

The natural world



A



B



C



D

Warm Up

1 Pair Work Discuss. Where are the animals in the photos? Which are being used by people? How? Do you approve of the way they are being used? Why or why not?

2 Pair Work Discuss.

1. Name two or more animals for each category:

- | | |
|-----------|--------------------|
| mammal | endangered species |
| reptile | exotic animal |
| carnivore | predator |

2. Name two or more animals that live in the following places:

- | |
|-----------------------------------|
| in a sanctuary or nature preserve |
| in the wild |
| in a cage |

3. What do you know about the following issues?

- | | |
|---------------|-------------------------------|
| the fur trade | animal testing |
| animal rights | over-hunting and over-fishing |

Reading

- 1 Look at the two titles in the reading. What do you think the article will be about? Read and check your prediction.

How watching animals will save us

Becoming better observers of animal behavior may be the key to surviving natural disasters in the future. During the tsunami disaster of 2004, over 300,000 people died. No one has counted the number of animals killed, but we know that it wasn't many. All over the region, before the disaster struck, animals were behaving strangely.

Shortly before the tsunami, in Khaolak, Thailand, 12 elephants that were giving tourists rides became agitated. They suddenly left their usual habitat, carrying four surprised Japanese tourists to safety. On the eastern coast of India, flamingos, which should have been breeding at that time of year, suddenly flew to higher ground. Of the 2,000 wild pigs that inhabit an Indian nature reserve, only one was found dead after the tsunami.

The idea that animals are able to predict disasters is nothing new. In fact, it has been well documented over the years. Twelve hours before Hurricane Charlie hit Florida in 2004, 14 electronically tagged sharks left their natural habitat and stayed in deeper waters for two weeks. The sharks, which

were being observed by US biologists, had never done that before. They escaped the hurricane. In the winter of 1975 in Haicheng, China, snakes that would normally have been hibernating were seen on the ground. Days later, there was an earthquake that measured 7.3 on the Richter Scale.

Unlike human beings, wild animals perceive a great deal of information about the world around them. Their senses are sharper, and they can feel even the smallest changes in the environment. In other words, they see natural warnings that are invisible to the human eye. Ancient people probably had similar "animal instincts," which they needed to survive but which have been lost to us as modern technology leads us further away from the dangers that nature poses.

The real question is, can we use the reactions of animals to save ourselves from natural disasters? Animal behavior expert Rupesh Kancera believes we have no choice. "The technology that we rely on isn't always perfect, and in poorer countries it isn't even available. Animals know the environment better than any of us. When they run for their lives, we must follow."

And how rats will rescue us . . .

In the earthquake capitals of the world—Japan, Los Angeles, Turkey—rats will soon be man's new best friend.

In the aftermath of an earthquake, rescue teams send in dogs that are trained to smell people. No one knows how many lives they have saved, but there are, of course, drawbacks: dogs are big, and they can't get into small spaces. Now a new research project is using a smaller animal to save lives: the rat.

How does it work? First, the rat is trained to smell people. When it does, the rat's brain gives off a signal, similar to what happens when a dog smells a bomb. The trained rats are sent into the wreckage. On their back is a very small radio, which

is connected to the rat's brain. The rescuers, at a safe distance, monitor the radio signals. When the rat's brain activity jumps, the rescuers know that someone is alive.

Of course, there are already robots that can do this job, one of which looks and moves like a snake, but rats are better because they can smell more efficiently than robots, whose noses don't work well when there are other smells around. Rats also crawl efficiently in destroyed buildings—something that robots are not as good at—and they don't need electricity. What's more, rats have a survival instinct: they get out when it isn't safe.

- 2 Answer the questions.

1. What did the animals do before the natural disasters occurred?
2. How do we know what the sharks did before Hurricane Charlie?
3. What specific ability allows animals to "predict" natural disasters?
4. How do rescue teams know that a rescue rat has found someone?

- 3 **Pair Work** Discuss.

1. What differences between humans and animals does the article describe?
2. Do you believe in a "sixth sense" or "animal instincts"?
3. Do you think these ideas for using animals will be successful? What problems might there be?

Grammar | adjective clauses

- 4 Read the sentences from the reading in the Active Grammar box and underline the adjective clauses. Then answer the questions.

Active Grammar

Restrictive adjective clauses

Twelve elephants that were giving tourists rides became agitated.

Of the 2,000 wild pigs that inhabit an Indian nature reserve, only one was found dead.

There are already robots that can do this job.

The technology that we rely on isn't always perfect.

Non-restrictive adjective clauses

Flamingos, which should have been breeding at that time of year, suddenly flew to higher ground.

The sharks, which were being observed by US biologists, had never done that before.

Rats are better because they can smell more efficiently than robots, whose noses don't work well.

1. Which clauses identify a person or thing and cannot be deleted without changing the meaning of the sentence?
2. Which clauses add extra information and can be deleted without changing the meaning of the sentence?

See Reference page 133

- 5 Answer the questions.

1. In which type of adjective clause (restrictive or non-restrictive) can we use *that* instead of *who* or *which*?
2. When do we use commas with adjective clauses?
3. Which clause ends with a preposition? Find another example in the final paragraph of the reading and underline it. Where does the preposition go in formal English?
4. Find the sentence in the final paragraph of the reading that contains the structure *one of which*.

- 6 **Pair Work** Do the pairs of sentences have the same meaning? If not, how are they different? Which sentences are incorrect?

1. a. Monkeys whose DNA is similar to that of humans are often used in research into the brain.
b. Monkeys, whose DNA is similar to that of humans, are often used in research into the brain.
2. a. Guide dogs were first used by soldiers who had been blinded during World War One.
b. Guide dogs were first used by soldiers, who had been blinded during World War One.
3. a. The funnel spider's web, which is extremely fine, was used to cover wounds.
b. The funnel spider's web, that is extremely fine, was used to cover wounds.
4. a. Homing pigeons are able to return, weeks later, to the place which they came from.
b. Homing pigeons are able to return, weeks later, to the place from which they came.

- 7a Rewrite the questions, including the phrases in the box. Add commas where necessary.

1. Should hunting be allowed?
2. Should zoos be banned?
3. Should the Amazon rainforest be protected? If so, how?
4. Should the use of fur for clothing be banned?

- that take animals from their natural habitat
- that is done only for sport and not for food
- about which there has been much debate in the fashion industry
- which is being destroyed

- b **Pair Work** Discuss the questions. Think of arguments for both sides of each issue.

Listening

8 ▶ 2.02 Listen. Mark the sentences true (T), false (F), or doesn't say (?). Then listen again to check answers.

- ___ 1. You need to do some planning before you buy your rabbits.
- ___ 2. Rabbits eat almost any type of food.
- ___ 3. You should be vaccinated.
- ___ 4. You should have at least two rabbits in a hutch.
- ___ 5. Lots of people choose a dog because it looks cute.
- ___ 6. The speaker thinks it's a bad idea to keep a dog outside.
- ___ 7. The owner's lifestyle is an important consideration in choosing the breed of dog.
- ___ 8. The speaker knows a lot of dog-owners.



Pronunciation | unstressed prepositions

9a How is *to* pronounced in these phrases and sentences from the listening?

- 1. The first thing you need to do . . .
- 2. You just need to do a little planning.
- 3. You have to make sure to get food that they like.
- 4. You have to clean out the hutch once a week or more . . .

b ▶ 2.03 Listen to check.

c ▶ 2.04 Identify the unstressed prepositions in the following sentences. How are they pronounced? Listen and check.

- 1. A lot of people, for example, just go for the cutest dog they can find.
- 2. The first thing you need to do is ask yourself a few questions.
- 3. . . . the next thing to think about is what type of dog would be best for you.
- 4. . . . if you spend most of your time at home watching TV, get a less active dog.

10 **Pair Work** Think of something that you know how to do well. Make notes on the steps involved. Then tell your partner how to get started. Use some of the language from the How To box.

Learning how to windsurf is hard at first, but it's worth the trouble. The first thing you should do is find a good teacher. You'll probably need to rent the equipment at first . . .

How To:

Explain procedures

Prefacing with a general statement	<ul style="list-style-type: none"> • <i>It can be a little tricky at first.</i> • <i>It's pretty straightforward.</i> • <i>It's really easy./It's a piece of cake.</i>
Sequencing	<ul style="list-style-type: none"> • <i>First . . ./The first thing you have to do is . . .</i> • <i>Then/Second/The next step is to . . .</i> • <i>Finally,</i>
Checking understanding	<ul style="list-style-type: none"> • <i>OK?/Got it?/Any questions?</i>

Writing

11 A friend is going to stay in your home while you are away. Write three notes explaining how to use your washing machine, feed your pet, water your plants, etc.



Speaking

1 **Pair Work** Discuss. What's the hottest place you have been to? What problems could you have visiting a very hot place? Think about things such as animals, places to stay, health.

Listening

2a ▶ 2.05 Listen to the first part of David Clark's story. Answer the questions.

- 1. What does David need from the bureaucrat?
- 2. What is the bureaucrat's attitude toward David's trip? How do we know?
- 3. The bureaucrat has a sense of humor. What does he say that shows this?

b **Pair Work** Discuss. What do you think the journey will be like? What do you think the Danakil Depression looks like? How do you think David will feel when he arrives?

I don't think David knows what he's getting into. I bet he is going to be surprised . . .

c ▶ 2.06 Listen to the second part of the story. Were your predictions correct?

3 **Group Work** Discuss.

- 1. Why do you think David wanted to make this journey?
- 2. Why do you think explorers go to extreme places?
- 3. Why do you think David is disappointed with the Danakil Depression?
- 4. Would you like to go there? Why or why not?
- 5. "It is better to travel than to arrive." Do you agree with this proverb?

Vocabulary | descriptive language

4a Listen to the story on page 83 again. Match the words and phrases on the left with the words on the right to make common collocations.

- | | |
|--------------------|---------------|
| ___ 1. spectacular | a. level |
| ___ 2. permanent | b. town |
| ___ 3. tourist | c. settlement |
| ___ 4. below sea | d. landscape |
| ___ 5. active | e. volcano |
| ___ 6. ghost | f. site |

b Which of the collocations could be used to describe the photos below?



5 Complete the sentences with collocations from Exercise 4a.

- The world's most popular _____ is the area around the Eiffel Tower, in Paris.
- Mount Etna in Sicily, Italy, is the world's most _____.
- Antarctica is the only continent on which there is no _____. It is too cold!
- The Dead Sea is the lowest point on Earth. It is 1,371 feet (418 meters) _____.
- Walhalla, Australia, is a rare example of a _____ that came back to life. Originally a gold mining town, it was abandoned when the gold ran out, but is now popular with tourists.
- Some of the world's most _____ can be found in Cappadocia, Turkey.

6a Read Audioscripts 2.05 and 2.06 on page 155. What things and people do the words in the box describe? Look up the definitions of any words that you don't know.

Ex: "Drone" describes the noise of a fan.

Verbs	Adjectives
drone	warped
zig-zag	vibrant
loom	hunched
trespass	drenched
	parched

b **Pair Work** Now think of other things you can describe using the adjectives.

Vibrant—the colors were vibrant

Barcelona has a vibrant nightlife. She has a vibrant personality.

Grammar | verbs followed by infinitives or gerunds: meaning

7 Complete the tasks in the Active Grammar box.

Active Grammar

Some verbs can be followed by an infinitive or a gerund. Sometimes the meaning changes. Compare the sentences and answer the questions.

Mean

- Which verb phrase means a) intended, b) involves?
 - ___ *Going to the Danakil Depression means walking into hell on Earth.*
 - ___ *David meant to write a book after his trips.*

Remember

- Which verb phrase describes a) a responsibility or something that you need to do, b) a memory of the past?
 - ___ *He remembers experiencing a feeling of emptiness when he arrived.*
 - ___ *They tell you . . . to remember to drink even when you're not thirsty.*

Regret

- Which verb phrase means a) a feeling of sadness about something in the past, b) a formal apology?
 - ___ *I regret to inform you that your application for a visa has been turned down.*
 - ___ *I didn't regret going to the Danakil Depression.*

Stop

- Which verb phrase means a) paused in order to do something, b) completely finished something?
 - ___ *We stopped to visit a ghost town.*
 - ___ *David stopped looking for vegetation and wildlife once he realized nothing survived in the Danakil Depression.*

Try

- Which verb phrase describes a) an experiment to see what will happen (as a solution to a problem), b) an effort to do something difficult?
 - ___ *They had tried to build a railway.*
 - ___ *He tried drinking more water but he still felt terrible.*

Go on

- Which verb phrase means a) continued an action, b) did something after finishing something else?
 - ___ *They waved and went on riding.*
 - ___ *David Clark went on to write a book about his experiences.*

See Reference page 133

8 Using patterns from the Active Grammar box, add two words to complete each sentence.

Ex: I don't remember ^{taking the} photo, but it turned out really well.

- After six hours of driving, we take a break by the roadside.
- We visit the cathedral, but it was closed that day.
- Even after I told her to be quiet, she went loudly.
- She regrets so early this morning. Now she's really tired.
- I remembered traveler's checks this time. Last time, I forgot and lost all my money.
- After leaving school with a law degree, she to become a famous lawyer.

Speaking

9a Circle the correct choice.

- For me, a vacation means to lie/lying on a beach.
- I try spending/to spend time outside whenever I can.
- I'll never stop traveling/to travel, even when I'm old.
- I've never regretted to go/going anywhere.

b **Pair Work** Are the sentences true or false for you? Expand on your answer.

I prefer doing something active when I'm on vacation, like hiking or skiing. . .



Listening

- 1a Pair Work** Can you think of any jobs that involve animals? What skills do you think are required?
- b** 2.07 Listen and discuss the questions. What are Sharon's job responsibilities? How does Sharon feel about her job? What qualities do you think are necessary for a job like this? Would you like Sharon's job? Why or why not?

Reading

- 2** Read the article and then circle the correct choice to complete each statement.

ANIMALS ONLINE

- 1 Can you really buy anything on the Internet? Believe it or not, some of the items marketed on the Internet as gifts for children or as prestige items for the home are actually live animals, many of them endangered species.
- 2 Despite international laws against the sale of endangered species, animals such as gorillas, tigers, chimpanzees, and leopard cubs are bought and sold on the Internet, some for as little as a few hundred dollars. According to a report by the IFAW (the International Fund for Animal Welfare), well over 1,400 live, exotic animals were being sold online in just one 6-week period. "That's an astonishing number," says one IFAW employee involved in the study. Of these 1,400 animals, most of the online ads were for birds, though in the US alone, 13 primates, 5 big cats, and 2 rhinos were for sale.
- 3 So what exactly would it cost, and what would you have to do to buy a wild animal? The researchers found chimpanzees dressed as dolls for \$60,000 each. What about proof that you can look after and house an animal adequately? None needed. Although gorillas require space and very specialized care, the researchers also found a gorilla for sale for \$8,100. For those with a little more head room, giraffes can also be bought. Got-PetsOnline.com offered a young giraffe for \$15,000.
- 4 Though the vast majority of animals for sale are birds, monkeys make up a large portion of Internet sales, and experts are particularly concerned by the way they are marketed and traded on the Internet. A number of websites describe them as if they are little more than large, hairy dolls. They offer "accessories, such as diapers, bottles, and clothes." The traders even have a cute name for themselves: "monkey moms." They call the animals themselves "monkids." Virtually none of these websites explains how to take care of the animals.
- 5 When the IFAW undercover investigators contacted some of the US traders, they were told that it would be possible to export them to European countries—a blatant breach of EU law. There is also concern that demand for monkeys and chimps is fueling the illegal trapping and trading of wild species. Although there were approximately 2 million chimpanzees in the wild a century ago, there are as few as 150,000 left, and one research project says that by 2020 there will be a maximum of 100,000.
- 6 The effort to stamp out the live animal trade is made more difficult by the number of websites involved and by the fact that it is sometimes almost impossible to track sales made offline once sellers and buyers have made initial contact on the Internet. The IFAW's message to online shoppers is straightforward: "Buying wildlife online is as damaging as killing it yourself."

- The animals are marketed as if they are useful around the home/dangerous/toys.
- The IFAW was surprised at the size of the illegal market for wild animals/to find endangered species for sale/at the way the traders treat the animals.
- The online animal trade is one cause of economic problems in poor countries/violent crime/illegal hunting.

- 3 Pair Work** Discuss.
- Should people have wild animals as pets? Give reasons.
 - What can be done to stop the illegal trade? Is it possible to stop illegal Internet sales in general?

Grammar | *as . . . as*; describing quantity

- 4** Complete the tasks in the Active Grammar box.



Pronunciation

- 5a** 2.08 Listen to how *as* is pronounced in the sentences.

- b Pair Work** Now create sentences with some of the phrases from the Active Grammar box. Practice saying them.

The vast majority of my friends have pets.

- 6** Put the words in order. Begin and end each sentence with the underlined words.
- Hamsters many birth to as offspring can as give eight at a time.
 - The to able majority domestic repeat of parrots are vast human speech.
 - The life as housefly of 17 is short as a days.
 - Koalas lives their virtually of spend all asleep: 22 hours per day.
 - Tortoises years, well longer a over 100 live deal can great than humans.

Speaking

- 7 Pair Work** Discuss.
- Do you own or have you ever owned a pet? What type of animal?
 - Would you ever consider buying an animal on the Internet? In what circumstances?

Active Grammar

- as* + adjective + *as* is used to:
 - show that two things are equal
 - describe quantity
 Find three examples in the article (paragraphs 2, 5, and 6). Which meanings does *as* + adjective + *as* have in these cases?
- There are other phrases commonly used to describe quantity. Look at the phrases below and find their opposites in the article.

paragraph

- as much as* → _____
- well under* → _____
- a tiny minority of* → _____
- virtually all (of)* → _____
- precisely* → _____
- as many as* → _____
- a minimum of* → _____

- Which phrases use numbers? (For example, *as much as 20*)
- Which two phrases can't be used with count nouns?

See Reference page 133

Vocabulary | buying and selling

- 8a Match each phrase on the left with an expression with a similar meaning on the right.
- | | |
|---|--|
| ___ 1. It's in excellent condition. | a. It's one of a kind. |
| ___ 2. It's the latest model. | b. It's used. |
| ___ 3. It's second hand. | c. It's on the market. |
| ___ 4. It's available now. | d. It's not in perfect condition (it's been used a lot). |
| ___ 5. It's handcrafted. | e. You can choose from a selection of . . . |
| ___ 6. It's brand new. | f. It's made by hand. |
| ___ 7. It features . . . | g. It's still in its packaging. |
| ___ 8. It has some wear and tear. | h. It's as good as new. |
| ___ 9. It's unique. | i. It includes . . . |
| ___ 10. It comes in a wide range of . . . | j. It's state of the art. |

b **Pair Work** Say a sentence using a phrase from the Vocabulary. Without looking at the book, your partner rephrases the sentence, using his or her own words. Take turns creating and rephrasing more sentences.

Speaking

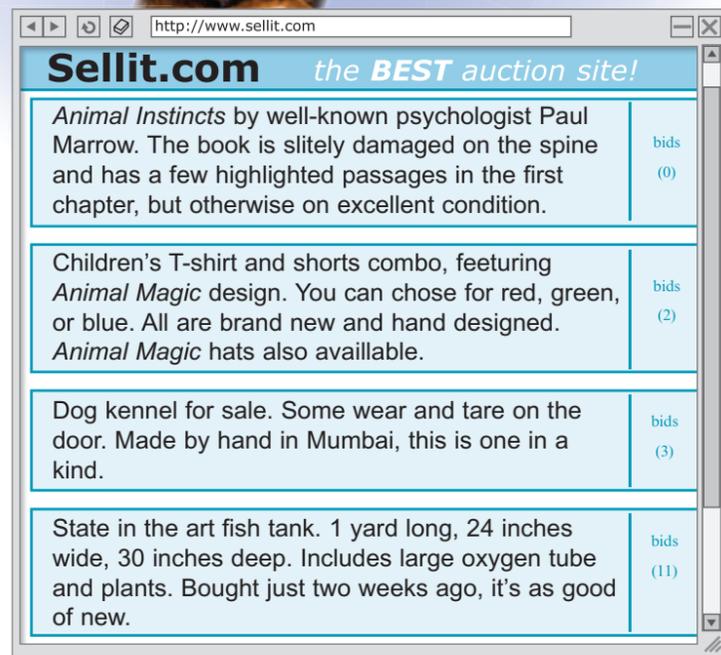
9 **Pair Work** Which phrases from the Vocabulary could you use to describe the things in the photos? Were any animals used to make these things?



Writing

10a Read the ads on an Internet auction site. Find five spelling mistakes and five preposition mistakes.

- b Choose something that you would like to sell (for example—furniture, books, toys, clothes) and write an ad describing the object, price, condition, etc.
- c **Group Work** Show your ads to each other. Ask and answer questions about the different items, and try to find something you would like to buy.
- d Tell the class about the item you decided to buy and explain why you chose it.



Review

1 Complete the paragraphs by inserting the phrases in the box in the correct places.

that trains who spend who trained when they who work that will that has

2 Combine the two sentences into one sentence, using adjective clauses.

Ex: The animals escaped to higher ground. The animals sensed the tsunami approaching.
The animals, which sensed the tsunami approaching, escaped to higher ground.

- I got a new dog at the animal shelter. The shelter rescues homeless animals.
 - Rats can smell more efficiently than robots. The rats are sent into damaged buildings.
 - The explorer was amazed by the view. She had hiked for hours up the mountain.
 - The volcano erupted last night. The volcano hadn't been active for years.
 - Many animals are sold illegally. The animals are sold on the Internet.
 - Zoos can help save endangered species. The species might otherwise become extinct.
- 3 Circle the correct choice to complete each sentence.
- I meant to say/saying something to you earlier, but now I've forgotten what it was.
 - She's such a crazy dresser. I hate to think/thinking what she's wearing tonight!
 - He remembered to lock/locking the door this time. Last time, we got robbed!
 - We regret to tell/telling you that your application was turned down.
 - Please stop to talk/talking. I can't hear the movie.
 - She tried to drink/drinking warm milk before bedtime, but she still couldn't sleep.
 - Despite a difficult childhood, he went on to become/becoming the world's greatest athlete.

4 Use the words in the box to complete the sentences.

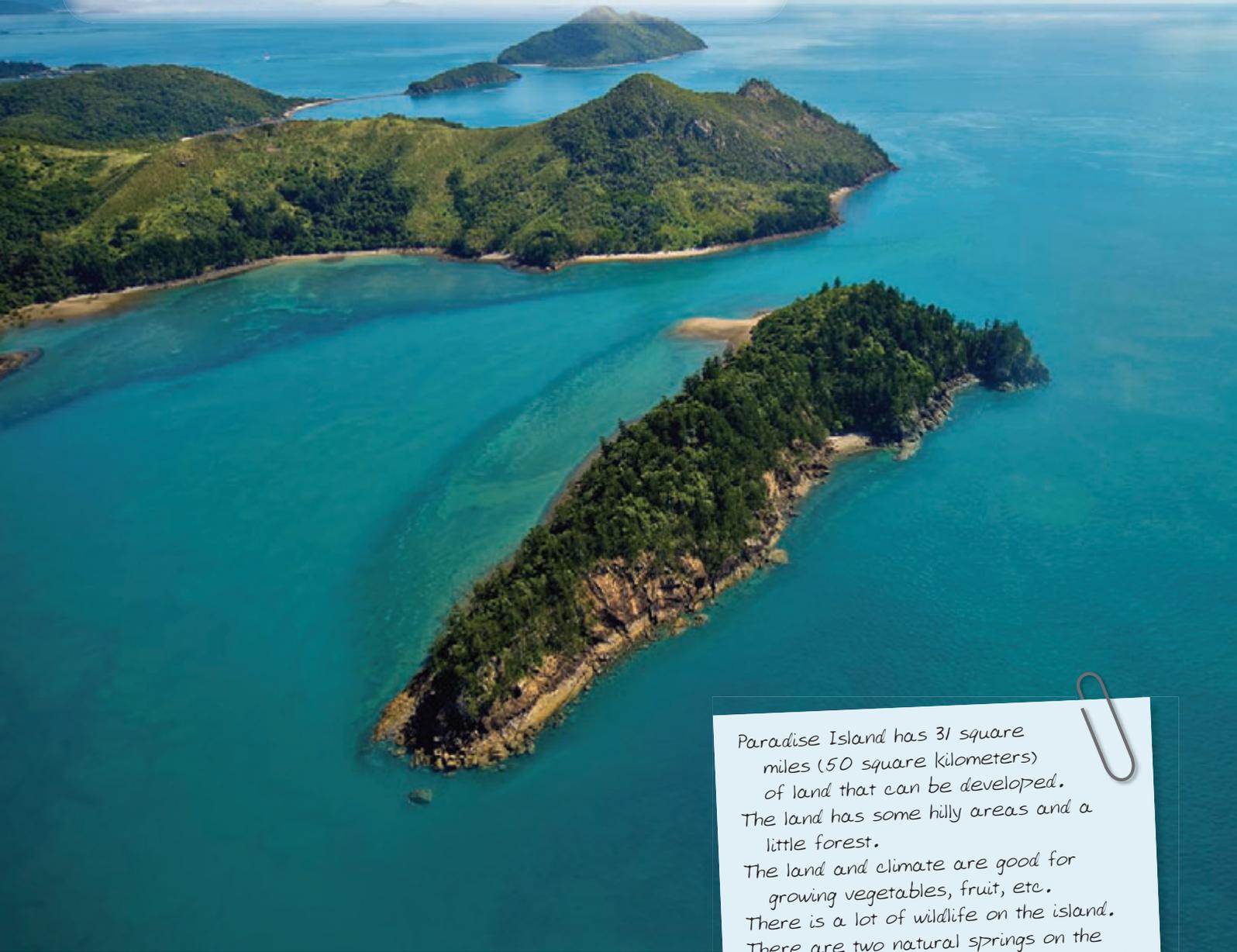
- Apparently you can buy a leopard for _____ little as \$10,000 on the Internet.
- A _____ majority of the public—nearly 90 percent—voted to keep the old currency.
- There are _____ 6,000 in the hall, but we don't know the exact number.
- I spent _____ all my money on the entrance fee. I only have \$5 left for food.
- This elevator holds a _____ of eight people.
- He's huge! He must be _____ over 6 feet tall.
- You can earn as _____ as \$200,000 a year, if you work hard enough.
- Virtually _____ of the team members had ever played there before.

maximum none well
 virtually vast as
 approximately much

One problem that faces many prison inmates, most of their time locked up, is how to develop self-esteem and do something useful. One idea been piloted at a prison in Washington is to get the inmates to train dogs eventually help disabled people. The project has been a great success. The relationship between the inmates and the guards at the prison has improved considerably. Many of the inmates, leave the prison, go on to work with animals.

In another scheme, Pilot Dogs, a company dogs for the blind in Ohio put five dogs in the hands of prison inmates, the dogs successfully.

Communication | reach a compromise on a plan



Paradise Island has 31 square miles (50 square kilometers) of land that can be developed. The land has some hilly areas and a little forest. The land and climate are good for growing vegetables, fruit, etc. There is a lot of wildlife on the island. There are two natural springs on the island. The spring water is very good for people's health. The island nearby has recently become more popular with tourists.

- 5 Look at the photo and read the notes about Paradise Island.
- 6 **Pair Work** Make a list of all the things you could do with the island if it belonged to you. Compare your ideas with other students.
- 7 **2.09** Listen to the discussion. Are any of their ideas the same as or similar to yours?
- 8 **SPEAKING EXCHANGE** Work in groups. Student A: read the role on page 138. Student B: read the role on page 141. Student C: read the role on page 142. Then discuss what to do with the land. You must agree to do something with it; if you can't agree on one thing, you can combine some of your ideas.
- 9 Report back to the class. What did you decide to do with the land?