

6. Sound colour

Instrumentation

SECTION 1 MUSICAL CONTEXT

Vocal timbre

1. In this block we will look at a variety of aspects of the human voice. In the left-hand column, say whether you think the statements are true (T) or false (F). If you think the statement is false, write in the right answer.



- T** 1. A choir made up of women and men is called a “chorus of mixed voices”.

- F** 2. The highest human voice is the mezzosoprano.
_____ *Soprano*
- F** 3. Music interpreted using human voices alone, with no musical accompaniment, is called “solo voce”. _____ *A cappella*
- F** 4. Children’s voices are almost exactly the same as women’s voices in choirs. _____ *Women and children*
- F** 5. The lowest human voice is the tenor voice.
_____ *Bass*
- T** 6. Within the category of women’s or children’s voices, the intermediate voice is called a contralto. _____
- T** 7. The term “vocal timbre” refers to a classification of voices as higher or lower.

- F** 8. Within the category of men’s voices, the intermediate voice is called a tenor.
_____ *Baritone*



2. Fill in the blanks in the following text using the words given in the box, and you'll review your knowledge of the vocal tract.

larynx	pressure	mouth	nose
lungs	expiration	skull	inspiration
vocal cords	resonator		

During respiration we take air in, called inspiration and then expel it, called expiration.

Sound is produced when the air pressure coming out of the lungs makes two elastic tendons vibrate, called the vocal cords, located in the larynx. This sound is amplified because our body acts as a resonators. Some of the resonators we use to increase the sound are the mouth, skull and nose.

The timbre of instruments

3. This letter soup contains 6 instruments from the string family. Find them and say whether they are "bowed", "plucked" or "struck".

✓ Bowed string viola, contrabass

✓ Plucked string guitar, harp, harpsichord

✓ Struck string piano



M	I	T	S	O	N	I	S	A	T	I
D	R	O	H	C	I	S	P	R	A	H
S	A	M	V	B	C	A	T	O	P	S
N	E	T	R	O	E	T	V	R	T	M
H	U	B	A	J	V	B	A	M	P	O
T	I	N	T	R	A	H	O	M	I	T
M	O	V	I	O	L	A	T	R	A	V
O	N	H	U	T	C	O	T	H	N	B
L	S	I	G	O	M	S	T	E	O	X
C	O	N	T	R	A	B	A	S	S	A

4. a) Answer with the name of the right percussion instrument and you'll be able to complete the crossword puzzle below.

Horizontal

- Percussion instrument with metal plaques, with 12 letters. metallophone
- Percussion instrument with one single drumhead and metal jingles around a wooden frame that produces sound when hit with the hand or knuckles. tambourine
- Percussion instrument consisting of two concave shells joined on one end by a string, held in the hand to produce clicking noises. castanets
- Percussion instrument with wooden blocks that are struck. xylophone

Vertical

- Percussion instrument with 6 letters that consists of two thick dowels of wood that are struck together. claves
- Percussion instrument with 8 letters whose name is the same as a geometrical form triangle
- Percussion instrument with 7 letters with two bronze or brass plates that are struck together. cymbals
- Member of the percussion family technically classified as membranous, with a round body and a membrane or skin that is struck with sticks. drum

- b) Complete the crossword and then place each of the instruments in the right category on the following page.

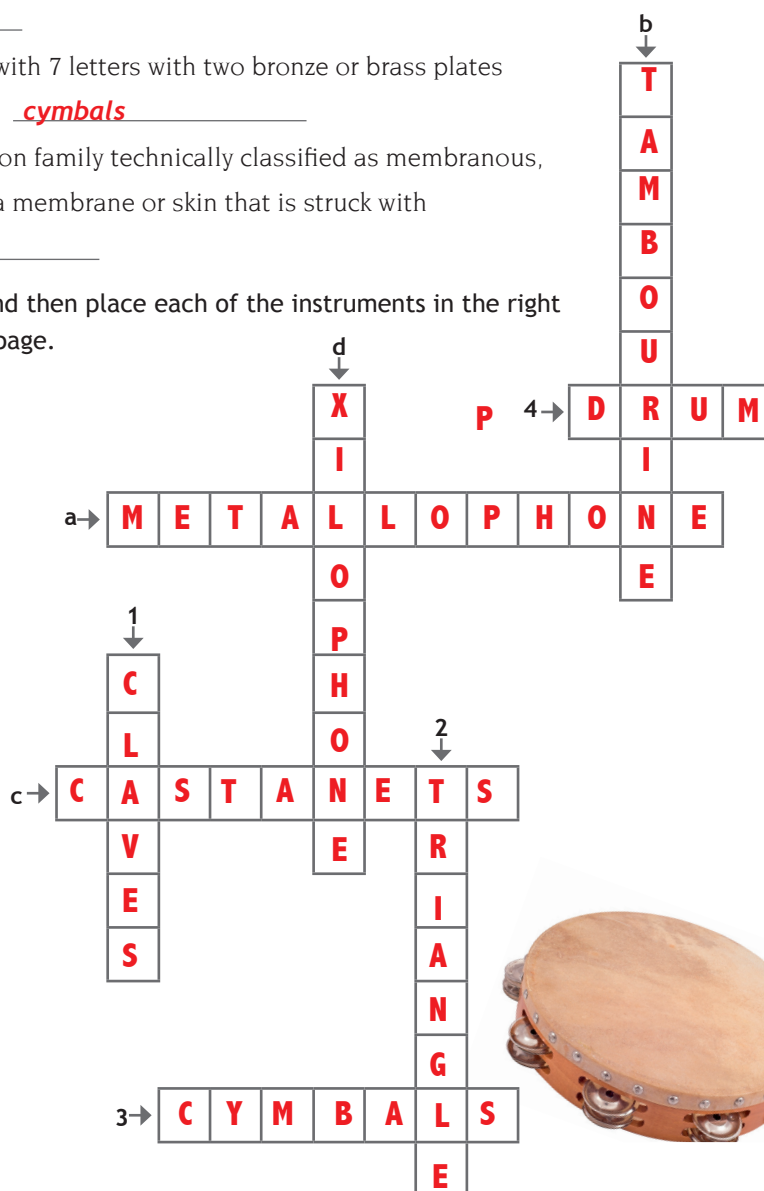


Table of instruments

of definite pitch	of indefinite pitch
✓ <i>Metallophone, xylophone</i>	✓ <i>Claves, cymbals, tambourine,</i>
	<i>triangle, castanets, bass drum</i>

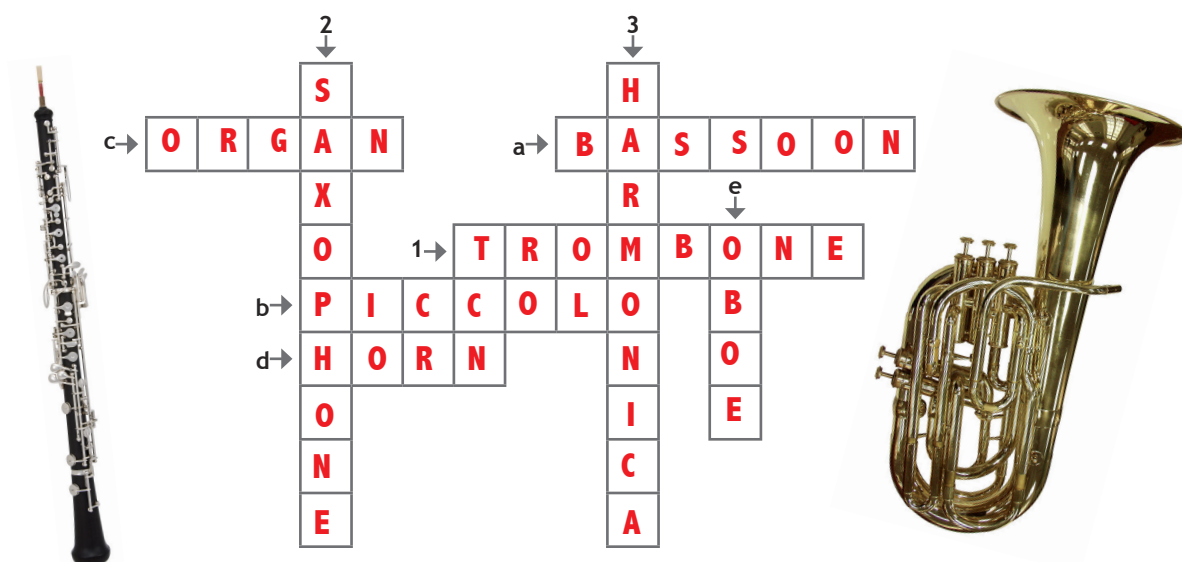
5. Answer with the name of the right wind instrument and you'll be able to complete the crossword puzzle below.

Horizontal

- a) The largest instrument in the woodwind family. *Tuba*
- b) The smallest instrument in the mixed woodwind family, with a bevelled mouthpiece. *Piccolo*
- c) A woodwind instrument with a keyboard, of large size, normally found in churches. *Organ*
- d) A brass instrument with coiled tubing and a very large sound-producing bell. *Horn*
- e) A woodwind instrument with a double reed. *Oboe*

Vertical

1. A brass instrument with a telescoping slide mechanism. *Trombone*
2. Instrument with a simple reed that although it is made of metal, actually belongs to the woodwind instrument family. *Saxophone*
3. Small instrument in the mixed woodwind family, with 9 letters, that is played with both hands. *Harmonica*



SECTION 2 LISTENING

VOCAL TIMBRES

1. **VOICE COLOUR.** Classify the voices depending on the timbre. You can use the adjectives in the box below, although you can also use others if you want to.

delicate, intimate, quiet, agreeable, soft, sweet, passionate,
impetuous, vigorous, funny, suggestive, energetic, disagreeable, strident,
brilliant, opaque, low, high, nasal, throaty, screaming...

Listening 29 *Highway to Hell* ACDC

→ Strident, high, screaming

Listening 30 *Sex Bomb* Tom Jones

→ Vigorous, energetic, low

Listening 31 *Hello Dolly* Louis Armstrong

→ Throaty, low, opaque

Listening 32 *I Wanna Be Loved by You* Marilyn Monroe

→ Suggestive, funny, sweet



2. **VOCAL GROUPS.** Say which piece is sung *a cappella* and which has a musical accompaniment.

Listening 33

Popule meus Tomás Luis de Victoria

The interpretation is → a cappella

Listening 34

Zadok the Priest George Friedrich Haendel

The interpretation is → With an instrumental accompaniment



3. **CHOIR VOICES.** Indicate whether the voices you can hear are children's and women's, low or mixed.

Listening 35 *Amen* Traditional Afro-American

→ Low or male voices

Listening 36 *Do-Re-Mi* R. Rodgers

→ Women's or children's voices

Listening 37 *9th Symphony* L. van Beethoven

→ Mixed voices (low and high)



4. **VOICE CLASSIFICATION.** Human voices can be classified as high and low, but also according to their ranges (lowest and highest notes singable).
Mark the right classifications with an **X**:

Listening 38

Volga Boatmen Anonymous



VOICE TYPE

- ☐ Child's voice
☒ Low or male voice

CLASSIFICATION

- ☐ Soprano ☐ Tenor
☐ Contralto ☒ Bass

Listening 39

Malinconía, ninfa gentile V. Bellini

VOICE TYPE

- ☐ Child's voice
☒ Low or male voice

CLASSIFICATION

- ☐ Soprano ☒ Tenor
☐ Contralto ☐ Bass



Listening 40

Die Forelle F. Schubert

VOICE TYPE

- ☒ Child's voice
☐ Low or male voice

CLASSIFICATION

- ☒ Soprano ☐ Tenor
☐ Contralto ☐ Bass

Listening 41

Blow the Wind Southerly Anonymous

VOICE TYPE

- ☒ Child's voice
☐ Low or male voice

CLASSIFICATION

- ☐ Soprano ☐ Tenor
☒ Contralto ☐ Bass

Listening 42

Hallelujah George Friederich Haendel

In this fragment you can hear the four types of voices used in a mixed choir: sopranos, contraltos, tenors and basses. Listen carefully and you'll hear how voices are added successively. Write the names of the voices in order of appearance.

1st Sopranos

2nd Contraltos

3rd Tenors

4th Basses

INSTRUMENTAL TIMBRES



Listening 1

Crystallize 2012

Lindsey Stirling



Lindsey is a talented American interpreter who has played in lots of places – at contests, clubs in Las Vegas, and even at half-time shows during NBA basketball games. In February 2012 she uploaded an original video to YouTube and now has over 114 million views to her name.

In the exercise, you can hear that she plays a bowed string instrument, and it is the smallest in the family and produces the highest sounds.

What instrument is it? Violin

Listening 2

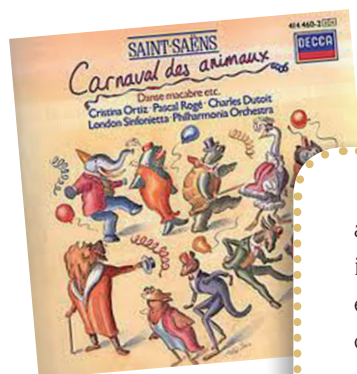
The Swan, The Carnival of the Animals 1886 Camille Saint-Saëns



The author thought this work would detract from his “serious” composer image, so he asked his publisher not to publish it in his lifetime, except for the solo *The Swan*, which you will hear here.

Although it is played by an instrument in the same family as before, its size is larger, so it sounds lower in pitch.

What’s the name of this instrument? Violoncello



Listening 3

The Elephant, The Carnival of the Animals 1886

Camille Saint-Saëns



This piece was composed while Saint-Saëns was spending the summer in a small Austrian village, regarding it as a piece of fun, maybe for a Carnival. He included all the animals: lions, hens and roosters, wild asses, turtles, and the elephant you will hear in this exercise, with humours sounds occurring throughout the piece.

This instrument also belongs to the same family as before, but this time it is very large, reaching up to 1.80cm in size.

Write the name of the instrument: Contrabass

Listening 4

Romance Anonymous

The song you will hear next is played by the great Paco de Lucía, and was a hit you will surely remember.

Note that the instrument he plays belongs to the string family and produces sound by being plucked with the fingers.



What instrument is it? Guitar

Listening 5

Fantasia Anonymous

This piece is played by an instrument in the same family as before, but its shape is entirely different. It has a large number of strings, sometimes reaching up to 47 in fact.

Do you know the name of this instrument? Harp

What family does it belong to? Plucked strings

Listening 6

Sarabande (Suite in D Minor) 1733 George Friederick Händel

The piece you will hear pertains to the Baroque period and is called a *Sarabande*, or a kind of dance forming part of a Suite (a collection of dances intended for the entertainment of the nobility). This piece was used by the film director Stanley Kubrick in the film *Barry Lyndon*.

Listen to the interpretation because it is an ancient instrument with a distinctive sound. It was the forerunner of the piano.

Write the name of the instrument. Clavichord, harpsichord or gravicembalo.

Listening 7

Für Elise 1867 Ludwig van Beethoven

This is the work by the German composer that you will have heard before. It is suggested that the piece is wrongly named due to the transcription of the discoverer of the piece after Beethoven's death, Ludwig Nohl. Since the composer's handwriting was difficult to read, Nohl read "For Elise" instead of "For Therese", perhaps referring to Beethoven's young student Therese Malfatti, with whom he fell in love and proposed to in 1810, but she refused him.

Write in the name of the instrument and the family it belongs to. Piano. Struck string family

Listening 8

La casa del rey 1997 Ñu



This Spanish rock group was strongly influenced by foreign groups like Deep Purple, Led Zeppelin, Black Sabbath and others, and they brought non-traditional instruments into rock. The members of the band came from bands like Barón Rojo, Leño, Coz and are now icons of Spanish rock.

Note in the listening exercise that although this is an instrument that is quite distinctive, the *flutter-tonguing* (using the tongue to flap back and forth to make a characteristic “FrrrrFrrrrr” sound) and the *glissandos* (a glide from one pitch to another) make it sometimes difficult to detect.

Name of instrument Transverse flute

Family Woodwind with bevelled mouthpiece

Listening 9

Peter and the Wolf (The Cat) Op. 67 1936 Sergei Prokofiev



In Prokofiev’s work, Peter is a young Russian boy who lives with his grandfather, a woodsman. The work was written as a story for children, with both music and text spoken by a narrator accompanying the orchestra, and where a number of animals come into the tale. Listen and try to think which instrument made in wood and with a single reed is used to imitate the sound of the cat.

Name of instrument Clarinet

Family Double-reed woodwind



Listening 10

Peter and the Wolf (The Duck) Op. 67 1936 Sergei Prokofiev



In 1936, Sergei Prokofiev was commissioned to write a new musical symphony for children, so they could learn about music from an early age. Attracted by the idea, Prokofiev completed *Peter and the Wolf* in just four days.

In this piece you will hear a slightly nasal sound, from an instrument made in wood, with a double read mouthpiece.

Name of instrument Clarinet

Family Double-reed woodwind

Listening 11

Peter and the Wolf (The Grandfather) Op. 67 1936 Sergei Prokofiev

Although the composer placed importance on this work, when it was first performed on May 2nd 1936, it was not very well received. As the composer himself said: "...[attendance] was poor and failed to attract much attention".

The instrument you can hear in this piece belongs to the same family as before, but it is bigger and therefore produces lower sounds.

Name of instrument Bassoon Family Double-reed woodwind

Now you are going to listen to various timbres of instruments. Pay attention, because you have to find out the name of the instrument by listening to the short track provided here.

Listening 12

The Pink Panther Henry Mancini

This instrument is a member of the woodwind family, although it is made from metal, except for the mouthpiece. What's the name of this instrument? Saxophone

You already know it belongs to the woodwind family, but what kind of mouthpiece does it use? Single-reed

Listening 13

Concerto in Eb Major Franz Joseph Haydn

This instrument is in the brass family. It sounds high and bright, and it is not very big. Write the name of the instrument. Trumpet

Listening 14

Lassus Larry Clark

This instrument is in the same family as the one above, but it is larger and has a lower, deeper sound. What instrument is it? Trombone

Listening 15

Peter and the Wolf (The Wolf) Sergei Prokofiev

This is an instrument in the same family as before, but it is deeper and lower. What name is given to this instrument? Horn

Listening 16

Bass

This is the largest instrument in the string family. Its sound is low, deep and heavy. What's the name of this instrument? Tuba

Listening 17

Toccata and Fugue in D Minor Johann Sebastian Bach

The instrument you can hear is a keyboard instrument, with lots of pipes through which air is forced to produce sound.

Name of instrument organ Family Mixed winds

Listening 18

La Valse d'Amelie Yann Tiersen

This is also a keyboard instrument like the preceding one, but this time it has buttons. The sound is produced by flexible metal reeds that vibrate when air is passed through them by a bellows mechanism.

Name of instrument accordion Family Mixed winds

Listening 19

School Supertramp

This instrument also produces sound by vibrating metal reeds by means of air. But this time, although it belongs to the same family, it doesn't have keys or a bellows mechanism. You have to blow into it to make it sound.

Do you know the name of this instrument? Harmonica

Listening 20

Definite pitch percussion

These are percussion instruments that play specific notes that can be written on a staff. Listen carefully now, because you have to identify whether the percussion instrument of definite pitch that you hear is made of wood (xylophone) or metal (metallophone)

The first instrument is a xylophone (wooden plaques)

The second instrument is a Metallophone (metal plates)

Listening 21

Fossils Camille Saint-Saëns

You know that fossils are petrified animals or plants that died in the remote past. The composer uses this instrument to remind us of the sound of bones of skeletons and stones, as these animals have become stone now that they are fossilised.

What instrument is it? Xylophone

Listening 22

Indefinite pitch percussion

Now you will hear a series of percussion instruments of indefinite pitch. Remember they receive this name because although they give rhythm and warmth to songs, they cannot produce melodies that can be written as definite notes on the staff. Write their names after listening to the tracks.

1st Bass drum 2nd Cymbals

3rd Triangle 4th Snare drum

SECTION 3 CULTURAL CONTEXT



1. Complete these statements and you'll consolidate your knowledge of instrumentation in different historical periods.

- a) **With a P:** Singing by women and the use of instruments was prohibited in the religious music of the Middle Ages.
- b) **With an L:** A plucked string instrument widely used in the Renaissance: lute
- c) **With a M:** The first players of profane music in the Middle Ages: joglers
- d) **With a C:** A characteristic instrument in many works composed in the Baroque period: harpsichord
- e) **With a B:** A brass instrument that appeared in the Romantic period: Euphonium
- f) **With a V:** The favourite bowed string instrument of the Baroque period: violin
- g) **With a T:** Electronic instrument from the 20th century: Thèremin
- h) **With a C:** A woodwind instrument that appeared in the Classical period: clarinet
- i) **With a P:** The "king" of instruments in the Romantic period: piano
- j) **With a V:** A bowed string instrument widely used in the Renaissance: viola
- k) **With a P:** The forerunner of the modern-day piano in the Classical period: pianoforte



2. Write the name of the right period depending on the statement given.

The Middle Ages, Renaissance, The Baroque, Classicism, Romanticism, 20th century

- ▶ The Baroque The orchestra layout was not fully formed at this time, and instrumental groups are still small. The violin and the clavichord were predominantly used.
- ▶ The Middle Ages Troubadours and joglers are the first to popularise profane music in this period.
- ▶ 20th century Experimentation and innovation led to the appearance of newly created electronic instruments like the synthesiser, Martenot and Thèremin.
- ▶ The Renaissance In religious music, singers were only men, in *a cappella* style, or occasionally, with an organ accompaniment.
- ▶ Romanticism Large-scale orchestras with over 100 musicians begin to appear. New instruments appeared such as the saxophone and the piano.
- ▶ The Middle Ages Religious music in this period prohibited singing by women and the use of instruments, as this was thought to distract the faithful.
- ▶ Classicism The orchestra became consolidated, increasing the number of musicians and paying special attention to the colour and sound quality of each section. New instruments appeared such as the clarinet (woodwind) and the pianoforte (struck strings).

SECTION 4 MUSICAL CREATION

ACCIDENTALS. TYPES OF ACCIDENTALS



1. Answer true (T) or false (F).

- ☐ F A sharp is indicated by the sign \sharp and it lowers the pitch of a note by one tone.
- ☐ F A sharp is indicated by the sign \flat and it lowers the pitch of a note by one semitone.
- ☐ T A sharp is indicated by the sign \sharp and it raises the pitch of a note by one semitone.
- ☐ F A flat is indicated by the sign \flat and it lowers the pitch of a note by one tone.
- ☐ F A flat is indicated by the sign \sharp and it raises the pitch of a note by one semitone.
- ☐ T A flat is indicated by the sign \flat and it lowers the pitch of a note by one semitone.
- ☐ F A natural note is indicated by the sign \sharp and cancels out the effect of a preceding sharp or flat, restoring the sound to its natural pitch.
- ☐ T A natural note is indicated by the sign \natural and cancels out the effect of a preceding sharp or flat, restoring the sound to its natural pitch.
- ☐ F A natural note is indicated by the sign \flat and cancels out the effect of a preceding sharp, but not a flat.

2. Practice writing the sharp, the flat and the natural sign.

\sharp	
\flat	
\natural	

PLACEMENT OF ACCIDENTALS



3. Circle the accidentals that are incorrect.



4. Write the above accidentals correctly.



5. Write the notes as indicated using minims.



ACCIDENTAL MODIFICATIONS AND KEY SIGNATURE ALTERATIONS

6. Look at the key signature alterations and circle the notes on the staff affected by them.



7. Mark the key signature alterations with (K) and the accidentals with (A).



MUSIC AND TECHNOLOGIES

The CD ROM gives you a series of activities in which you can practise what you've learned in this Unit.