

Sound



READING	Identifying tone and mood
VOCABULARY	Descriptive adjectives
GRAMMAR	Cleft sentences with <i>what</i>
WRITING	Using similes and metaphors

Discussion point

Discuss these questions with a partner.

- How loud do you imagine the sound of a volcano eruption might be? What could you compare it to? How far away do you think it could be heard?
- Look at the phrases that describe sounds. Rank the phrases, going from the softest (1) to the loudest (10).

___ bang of a drum	___ bark of a dog
___ crash of a glass breaking	___ honk of a car horn
___ whisper of a child	___ screech of brakes on a train
___ hum of a clothes dryer	___ scratch of a pencil across the page
___ buzz of a bee	___ boom of thunder

Vocabulary preview

Complete the paragraph with the correct form of the words in the box.

affect audible cease confuse distinguish roar sweep trouble

I recently had an ear infection, and it greatly (1) _____ my hearing. I couldn't (2) _____ between my friends' voices in a conversation. Their words were barely (3) _____. In frustration, I (4) _____ listening, and just read a magazine. Later, at the train station, I could scarcely hear the (5) _____ of the approaching train and so, was (6) _____ when it seemed to suddenly appear. When the doors of the train opened, the crowd of people (7) _____ me into the car. I was so (8) _____ by that experience and the growing pain in my ear that I went directly to the doctor.

READING 1 *The Secret Garden: An excerpt*

Before you read

Write answers to the question. Then discuss it with a partner.

When you were young, do you remember a place that was secret or mysterious or where you used to hide? Where was it? What did you do there? Did you play games, read, talk with a friend?

Global reading

1 Read the excerpt from *The Secret Garden*. Answer the questions.

- Where are Mary and Martha in this part of the story?
- Where does Mary think the crying sound is coming from?
- What caused the door to blow open?
- Martha has a different way of talking. How does the author show this?

IDENTIFYING TONE AND MOOD

When you read, you will feel affected by the language the author uses and the images the author creates. In literature as well as in more factual kinds of writing, you will need to be aware of the **tone** of writing. Tone is the author's attitude toward the story or topic, or even the audience. The author's tone can be humorous, serious, understanding, or critical. The tone can also refer to informal or formal language.

The author also uses language to create a **mood** or feeling. Words can communicate feelings of happiness, sadness, or humor — almost any emotion you can name. In a story, the mood changes, depending on what is happening. Noticing the mood can help you understand the story. Authors of non-fiction, however, do not use language to create mood.

2 Find a sentence in *The Secret Garden* which shows each mood in the box.

mysterious puzzled scary suspicious

The Secret Garden: An excerpt



Close reading

Find and underline each word in *The Secret Garden*. Read the context around the word. Then match the word to the definition.

- | | | | | | |
|-------------|---|------------|-------|---|---------------------------------|
| Paragraph 2 | 1 | shuddering | _____ | a | cold air that blows into a room |
| | 2 | buffeting | _____ | b | hallway |
| Paragraph 4 | 3 | wailing | _____ | c | clearly |
| Paragraph 5 | 4 | draught | _____ | d | not willing to change your mind |
| | 5 | passage | _____ | e | keep hitting with force |
| | 6 | plainly | _____ | f | shaking |
| Paragraph 7 | 7 | stubbornly | _____ | g | crying |



Frances Hodgson Burnett

¹In *'The Secret Garden'*, a novel written by Frances Hodgson Burnett in 1911, young Mary Lennox arrives from India to live with her uncle in Yorkshire, England. Her parents have died during an epidemic in India, and Mary is now alone. In India, she had grown up isolated from other children, and is an angry and lonely girl. At her uncle's house, she is often by herself and begins to explore the big quiet house. It seems to hold many mysteries and secrets. One night, she is sitting and talking with Martha, a young maid. Martha tells Mary to listen to the 'wind wutherin' around the house.

²Mary did not know what 'wutherin' meant until she listened, and then she understood. It must mean that hollow, shuddering sort of roar which rushed round and round the house, as if the giant no one could see were buffeting it and beating at the walls and windows to try to break in. But one knew he could not get in, and somehow it made one feel very safe and warm inside a room with a red coal fire.

Sitting by the fire, Mary asks Martha questions about her uncle and the house. After a while, they fall silent, listening to the wind blowing outside and watching the fire.

³But as she was listening to the wind she began to listen to something else. She did not know what it was, because at first she could scarcely distinguish it from the wind itself. It was a curious sound — it seemed almost as if a child were crying somewhere. Sometimes the wind sounded rather like a child crying, but presently Mistress Mary felt quite sure that this sound was inside the house, not outside it. It was far away, but it was inside. She turned round and looked at Martha.

⁴'Do you hear anyone crying?' she said.

Martha suddenly looked confused.

'No,' she answered. 'It's th' wind. Sometimes it sounds as if someone was lost on th' moor an' wailin'. It's got all sorts o' sounds.'

'But listen,' said Mary. 'It's in the house — down one of those long corridors.'

⁵And at that very moment a door must have been opened somewhere downstairs; for a great rushing draught blew along the passage and the door of the room they sat in was blown open with a crash, and as they both jumped to their feet the light was blown out and the crying sound was swept down the far corridor, so that it was to be heard more plainly than ever.

⁶'There!' said Mary. 'I told you so! It is someone crying—and it isn't a grown-up person.' Martha ran and shut the door and turned the key, but before she did it they both heard the sound of a door in some far passage shutting with a bang, and then everything was quiet, for even the wind ceased 'wuthering' for a few moments.

⁷'It was th' wind,' said Martha stubbornly. 'An' if it wasn't, it was little Betty Butterworth, th' scullery-maid. She's had th' toothache all day.' But something troubled and awkward in her manner made Mistress Mary stare very hard at her. She did not believe she was speaking the truth.

From: *The Secret Garden*, Frances Hodgson Burnett, London: Penguin Books Ltd., 1911.

Developing critical thinking

Discuss these questions in a group.

- 1 What could be making the crying sound? Give reasons.
- 2 What can you infer about daily life from the story?

ACADEMIC KEYWORDS

distinguish	(v)	/dɪ'stɪŋɡwɪʃ/
far	(adj)	/fɑː/
some	(det)	/sʌm/

READING 2 The loudest sound you've never heard

Before you read

For academic reading, it is a good idea to quickly scan the text so that you can adjust your reading strategies to the task. Scan *The loudest sound you've never heard* on the next page and answer the questions. Then discuss your answers with a partner.

- 1 Look at the title and the box of science terms. What terms do you already know? Is this a familiar or unfamiliar topic for you?
- 2 What information does the photo give you about the topic?
- 3 How many paragraphs are in the article? How long will it take you to read the article?

Global reading

- 1 Read *The loudest sound you've never heard* and answer the questions.

- 1 What is the tone of this article? Circle the word or words.

academic formal humorous informal

- 2 This article does not have a mood. Why not?

- 2 Read the topic notes. Match the notes to the paragraph number. There are two extra topics that are not in the article. Mark those with an X.

- | | |
|--------------------------------------------------|-------------------------------------------------------------|
| ___ <i>Infrasound – heard by animals.</i> | ___ <i>Discovery of infrasound</i> |
| ___ <i>Can be created by many natural events</i> | ___ <i>Travels through earth and ocean; can be measured</i> |
| ___ <i>How infrasound affects humans</i> | ___ <i>Best methods for measuring sound frequencies</i> |
| ___ <i>Can create health problems in humans</i> | ___ <i>Infrasound – less than 20 hertz, very low</i> |

Close reading

- 1 Read the sentences. Write *T* (True) or *F* (False) according to *The loudest sound you've never heard*. Then correct the false statements.

- 1 Scientists cannot measure sounds that are less than 20 hertz. _____
- 2 The Krakatoa Volcano erupted in Italy. _____
- 3 Meteorologists can use data about infrasound to predict air turbulence. _____
- 4 Before a volcano erupts, there is a great decrease in infrasound. _____
- 5 Some birds use infrasound to navigate. _____
- 6 Supersonic jets create infrasound. _____
- 7 Experiments have shown that about 80% of people may be affected by infrasound. _____

- 2 Answer the questions.

- 1 What is infrasound? Write a definition.
- 2 How did infrasound from Krakatoa affect people?
- 3 What natural events can create infrasound?
- 4 How does infrasound change before a volcano erupts?
- 5 Give an example of how an animal uses infrasound.
- 6 How does infrasound affect humans?

ACADEMIC KEYWORDS

associate	(v)	/ə'souʃi,et/
increase	(n)	/'ɪn,kriːs/
predict	(v)	/prɪ'dɪkt/

The loudest sound you've never heard

¹What do elephants, whales, alligators, hurricanes, and manmade explosions all have in common? They all can create infrasound, a mysterious sound that humans cannot hear. Humans can only hear sounds within a certain range of frequency. The frequency (the number of cycles of vibration per second) of sound is measured in a unit called a hertz. Humans can hear sounds from 20 Hz (hertz) to 20kHz (20,000 hertz), but scientists are able to measure sounds at much lower hertz. Infrasound is less than 20 hertz, which is a frequency too low for humans to hear.

²Scientists first became aware of the existence of infrasound in 1883, when the gigantic explosion of the Krakatoa volcano in Indonesia resulted in windows breaking hundreds of miles away and barometric pressure readings going haywire around the world. Scientists realized that the volcano created a massive yet inaudible infrasound, sweeping through the air around the world.

³Modern scientists are now collecting large amounts of infrasound data from measuring stations around the world. They have discovered that infrasound can be created by explosions, ocean storms, hurricanes, auroras (northern lights), and air turbulence. As they learn more about the infrasound patterns associated with certain situations, scientists can use the information to predict storms, volcanoes, and other disturbances. For example, airplanes are often tossed up and down by clear air turbulence, invisible air pockets that are not associated with bad weather. If meteorologists can distinguish the infrasound of air turbulence, they can warn pilots to avoid the dangerous areas.

⁴Infrasound can also be measured as it travels through the earth and ocean. Scientists are now measuring the rumblings of earthquakes and the powerful roars of volcanoes before they can be heard by humans. For example, researchers placed special microphones near the opening of Antarctica's Erebus volcano.

Even though they could hear practically nothing on the earth's surface, the underground devices measured a great deal of infrasound. Before the 1998 eruption of the Sakurajima volcano in Japan, infrasound instruments recorded a sharp increase in the frequency and power of the infrasound. Geologists have learned that infrasound is better for predicting a volcano than seismographic activity.

⁵To some creatures in the animal world, infrasound is loud and clear. Elephants make infrasounds that can be heard by other elephants up to 10 kilometers away, and can be heard through the ground up to 32 kilometers away. Infrasound travels much further in water, allowing some types of whales to communicate with each other across thousands of miles. Some birds use infrasound to navigate, and rock doves have heard infrasound measured at .05 Hz, an extremely low frequency. Understanding infrasound and how animals use it can increase our knowledge about animal behavior, but it can also show how our actions can disrupt these important sounds. For example, infrasound from supersonic jets, ships, and wind turbines has been shown to disrupt other natural infrasounds, leading animals to become confused and disoriented.

⁶Even though we humans can't hear infrasound, there is some evidence that we are affected by it. In a 2003 experiment in the United Kingdom, 750 concertgoers listened to four separate musical pieces. Unknown to the attendees, some of the music pieces were accompanied by infrasound. After the concert, 22% of the concertgoers reported feeling troubled by uneasiness, chills, and nervousness during the infrasound sections of the concert. There are many stories of people being affected by infrasound, but most of these lack true scientific evidence. More research needs to be done to support claims that people are affected in predictable ways by infrasound.

Developing critical thinking

1 Discuss these questions in a group.

- 1 Would it be advantageous for humans to be able to hear infrasound? Why or why not? Make a list of the pros and cons.
- 2 In our daily lives, we are surrounded by all sorts of sounds. What sounds are the most pleasant or relaxing? Do you enjoy being in complete silence?

THINK ABOUT:

communication	dangerous
concerts	upsetting
weather	warning signs

2 Think about the ideas from *The Secret Garden: An excerpt* and *The loudest sound you've never heard* and discuss these questions in a group.

- 1 In *The Secret Garden*, Mary seems to hear things that Martha doesn't. Do you think that there may be some people who can hear infrasound? Why or why not?
- 2 Imagine a story about a person with the unusual ability to hear infrasound. What special things might this person be able to do? What would some of the difficulties be?

Vocabulary skill

DESCRIPTIVE ADJECTIVES

Knowing a wide variety of descriptive adjectives will improve your reading comprehension and your writing. Some general adjectives are over-used, such as *nice*, *good*, *bad*, *hard*, *loud*, and *big*. Using more specific adjectives makes a sentence more interesting. Compare the examples.

This is a **nice** cup of coffee.

This is a **delicious** cup of coffee.

It's a very **big** tree.

It's a **gigantic** tree.

There are a wide variety of adjectives for the senses. For example, adjectives related to sight can describe color, size, shape, and quality.

1 Which adjectives do not belong in each group?

- 1 Cross out the two adjectives that are not usually used to describe sound.

deafening	juicy	mysterious	shrill
high	muffled	round	soft

- 2 Cross out the two adjectives that are not usually used to describe sight.

bright	glamorous	narrow	square
damp	golden	noisy	steep

- 3 Cross out the two adjectives that are not usually used to describe smell.

fragrant	red	spicy	sweaty
friendly	smoky	strong	sweet

- 4 Cross out the two adjectives that are not usually used to describe taste.

bitter	delicious	salty	squeaky
dark	fresh	sour	sweet

- 5 Cross out the two adjectives that are not usually used to describe touch.

bumpy	green	rough	warm
delicious	icy	soft	wet

2 Complete the paragraph with adjectives from Exercise 1.

With a (1) _____ scream, I woke myself up from the nightmare. Shocked and suddenly wide awake, I laid still and wondered where I was. The air was (2) _____ and (3) _____, and I shivered under the thin blankets. Coming under the curtains was the (4) _____ light of dawn. I realized that I was in my own (5) _____ bed. My breathing slowed down, and I felt calmer. Inhaling, I could smell a (6) _____ breakfast. I could hear the (7) _____ sounds of people talking in the kitchen.

WRITING A descriptive anecdote

You are going to learn about using similes, metaphors, and cleft sentences with *what*. You are then going to use these to write an anecdote including some description.

Writing skill

USING SIMILES AND METAPHORS

When you write a story, you can use similes and metaphors to make it more interesting. Generally similes and metaphors are not used in more formal writing.

In a simile, you say that two things are similar using *like* or *as*.

*It sounds **as if** someone was lost on the moor.*

*Infrasound is **like** the sound of a gigantic rumble that you can't hear.*

*A blast of infrasound from a whale can be **as** powerful **as** being physically hit.*

In a metaphor, you say that one thing is another thing. It is a stronger image than a simile.

*That hollow, shuddering sort of **roar** which rushed round and round the house.*

*As I walked into the party I was **hit** by **a wall** of sound.*

*The silence was **deafening**.*

1 Answer the questions about *The Secret Garden*.

- As well as the metaphor in the skill box above, the author introduces another metaphor for the wind in paragraph 2 of the text. What does she say the wind is?
- In paragraph 3, the author uses a simile to say what the sound was like. What is the simile?

2 Use your imagination to complete this paragraph, based on paragraph 5 of *The Secret Garden*.

But as I was listening to (1) _____, I began to listen to something else. I did not know what it was, because at first I could scarcely distinguish it from (2) _____. It was a (3) _____ sound—it seemed almost as if (4) _____. Sometimes the (5) _____ sounded like (6) _____, but soon I felt quite sure that this sound was (7) _____. It was (8) _____, but it was (9) _____.

3 Write sentences using the simile or metaphor.

- 'as quiet as a mouse'
- 'like Einstein'
- 'as loud as a freight train' 'is a freight train'
- 'as strong as an ox' 'is an ox'
- 'is my lifeline'
- 'like a lion'

Grammar

CLEFT SENTENCES WITH WHAT

In a cleft sentence with *what*, the word order is changed to give emphasis to what comes first in the sentence. A *what*-clause is often used to emphasize emotions such as *like*, *need*, *feel*, *think*, *want*, *dislike* and *prefer*.

Form	Example
[<i>What</i> + noun/pronoun + emotive verb] + verb <i>to be</i> + noun or noun clause	<i>We need to distinguish between real and imagined sounds.</i> → <i>What we need to do</i> is to distinguish between real and imagined sounds.
A <i>what</i> -clause with the auxiliary <i>do</i> is used to emphasize the event or action.	<i>He left the door unlocked.</i> → <i>What he did</i> was leave the door unlocked.
[<i>What</i> + subject + <i>do</i>] + verb <i>to be</i> + verb clause	<i>I analyze all of the experiment data.</i> → <i>What I do</i> is analyze all of the experiment data.

- 1 Mark the cleft sentences with a C. Mark the regular sentences with a check (✓). In the cleft sentences, underline the *what* clause.

- What he did was measure the low sound frequencies.
- I didn't hear what she said.
- What the children love is playing in the water.
- He can listen and identify what instrument is being played.
- 'What is the problem?' I asked.
- What they do is conduct experiments with infrasound.

- 2 Rewrite the sentences as cleft sentences to emphasize the action or the emotion.

- They decided to soundproof the basement.
- I need to interview people who work with deaf people for my project.
- They want to discuss solutions to the problems of noise pollution.
- I felt upset that he wasn't listening to what I said.
- She always asks for the quietest room in the hotel.
- I love the sound of waves crashing on the shore.

- 3 Complete each cleft sentence with your own information. Then share with a partner.

- What I enjoy doing on the weekends ...
- What I feared during the storm ...
- What I dislike ...
- What I did ...
- What we did to ...
- What ... does ...

WRITING TASK

In this writing task, you will write the beginning of an anecdote, a short retelling of something that happened to you or someone you know. Think of an anecdote in which sound was important in some way.

Audience: peers/classmates
Context: an anecdote or letter
Purpose: to describe something that happened in an interesting way

BRAINSTORM

- With a partner, discuss the possible topics. Choose one for your writing.
 - a scary or frightening experience
 - a good surprise
 - an outdoor adventure
 - a funny experience
 - an unexpected event on a trip
 - a very loud sound
- Fill in the graphic organizer with ideas about your anecdote. Then decide what information to include. You do not need to include descriptions related to all five senses, but you do need to include a description of sounds.

The story	The senses
<i>who</i>	<i>sound</i>
<i>what</i>	<i>sight</i>
<i>where</i>	<i>touch</i>
<i>when</i>	<i>taste</i>
<i>why and how</i>	<i>smell</i>

PLAN

- Briefly, tell your anecdote to your partner. Answer any questions. This will help you organize your anecdote and decide what information and details to include.
- To make your writing more interesting, think of a simile or metaphor to include. Write it several different ways, and then choose the best version.

WRITE

Write your anecdote, using descriptive adjectives. Use a variety of sentence types, including simple, compound and complex sentences, and a cleft sentence.

SHARE

Exchange anecdotes with a partner. Read the checklist on page 109 and provide feedback to your partner.

REWRITE AND EDIT

Consider your partner's comments and write a final draft of your anecdote.

STUDY SKILLS Using the thesaurus

Getting started

Discuss these questions with a partner.

- 1 What type of dictionary do you use? What information does it include?
- 2 Do you use a dictionary to help you when you are writing? How does it help you?
- 3 Have you ever used a thesaurus to find synonyms (or antonyms)? When? For what types of writing?

Scenario

Read the scenario and think about what Kumar is doing right and what he is doing wrong.

Consider it

Look at these tips for using a thesaurus. Which ones do you already follow? Which ones are most useful to you?

- 1 **Know the benefits** The average thesaurus contains over 100,000 synonyms for words. Using a thesaurus can help you build your vocabulary, avoid repetition in your writing, express your ideas more accurately, and make your descriptions richer and more interesting.
- 2 **Know when to use it** Use a dictionary, when you want to know the meaning of a particular word. Use a thesaurus when you already have a word in mind but feel that it does not express exactly what you want to say, or when you want to avoid repeating a word in a passage, or when you are looking for a more (or less) formal/poetic/scientific, etc. word.
- 3 **Choose the right type** There are two types of thesaurus: those for general use are organized alphabetically, like a dictionary; the other type organizes words by theme or topic (e.g. medicine, music).
- 4 **Learn the features** In addition to synonyms, a thesaurus may list antonyms or contain topical word lists or other useful features.
- 5 **Be aware that synonyms aren't exact translations** No two words have exactly the same meaning nor convey the same tone, feeling, or level of formality. When in doubt, use the dictionary to double check meaning to help you make a choice for which word to choose.
- 6 **Check out electronic and online options** These days, many electronic dictionaries have thesaurus features. Smartphones have downloadable thesaurus 'apps', and there are many thesaurus websites. Choose the option that works best for you.

Over to you

Discuss these questions with a partner.

- 1 Which type of thesaurus would be most convenient and useful for you (e.g. printed book, electronic, online, alphabetical, topical)? Why?
- 2 What are the potential disadvantages of using a thesaurus?
- 3 What additional features would you ideally like to have in your thesaurus (e.g. antonyms, word lists, pronunciation information)? Why?

Kumar enjoys writing in English, and he even keeps an English journal, which he uses as a diary and for writing short stories and poems. This semester, he is taking a creative writing course for English majors. Sometimes he finds it hard to express his ideas because he isn't sure of the right vocabulary in English. He sometimes uses the dictionary when he wants to know the English translation for a word in his own language, but he finds it annoying to have to stop his writing often and check a big, bulky book. In these cases, he just uses simple words he already knows in English that have a similar meaning to the word in his first language. Two consistent comments from Kumar's writing teacher are that he should try to use more descriptive language in his writing and he needs to avoid repetition of the same words.