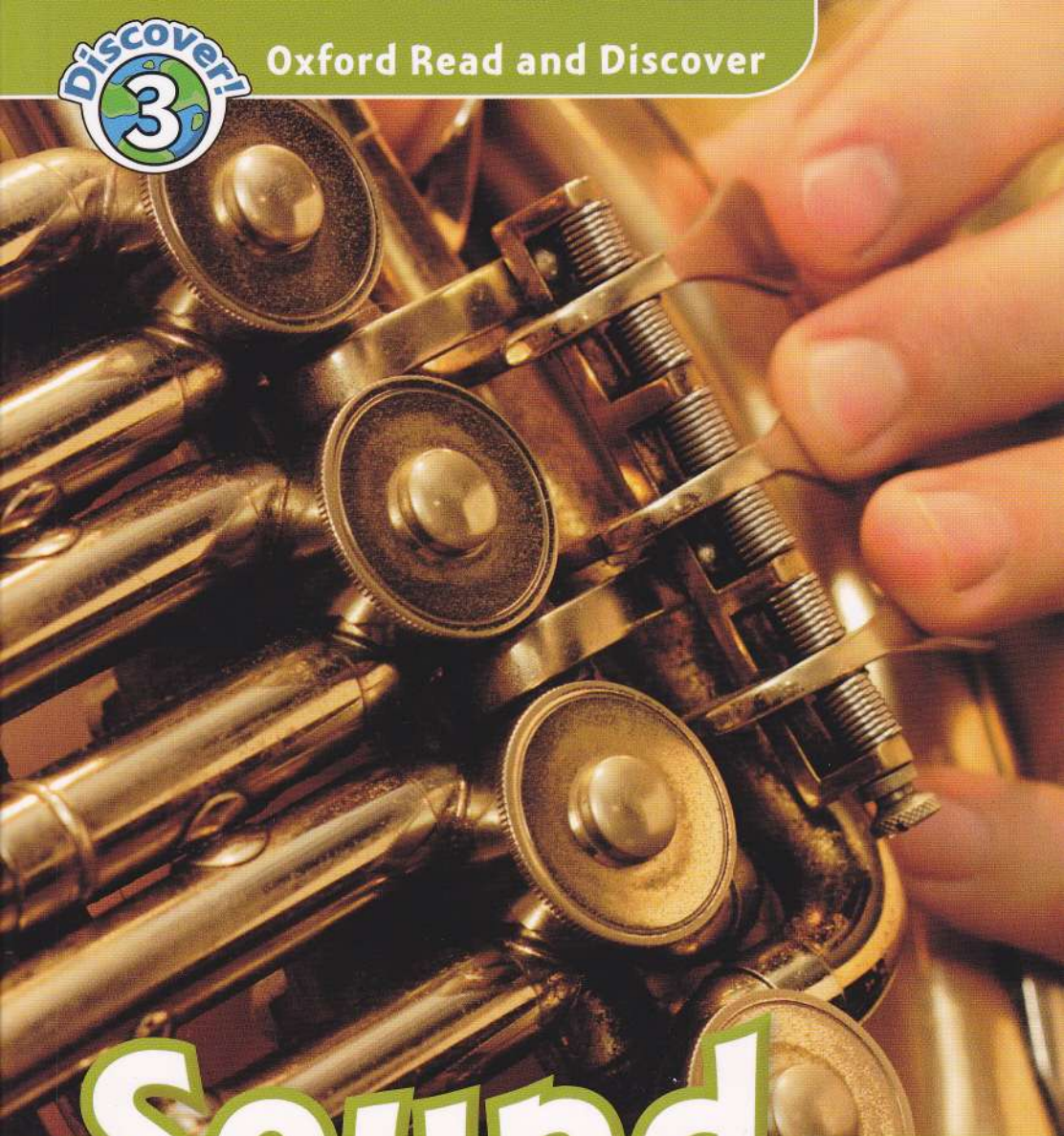




Oxford Read and Discover



Sound And Music



Sound And Music

Richard Northcott

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Introduction

Listen to the sounds around you. What can you hear? Can you hear cars? Can you hear people's voices? Maybe you can hear a television, or music on the radio.

Look at these pictures. What are these sounds? Do you like these sounds? Which sounds are music? What type of music do you like?



Now read and discover more about sound and music!

1 How Sound Moves



Shouting at a Soccer Game

When you speak, sing, or shout, the sound of your voice moves through the air. The sound goes to other people, and they hear it. Sound moves very fast.



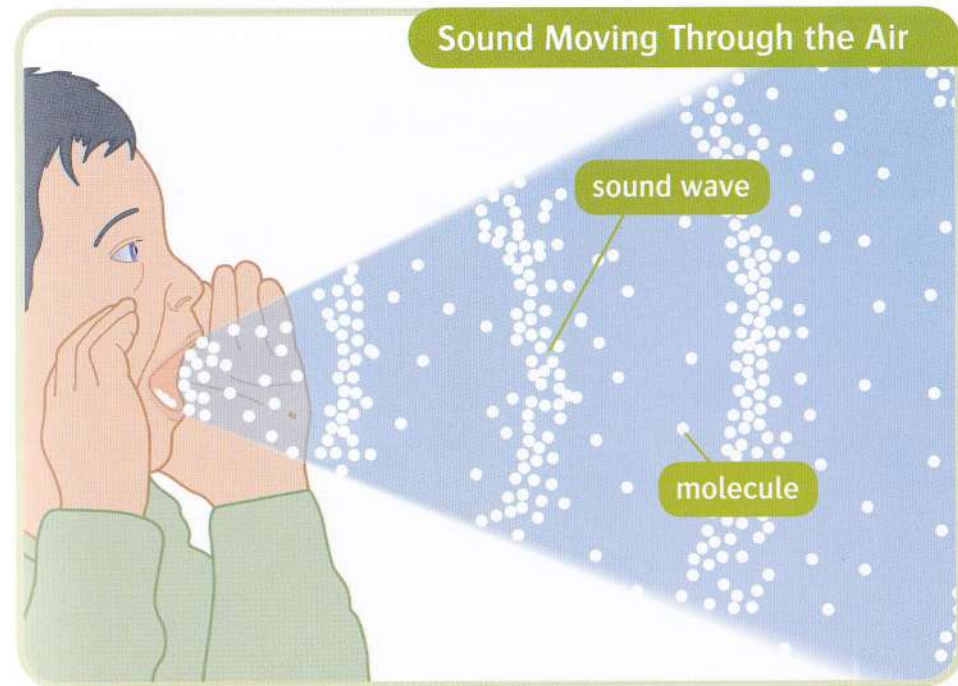
Sound moves through air at about 350 meters per second. The sound of a bus moves faster than the bus!



How does sound move through the air? The air is made of billions of molecules. The molecules are very small, so you can't see them.

Your voice pushes the molecules. The molecules move like waves in the ocean. The movements of the molecules are called sound waves.

The sound waves from loud sounds go far. The sound waves from quiet sounds don't go far.



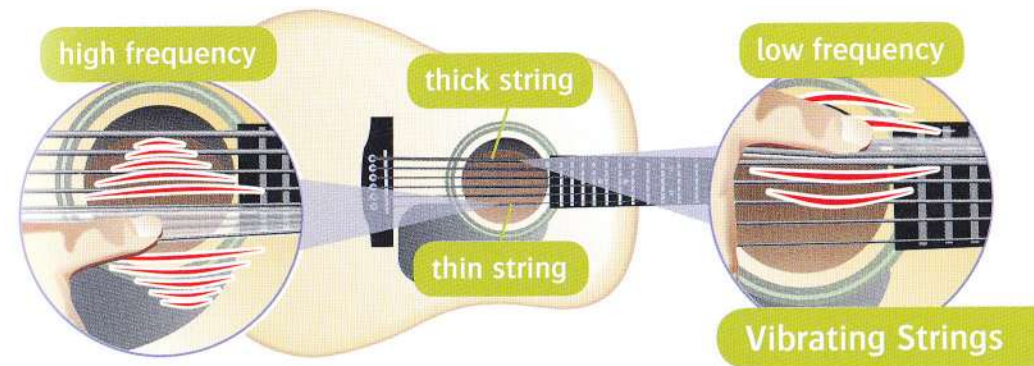
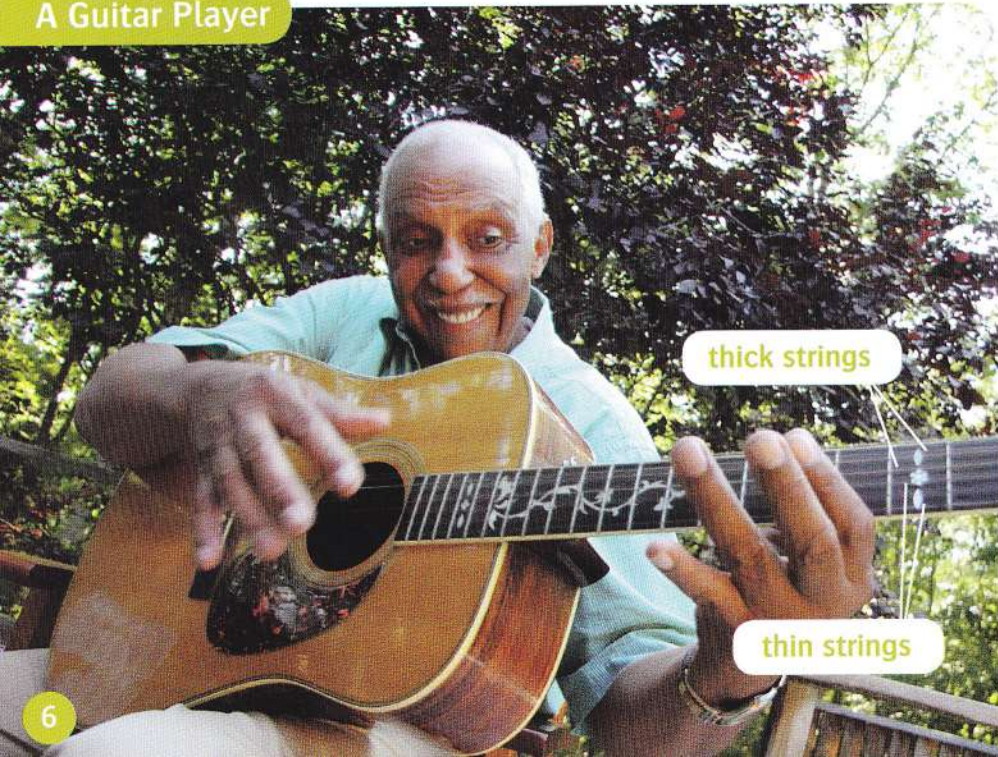
2

Low Sounds, High Sounds

Some sounds are low and some sounds are high. We can hear low sounds and high sounds everywhere. A plane makes a low sound, but when birds sing, they make a high sound.

Think about the strings of a guitar. The thin strings make a high sound and the thick strings make a low sound.

A Guitar Player



Vibrating Strings

The thin guitar strings vibrate fast. You can't see them move. The thick strings vibrate slowly. These different types of vibration are called frequency. The sound of the thin strings has a high frequency. The sound of the thick strings has a low frequency.

A baby's cry makes a high sound and it has a high frequency. A truck makes a low sound and it has a low frequency. A baby's cry is made of lots of thin sound waves. The sound waves from a truck are thicker.

Making a High Sound



Making a Low Sound



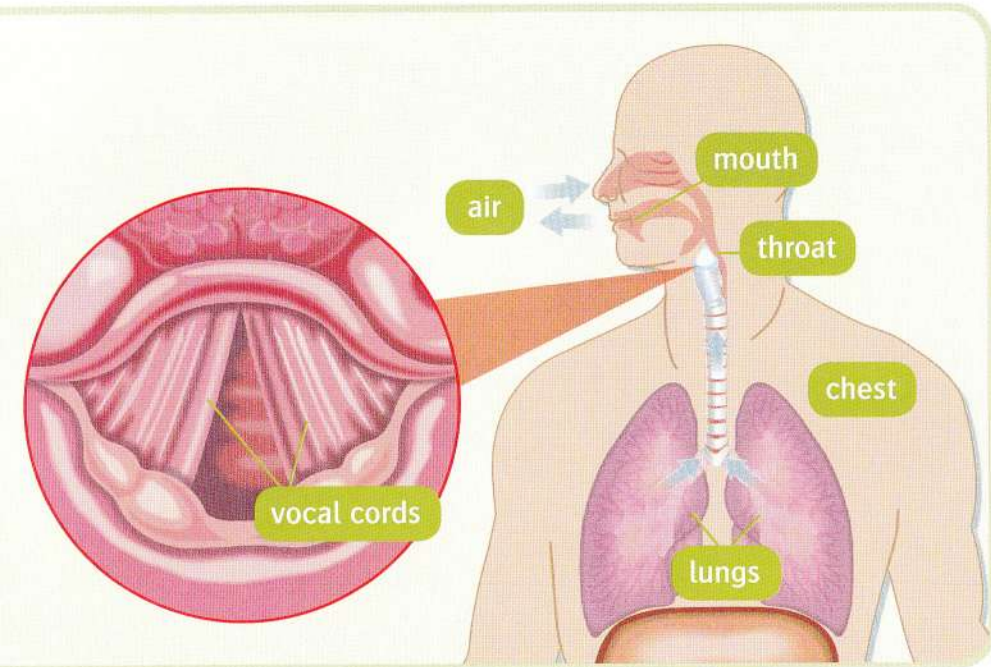
➔ Go to pages 26–27 for activities.

3

Your Voice

Everyone's voice is different. A man's voice is usually lower than a woman's voice.

Put your hand on the front of your throat and say something. When you speak, your throat vibrates. In your throat, you have vocal cords. When you speak, air from your lungs goes between your vocal cords, and your vocal cords vibrate.



A Singer and Her Teacher

When you sing, you use your mouth, your throat, and your chest. You make your vocal cords shorter or longer, so that you can sing high notes or low notes. Singers can learn how to use their body, so that they can sing better. Some singers have teachers who help them.



Some people in Siberia can sing two notes at the same time. They are called throat-singers.



4

Musical Instruments

Let's look at different musical instruments. Some are called wind instruments. Players use air from their lungs when they play a wind instrument.

Trumpet players press the trumpet on their lips and they blow air into the trumpet. Their lips vibrate, then the air in the trumpet vibrates and makes a sound.

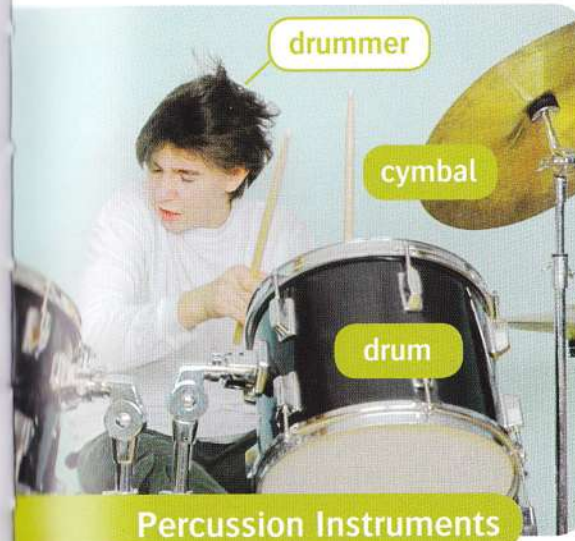
trumpet



flute



clarinet



drummer

cymbal

drum

Percussion Instruments

When a drummer hits a drum, the air in the drum vibrates and makes a sound. Other instruments, like cymbals or xylophones, make a sound when the player hits them. These instruments are called percussion instruments.

Guitars, violins, and cellos are stringed instruments. Guitar players pluck the strings of a guitar, but violin and cello players use a bow. They touch the strings with the bow and the strings vibrate.

Stringed Instruments



violin

bow

cello

5

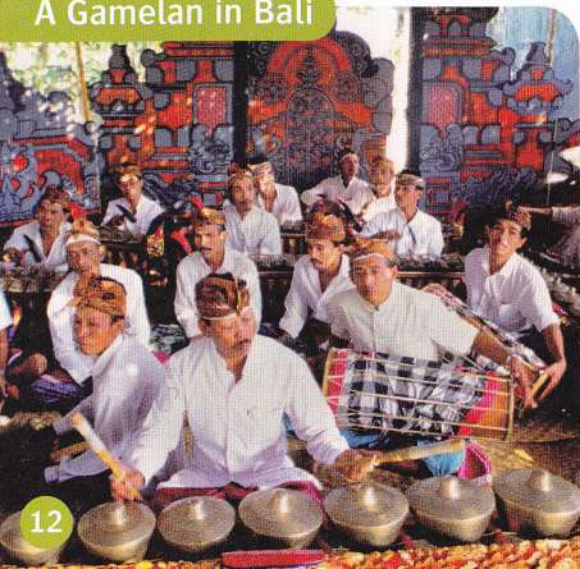
Music Around the World

Around the world you can find thousands of different musical instruments.

In Bali in Indonesia, there are orchestras called gamelans. In a gamelan there are lots of different percussion instruments. The players in a gamelan usually sit on the floor.

The bandoneon is a type of wind instrument. It's like a box with air inside. You squeeze it and it makes a sound. In Argentina, you can listen to bandoneon players in the streets.

A Gamelan in Bali



12

A Bandoneon Player in Argentina



A Koto Player in Japan

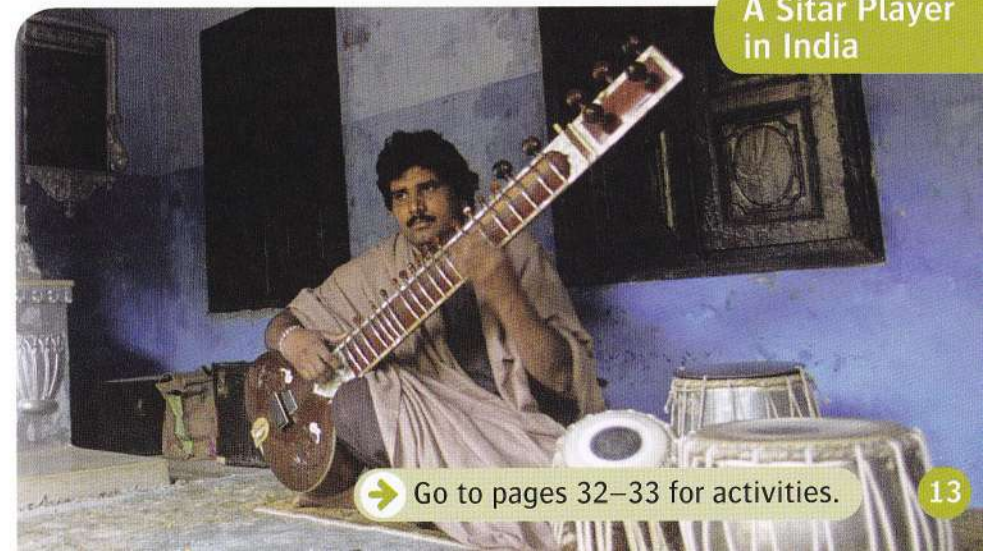


bridge

The koto is a stringed instrument from Japan. It has 13 strings. Koto players pluck the strings with their thumb and two fingers. The players move the small, white bridges to make different notes.

The sitar is a stringed instrument from India. It isn't easy to play. It has lots of strings. Some sitars have 23 strings.

A Sitar Player in India



Go to pages 32–33 for activities.

13

6

Orchestras and Concerts

The musicians in an orchestra listen to their instrument, and to all the other instruments at the same time. The musicians watch their conductor, too.

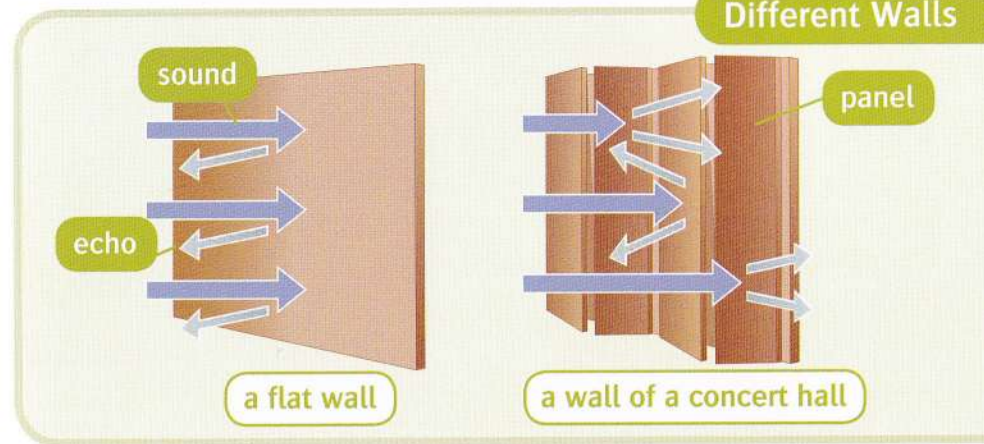
Musicians in an orchestra always practice before a concert. When they practice, the conductor sometimes tells them to play slower, or more loudly. Conductors move their hands and arms to help the orchestra.

An Orchestra



conductor

Different Walls



a flat wall

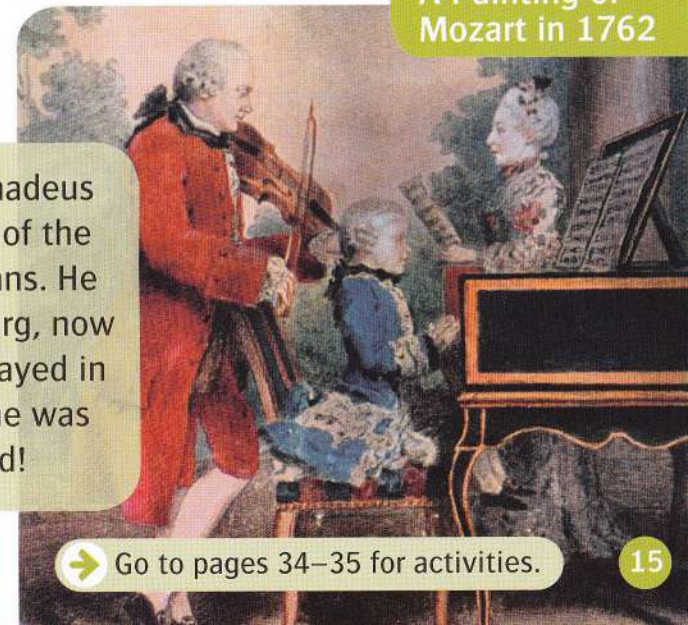
a wall of a concert hall

Not all rooms are good for concerts. In a room with flat walls, the sound of the music can bounce off the walls and make an echo. In concert halls, the walls are not flat. They are usually made of different panels. The sound bounces in different ways so there's no echo.

A Painting of Mozart in 1762



Wolfgang Amadeus Mozart was one of the greatest musicians. He was from Salzburg, now in Austria. He played in concerts when he was only six years old!



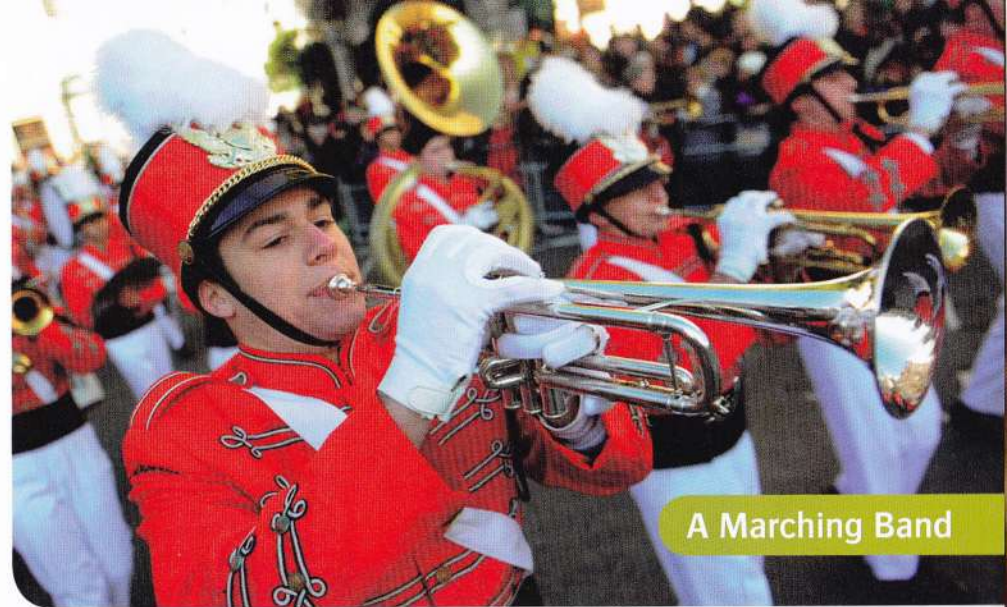
➔ Go to pages 34–35 for activities.



At a Rock Concert

When you listen to music, you sometimes want to tap your foot. When you listen to music with a strong rhythm, you want to dance.

What is rhythm? Sing your favorite song, and tap your foot, too. The sound of your foot is the rhythm of the song. The rhythm of a rock band is strong. When you listen, you want to move or dance.



A Marching Band

All music has rhythm, but there are different types of rhythm. The rhythm of a marching band is always the same, like the sound of marching.

In flamenco music from Spain, the rhythm gets faster and slower. Flamenco dancing is sometimes slow, and sometimes fast. It's very exciting!



A Flamenco Dancer with a Guitar Player

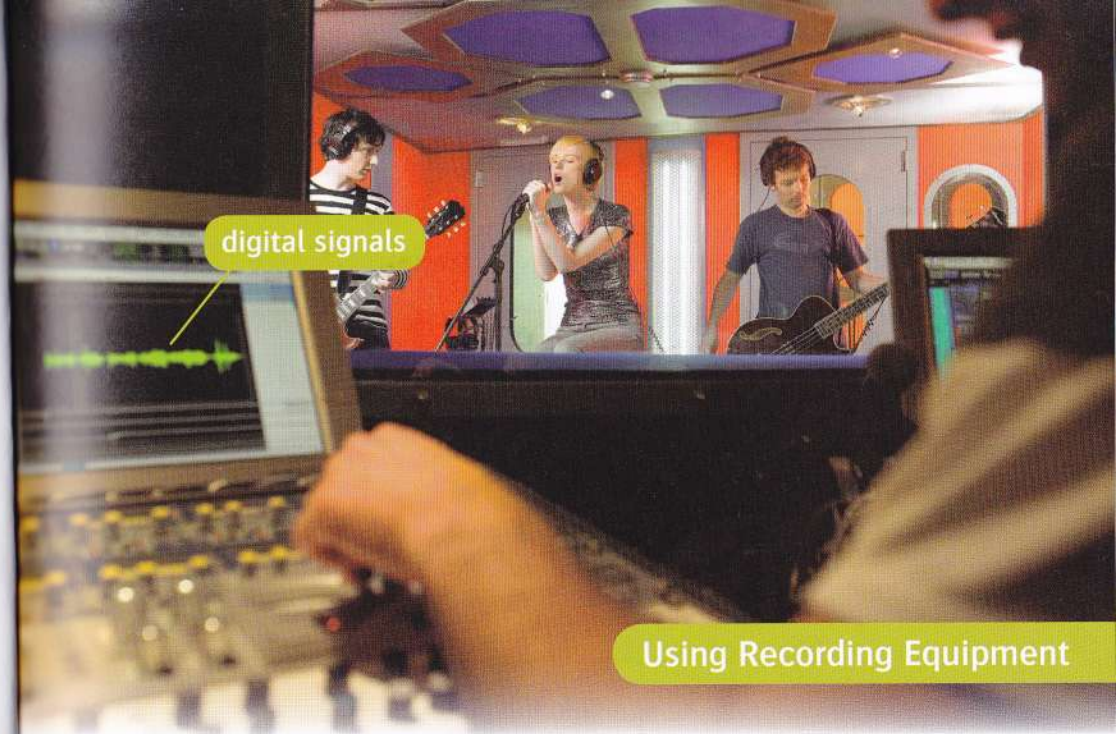
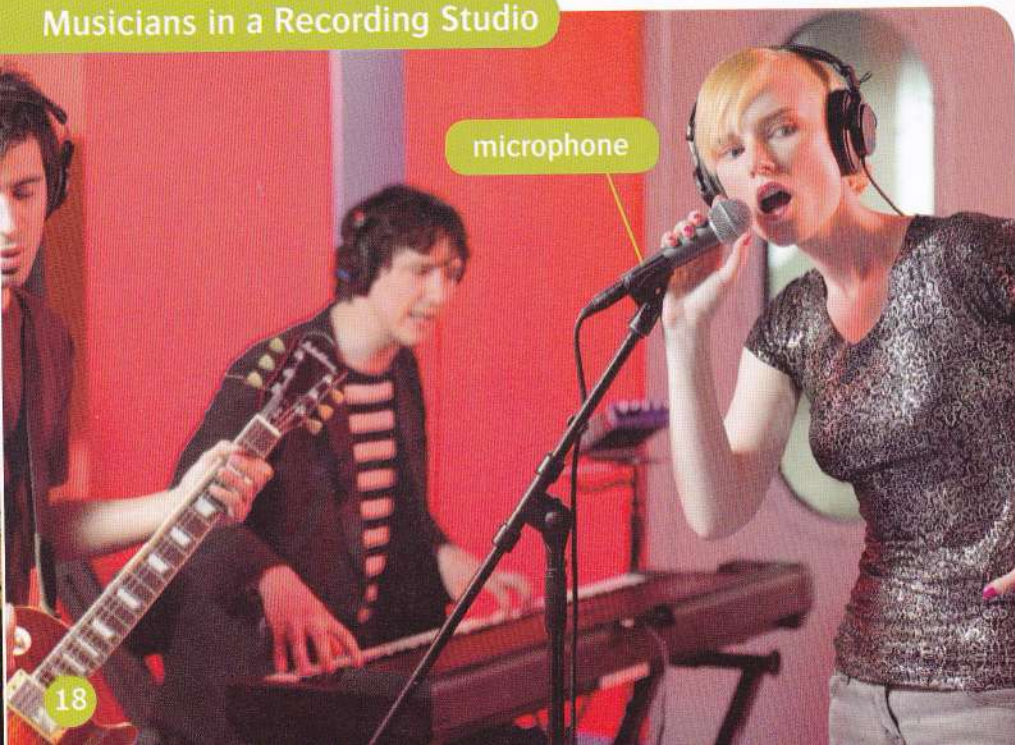
8

Recording Music

Today there's music everywhere. People listen to music at home or in their car. With an MP3 player, they can listen to their favorite songs when they are on a train or walking in the streets.

Where does a song come from? First, a songwriter writes a song and musicians play it. They practice, then they play the song in a recording studio in front of a microphone.

Musicians in a Recording Studio



Using Recording Equipment

In the studio, a sound engineer uses recording equipment and records the song. Now the song is a lot of digital signals. The sound engineer uses a computer and works with the signals. This makes the sound of the song better.



The first sound recordings were about 130 years ago. The first microphones were like big trumpets.



9

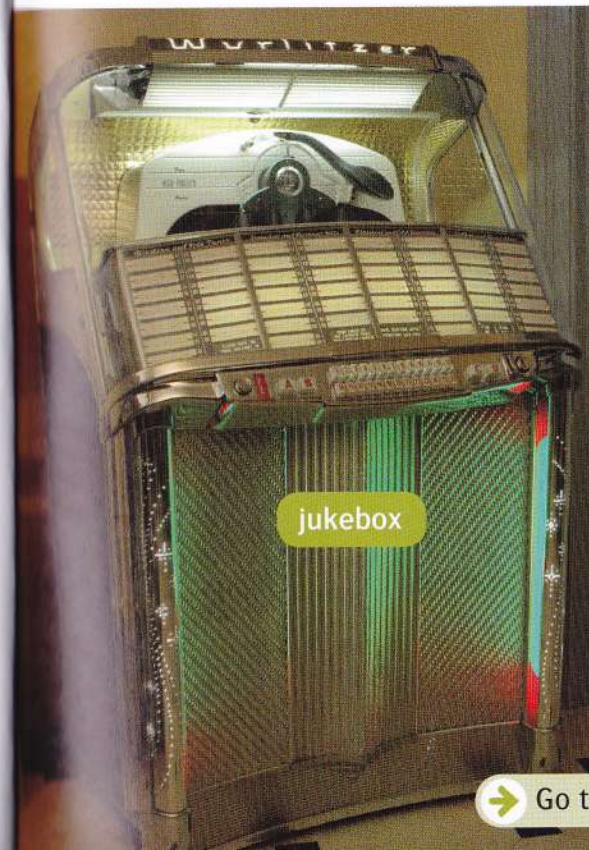
Buying Music

Today, people can buy music on the Internet. The music comes to their computer or phone. The music is made of thousands of digital signals. These signals stay on the computer or phone, and people can listen to the music when they want. People can also move the music from their computer to their MP3 player.

Music on the Internet



In the past, it wasn't so easy to buy music. About 100 years ago, people started to buy records. They played them on record players. Later, there were big jukeboxes in cafés. In a jukebox there were about 50 records. People put coins in the jukebox and it played their favorite song. About 40 years ago, there were cassettes. They were good because people played them in their cars. Then about 30 years ago, there were compact discs, or CDs.



jukebox



old record player



record

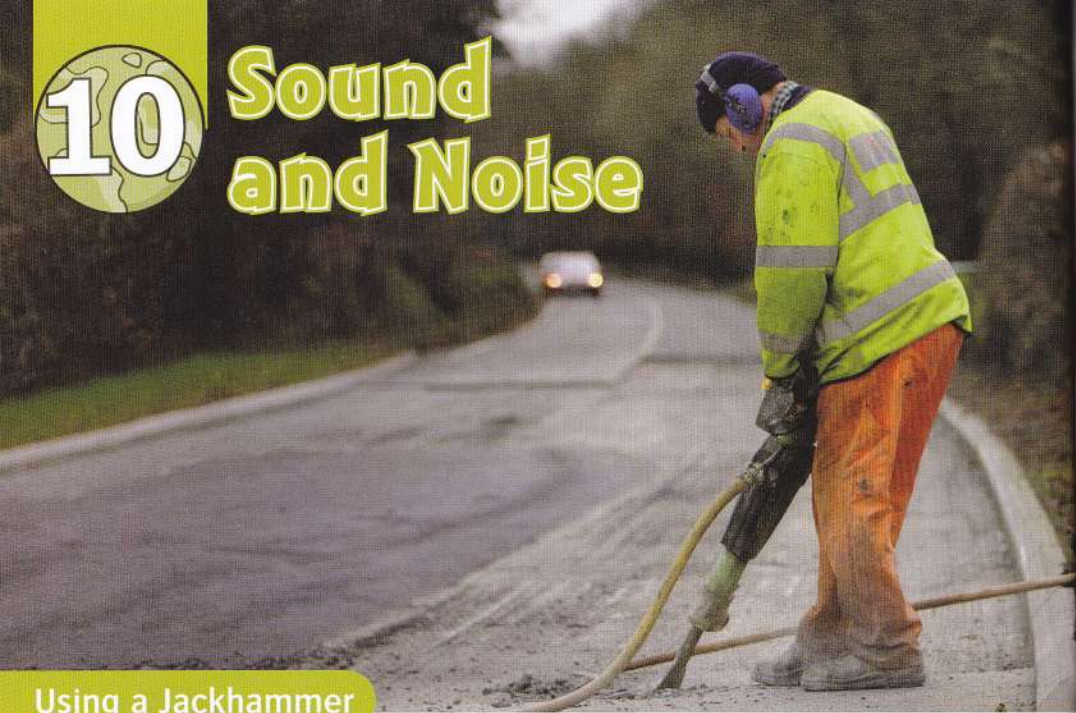
CD

cassette

➔ Go to pages 40–41 for activities.

10

Sound and Noise



Using a Jackhammer

We measure sound in decibels. The sound of a quiet wind is 10 decibels. When people speak, their voices are about 50 decibels. A jackhammer is about 100 decibels. Sounds of more than 120 decibels can be bad for your ears. A very loud sound or a bad sound is usually called a noise.



Some animals can hear better than people. Your cat can hear more sounds than you!



Don't listen to very loud music with earphones. It can hurt your ears. Other loud noises can be good, like the sound of a car. It tells you, 'A car is coming. Don't cross the street now.' Always listen carefully before you cross the street.

Listen to music, listen to people's voices, listen to the wind. Use your ears and listen to all the sounds around you!



➔ Go to pages 42–43 for activities.

1 How Sound Moves

← Read pages 4–5.

1 Write the words.

shout molecule push
sound waves voice waves



1 waves



2



3



4



5



6

2 Complete the sentences.

fast molecules move shout voice waves

- When you shout, the sound of your voice moves through the air.
- Other people can hear the sound of your _____.
- There are billions of _____ in the air.
- Molecules _____ like waves in the ocean.
- Sound _____ are movements of molecules.
- Sound moves very _____.

3 Match. Then write the sentences.

The girl is _____
Her voice is pushing _____
Other people _____
Sound moves _____
The sound of a bus _____
What sounds can _____

the molecules through the air.
moves faster than the bus.
at 350 meters per second.
shouting.
you hear now?
can hear her.

1 The girl is shouting.

2

3

4

5

6

4 Answer the questions.

1 Where are you now?

2 What sounds can you hear?

3 What sounds can you hear when you're in a bus?

4 What sounds can you hear when you're in a park?

2 Low Sounds, High Sounds

← Read pages 6–7.

1 Complete the sentences.

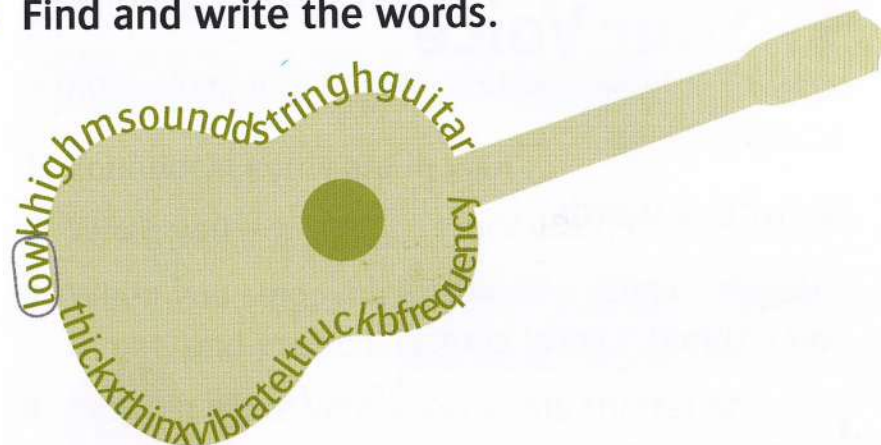
baby guitar truck high low

- 1 A _____ has thin strings and thick strings.
- 2 The thin strings make a _____ sound.
- 3 The thick strings make a _____ sound.
- 4 The sound of a _____'s cry has a high frequency.
- 5 The sound of a _____ has a low frequency.

2 Write true or false.

- 1 When birds sing, they make a low sound. false
- 2 A guitar has thin strings and thick strings. _____
- 3 A guitar can make high sounds and low sounds. _____
- 4 The thin strings of a guitar make a low sound. _____
- 5 The sound of a truck has a high frequency. _____
- 6 The sound waves from a truck are thin. _____

3 Find and write the words.



- | | |
|--------------|----------|
| 1 <u>low</u> | 6 _____ |
| 2 _____ | 7 _____ |
| 3 _____ | 8 _____ |
| 4 _____ | 9 _____ |
| 5 _____ | 10 _____ |

4 Complete the chart.

~~a thin guitar string~~ a truck a baby's cry
a bird's song a plane a thick guitar string

Things That Make a High Sound	Things That Make a Low Sound
<u>a thin guitar string</u>	_____
_____	_____
_____	_____

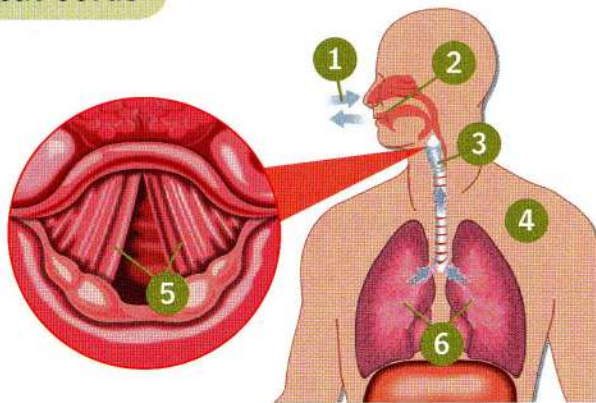
3 Your Voice

← Read pages 8–9.

1 Write the words.

lungs chest mouth
air throat vocal cords

- _____
- _____
- _____
- _____
- _____
- _____



2 Write *higher* or *lower*.

- A man's voice is lower than a woman's voice.
- A baby's voice is _____ than a man's voice.
- On a guitar, the sound of a thin string is _____ than the sound of a thick string.
- The sound of a plane is _____ than a bird's song.
- A girl's voice is _____ than a man's voice.

3 Complete the sentences.

high longer mouth notes speak throat

- Your vocal cords are in your _____.
- When you _____, your vocal cords vibrate.
- When you sing, you use your _____, your throat, and your chest.
- You can make your vocal cords shorter or _____.
- Some people can sing _____ notes and low notes.
- Some people can sing two _____ at the same time.

4 Answer the questions.

- Where are your vocal cords?

- What do your vocal cords do when you speak?

- Which is usually higher – a man's voice or a woman's voice?

- What can Siberian throat-singers do?

4 Musical Instruments

← Read pages 10–11.

1 Write the words. Then complete the chart.

clarinet cymbals drum flute
guitar cello trumpet violin



- 1 _____ 4 _____ 7 _____
2 _____ 5 _____ 8 _____
3 _____ 6 _____

Wind Instruments	Percussion Instruments	Stringed Instruments

2 Circle the correct words.

- Percussion instruments make a sound when the player **hits** / plucks them.
- Xylophones are **wind** / **percussion** instruments.
- All **stringed** / **wind** instruments have strings.
- Players pluck the strings or use a **drum** / **bow**.
- Cellos** / **Trumpets** and flutes are wind instruments.
- When the **air** / **voice** in a trumpet vibrates, it makes a sound.

3 Complete the sentences about you.

Write *can* or *can't*.

- I _____ play the guitar.
- I _____ sing.
- I _____ play the trumpet.

4 Write about your friends and family.

My friend Joe can play the violin.

My friend Serena can't play the guitar.

5 Music Around the World

← Read pages 12–13.

1 Circle the odd one out.

- 1 sitar gamelan bandoneon koto
- 2 world Japan Argentina India
- 3 play squeeze floor pluck
- 4 percussion wind stringed orchestra
- 5 thirteen two thumb twenty-three

2 Write true or false.

- 1 There are only two players in a gamelan. _____
- 2 There are lots of percussion instruments in a gamelan. _____
- 3 A bandoneon is like a box. _____
- 4 You hit a bandoneon to make a sound. _____
- 5 A koto has three strings. _____
- 6 Koto players pluck the strings with their thumb and fingers. _____
- 7 It's easy to play a sitar. _____
- 8 All sitars have 23 strings. _____

3 Complete the sentences.

floor notes orchestras play streets strings

- 1 People _____ sitars in India.
- 2 Some sitars have 23 _____.
- 3 In Argentina, people play the bandoneon in the _____.
- 4 Koto players move the bridges to make different _____.
- 5 There are _____ in Bali called gamelans.
- 6 In a gamelan, the players sit on the _____.

4 Match. Then write complete sentences.

sitar
bandoneon
gamelan
koto

an orchestra
a stringed instrument
a wind instrument
a stringed instrument

Indonesia
Japan
Argentina
India

- 1 A sitar is a stringed instrument from India.
- 2 _____
- 3 _____
- 4 _____

7 Rhythm

← Read pages 16–17.

1 Write *true* or *false*.

- All music has rhythm. _____
- All music has the same rhythm. _____
- The music at rock concerts has a strong rhythm. _____
- The rhythm of a marching band gets faster and slower. _____
- Flamenco music is from Spain. _____
- Flamenco music is always slow. _____

2 Match. Then write the sentences.

You tap your foot
There are different
The rhythm of a
marching band
The rhythm of
flamenco music

is always the same.
when you listen to music.
gets faster and slower.
types of rhythm in music.

- _____
- _____
- _____
- _____

3 Order the words.

- are / There / types / of / rhythm. / different
There are different types of rhythm.
- is / strong. / rock / band / The / rhythm / of / a

- music / Spain. / Flamenco / is / from

- exciting. / very / is / Flamenco / dancing

4 Answer the questions.

- What is your favorite song?

- Can you sing it and tap your foot at the same time?

- Does it have a strong rhythm?

- What music has a fast rhythm?

- What music has a slow rhythm?

8 Recording Music

← Read pages 18–19.

1 Write the words.

microphone sound engineer MP3 player
recording studio musicians digital signals



1 _____



2 _____



3 _____



4 _____



5 _____



6 _____

2 Number the sentences in order.

- The musicians go to a recording studio.
- The musicians play the song in front of a microphone.
- Musicians practice the song.
- 1 A songwriter writes a song.
- A sound engineer records the song.

3 Write correct sentences.

- 1 Today, people have MP3 songs.
Today, people have MP3 players.
- 2 They can't listen to their MP3 player in the streets.

- 3 A microphone writes songs.

- 4 A sound engineer works in a store.

- 5 A sound engineer doesn't have a computer.

4 Answer the questions.

- 1 Where do people listen to their MP3 player?

- 2 Where do musicians record their songs?

- 3 What does a sound engineer do?

- 4 Do you have an MP3 player?

9 Buying Music

← Read pages 20–21.

1 Write true or false.

- 1 People can buy music on the Internet. _____
- 2 About 100 years ago, people had CDs. _____
- 3 People had jukeboxes in their homes. _____
- 4 There were records in jukeboxes. _____
- 5 People put coins in jukeboxes. _____
- 6 Cassettes came later than CDs. _____

2 Match. Then write the sentences.

About 100 years ago,
Later, they listened to
Today, people can buy
Compact discs are
Do you

jukeboxes in cafés.
called CDs.
people had record
players.
have an MP3 player?
music on the Internet.

- 1 _____
- 2 _____
- 3 _____
- 4 _____
- 5 _____

3 Find and write the words.



computer internet records music song
jukebox vcafé coins playlisten

- | | |
|---------|----------|
| 1 _____ | 6 _____ |
| 2 _____ | 7 _____ |
| 3 _____ | 8 _____ |
| 4 _____ | 9 _____ |
| 5 _____ | 10 _____ |

4 Complete the sentences.

CDs everywhere home
Internet player songs



I like music. There are lots of _____ on my computer. I have an MP3 _____, so I can listen to music _____. When I want to buy a new song, I buy it on the _____. My mother and father have _____. They listen to their CDs at _____ or in the car.

10 Sound and Noise

← Read pages 22–23.

1 Write the words.

cat wind earphones
car jackhammer street



1 _____



2 _____



3 _____



4 _____



5 _____



6 _____

2 Circle the correct words.

- 1 We measure / hear sound in decibels.
- 2 A jackhammer / voice is about 100 decibels.
- 3 It's bad / good to listen to loud music with earphones.
- 4 Some loud noises can be / is good.
- 5 Cats can see / hear more sounds than people.

3 Complete the sentences.

animals bad coming car measure listen

- 1 We _____ sound in decibels.
- 2 Sounds of more than 120 decibels can be _____ for your ears.
- 3 Some _____ can hear better than people.
- 4 The sound of a _____ can help us.
- 5 It tells us, 'A car is _____.'
- 6 Always _____ before you cross the street.

4 Answer the questions.

- 1 How many decibels are people's voices when they speak?

- 2 Is the sound of a car a quiet sound?

- 3 Is the noise of a jackhammer very loud?

- 4 Do you like the sound of the wind?

- 5 What sounds do you like?

Project 1

A Sounds Poster

1 Make a list of things that make sounds.



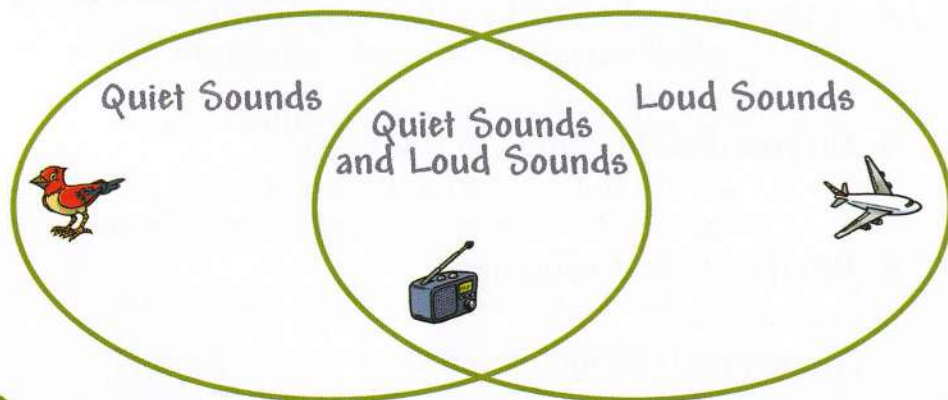
a bird

a radio

a plane

2 Find photos of these things, or draw pictures.

3 Make a poster. Show things that make quiet sounds, loud sounds, or quiet sounds and loud sounds.



Project 2

A Music Interview

1 Interview a friend. Write notes.



Name: _____

1 What type of music do you like?

2 Who is your favorite singer?

3 What is your favorite song?

4 Do you have an MP3 player?

5 Do you buy music on the Internet?

6 Do you listen to CDs?

7 Can you play a musical instrument?

2 Write sentences about your interview. Display your work.

Picture Dictionary



billion



buy



café



coins



cross



pluck



press



push



quiet



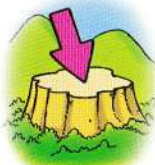
radio



cry



earphones



flat



hurt



lips



rock band



shout



sound



sound engineer



sound waves



loud



man



march



measure



MP3 player



squeeze



street



tap your foot



thumb



touch



musical instruments



musicians



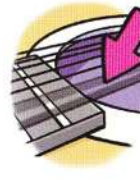
notes



ocean



orchestra



vibrate



voice



waves



woman



xylophone



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Subject Area Level	The World of Science & Technology	The Natural World	The World of Arts & Social Studies
3 600 headwords	<ul style="list-style-type: none"> • How We Make Products • Sound and Music • Super Structures • Your Five Senses 	<ul style="list-style-type: none"> • Amazing Minibeasts • Animals in the Air • Life in Rainforests • Wonderful Water 	<ul style="list-style-type: none"> • Festivals Around the World • Free Time Around the World
4 750 headwords	<ul style="list-style-type: none"> • All About Plants • How to Stay Healthy • Machines Then and Now • Why We Recycle 	<ul style="list-style-type: none"> • All About Desert Life • All About Ocean Life • Animals at Night • Incredible Earth 	<ul style="list-style-type: none"> • Animals in Art • Wonders of the Past
5 900 headwords	<ul style="list-style-type: none"> • Materials to Products • Medicine Then and Now • Transportation Then and Now • Wild Weather 	<ul style="list-style-type: none"> • All About Islands • Animal Life Cycles • Exploring Our World • Great Migrations 	<ul style="list-style-type: none"> • Homes Around the World • Our World in Art
6 1,050 headwords	<ul style="list-style-type: none"> • Cells and Microbes • Clothes Then and Now • Incredible Energy • Your Amazing Body 	<ul style="list-style-type: none"> • All About Space • Caring for Our Planet • Earth Then and Now • Wonderful Ecosystems 	<ul style="list-style-type: none"> • Helping Around the World • Food Around the World

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✓  **Level 3**
600 headwords

 **Level 4**
750 headwords

 **Level 5**
900 headwords

 **Level 6**
1,050 headwords

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