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The intelligence of ants

A Thinking about the topic

1 Read these ant facts with the help of a dictionary. Guess which fact is false. Compare with a partner.

ANT FACT CHALLENGE

One of these facts is false. Can you guess which?


- Ants outnumber humans a million to one.
- There are over 12,000 species of ant.
- There were ants in the age of the dinosaurs.
- Ants leave a trail of scent to lead the others to food.
- Ants can carry 50 times their own body weight.
- Ants choose a new nest democratically.
- The ants in a colony can think together, like one collective brain.
- One species of Australian ant has eight legs.
- Only one female in the colony breeds; all the others care for her brood.
- The ant biomass in the rainforest is four times the rest of the creatures put together.



B Tuning in



Antonia


2  **2.41** You're going to hear Malcolm, a radio interviewer, asking Antonia Forster, a researcher, about her work. Listen to and read her reply. Notice how you can tell from her intonation in phrases 1–8 that she'll continue. In phrase 9, her voice goes down so you know she's finished.

- 1 Um, well, we work with one species of ant primarily
- 2 called, er, *temnothorax albipennis*.
- 3 It's a really small ant,
- 4 so in the lab, we keep it in between glass slides
- 5 and mostly we study its behaviour,
- 6 er, we give it nest choice experiments,
- 7 um, one person in our lab, Jamie, studies their fighting strategy,
- 8 um, so there's all sorts of various things we look at,
- 9 mostly their collective behaviours.


3  **2.42** Listen to six more extracts from the interview and, for each one, say whether Antonia is going to continue (C) or has finished her point (F).

- 1 2 3 4 5 6

C Listening for the main ideas and detail

4  **2.43** Decide if these statements are true (T) or false (F). Then listen and check your answers. Correct any false statements.


- 1 Colonies of ants behave differently to the way they do as individuals.
- 2 People have become fascinated by ants in the last few years.
- 3 Ants are approximately the same size.
- 4 Ants may seem simple creatures, but they're not.

5  **2.43** Match these pieces of information (a–d) with the points in Exercise 4 (1–4). Then listen again and check your answers.

- a Some ants are several centimetres long, some are very small.
- b Ant behaviour is complicated.
- c We can learn a lot from studying ants.
- d Individual ants aren't capable of complicated thoughts or processes.


6  **2.44** Listen to the next part of the interview. What's Antonia's main point?

- a Studying ant group behaviour has shown us many different ways of doing things.
- b Ant intelligence is best seen when they are studied as a group.
- c Ants have many problems, and when they work together, they are able to find solutions.


7  **2.44** Listen again and answer these questions. Compare and discuss with a partner.

- 1 According to Antonia, what is 'colony-level cognition'?
- 2 What is an 'ant algorithm'?
- 3 Why does Antonia compare a colony of ants to the human brain?


D Listening for specific information

8  **2.45** In the next part of the interview, Antonia talks about *eusociality* – the ways in which certain creatures organize themselves. Underline the key words in these statements. Then listen for the key words and number the statements in the order you hear them.

- a The queen lays all the eggs.
- b Female eggs are fertilized, male eggs aren't.
- c The others don't lay their own eggs.
- d Female ants have sisters rather than daughters.
- e The others in the colony are the queen's daughters.

9  **2.46** How can you find out more about ants? Listen to the final part of the interview and tick the information you hear.

- 1 visiting the Bristol Ant Lab website
- 2 going to the cinema
- 3 reading academic papers
- 4 reading magazines
- 5 reading different books

10  **2.46** Listen again. Antonia mentions three different books. Note down one piece of information about each book.

- 1 *The Superorganism*
- 2 *The Ants*
- 3 *Honeybee Democracy*

E Extension and review

11 Would you like to visit the Bristol Ant Lab? Why? / Why not? Write a brief explanation or tell a partner.

12 Which of these activities helped you understand Antonia best?

- thinking about the topic before listening
- listening to intonation to decide if a speaker's going to continue their point
- listening for key words and phrases