?

**b** ▶ Ss discuss the questions with a partner, thinking of arguments for and against each issue. Get feedback from different pairs.

### OPTIONAL EXTENSION

After the discussion Ss choose one of the questions from Ex. 6a as the topic for a discursive essay. Ask Ss to write 150-200 words on the chosen topic for homework. Encourage Ss to include the expressions in the useful phrases box on page 164 in their writing. In the following lesson, either take the essays in or ask Ss to swap their essays with a partner and comment on the content and language.

## Listening

### OPTIONAL LEAD-IN

Organise Ss into two groups, one in favour of rabbits as pets, the other in favour of dogs. Each group thinks of reasons why their animal makes the better pet. Pair Ss with a partner from the other group. Ss then try and convince their partners that their animals are better to have as pets than their partners'. Get feedback.

**7a** ▶ Tell Ss they are going to listen to two people giving explanations about how to do something. Play recording 7.1 and ask Ss to mark sentences 1-8 with a T if they are true, F if they are false, and with a ? if the sentence is not mentioned.

**b** ▶ Play recording 7.1 again for Ss to check their answers. Get feedback and check answers with the class.

**Answers:** 1 True 2 False (they're picky eaters)  
3 False (you need to get rabbits vaccinated)  
4 Doesn't say 5 True 6 Doesn't say 7 True  
8 Doesn't say

## Pronunciation

**8a** ▶ Ask different Ss to read clauses 1-4 aloud with a partner. Tell the Ss to pay attention to how *to* is pronounced.

**b** ▶ Play recording 7.2 for Ss to check their answers.

**Answers:** /tə/

**c** ▶ Focus Ss on clauses 1-4. Tell Ss to underline the weak prepositions in each clause. Play recording 7.3 for Ss to check their answers. Give Ss time to practise saying the clauses with a partner. Monitor and note any difficulties Ss are having with producing the weak forms. Highlight these on the board for Ss to correct in pairs. Give praise to the Ss for their efforts.

**Answers:** 1 of for for 2 to to of 3 to of  
4 of at

**9** ▶ Focus Ss on the words in the box. Ss use these words to complete the spaces in the How to ... box. Ss compare answers with a partner. Check answers with the class.

**Answers:** Prefacing with a general statement: It can be a bit tricky at first; It's really easy./It's a piece of cake.  
Sequencing: Firstly .../The first thing you've got to do is; Then/Secondly, .../The next step is to + infinitive  
Conditions/what can go wrong: Without doing this, it won't work.; If it doesn't work, you should ...  
Checking it's understood: OK?/ Got it? /Any questions?

**10a** ▶ In pairs, Ss complete paragraphs 1-3 in their own words like to explain three different procedures they are familiar with. Monitor and help Ss as necessary.

**b** ▶ Ss read their paragraphs to the rest of the class. Encourage Ss listening to ask follow-up questions to find out what the instructions are for.

## Writing

### OPTIONAL WARMER

Write the word housesitter on the board. Ask, Ss, in pairs, to think of tasks that a housesitter does. Get feedback as a class and write their ideas on the board.

**11** ▶ Tell Ss that a friend is going to stay in their house while they are on holiday. Ss write three notes to leave around the house explaining how to use the washing machine, feed the pet, etc. If Ss don't know anything about washing machines or pets, they can write instructions for something else. Ask different Ss to read their notes to the class.