Sound

Lesson plan and teacher's notes · Grade 2 Science · 2 periods of 40 minutes

School	(write school name)	**Teacher**	(write name)
Date	(date)	**Class**	Grade 2
Subject	Science	**Enrolment**	Boys ___ Girls ___ Total ___
Time	80 minutes	**Topic**	Sound

Learners listen to and guess sources of sound, take a sound walk, group sounds as natural or artificial, compare loud and soft sounds and make sounds with local materials. Two periods.

Specific outcomes

By the end of the lesson, learners should be able to:

1. Identify sources of sound in the local environment
2. Classify sounds as natural or artificial
3. Describe loud and soft sounds
4. Produce sounds using local materials

Prior knowledge

- Learners can listen quietly for a short time
- Learners know a drum, a bell and a whistle
- Learners can work in groups

Teaching and learning materials

- Drum, bell, whistle, metal objects and paper
- Tins, sticks, bottles and stones
- Recorded sounds of animals and birds, if you have a phone
- Picture cards or a worksheet of sound sources
- Chalk and board

References

Ministry of Education (CDC) Grade 2 Science syllabus and module; 25Schools learners' note: Sound.

Lesson development

Stage and time	Teacher activities	Learner activities
P1 Listening and guessing 14 min	Ask learners to close their eyes. Make a sound with one object at a time, or play recorded animal and bird sounds. Ask: What sounds can you hear. Where do they come from. Show the object. Give learners tins, sticks, bottles and paper to make sounds. Ask: Which sound is loud. Which is soft. Which is high. Which is low. Say that different objects make different sounds.	Listen, guess and make sounds.
P1 Sound walk 18 min	Explain the purpose of the walk. Take learners outside for a short walk. They must keep quiet and listen. Let them name sources such as birds chirping, vehicles passing, people talking and wind blowing in the trees. Ask now and then: What sound do you hear. Where is it coming from. What is making it.	Walk quietly, listen and name the sources.
P1 Conclusion 8 min	Back in class, let learners list the sources they heard. Highlight the different sources of sound.	Share and list sources.
P2 Natural or artificial 14 min	Play two sounds, one from nature and one artificial. Ask: What sound did you hear. What produces it. Does it come from nature or is it artificial. Explain the two groups. Play one recorded sound at a time and let learners say which group. Write a table: wind, rain and birds on one side, bell, drum and car horn on the other.	Listen, classify and fill the table.
P2 Loud and soft 8 min	Make one loud sound by beating a drum strongly or clapping and one soft sound by tapping a desk gently. Ask which was loud and which was soft. Explain that a loud sound can be heard from far and a soft sound only from near.	Listen and say loud or soft.
P2 Make sounds 14 min	Say: You want to make a sound. What will you do. Take answers: hit, shake, rub, blow. Put learners in groups with tins, sticks, bottles and a desk. Ask them to make sounds. Ask: What happens when you hit gently. What happens when you hit harder. Do not ask for songs or patterns at this level.	Make sounds and observe the difference.

P2 Conclusion 4 min	Show picture cards or a worksheet of sound sources. Learners sort them into natural and artificial. Summarise and give homework.	Sort and copy homework.

Teacher's content notes

Read these before the lesson. They are what you need to know, not what to copy onto the board.

What sound is

Sound is produced when objects vibrate. We hear sounds from animals, machines and musical instruments.

Sources

Learners identify sources by listening and by taking a sound walk: birds chirping, vehicles passing, people talking and wind blowing in trees.

Natural and artificial

Natural sounds come from nature, such as wind, rain and birds. Artificial sounds come from things used to produce sound, such as a bell, a drum or a car horn.

Loud and soft

A loud sound can be heard from far and a soft sound only from near. Hitting harder makes a louder sound. Sound can be made by hitting, shaking, rubbing and blowing.

Questions to ask during the lesson

Question	Expected answer
Learners close their eyes and hear a sound. The teacher then shows a tin and a stick. The class guesses how it was made. (a) What made the sound. (b) How was it made. (c) Is it natural or artificial.	(a) The tin and stick. (b) By hitting. (c) Artificial.
On a sound walk a girl hears birds chirping and a vehicle passing. Her teacher asks what each sound is. (a) Which is natural. (b) Which is artificial. (c) What is making the artificial sound.	(a) Birds chirping. (b) The vehicle. (c) The vehicle's engine or horn.
A boy taps a desk gently and then claps hard. A friend at the back of the class listens to both. The teacher asks the class. (a) Which sound is soft. (b) Which sound is loud. (c) Which can be heard from far.	(a) The gentle tap. (b) The hard clap. (c) The loud clap.

Worked examples for the board

Sorting a sound

Step 1: Listen to the sound of a bell. Step 2: Ask what makes it. Step 3: Say it is a thing people use. Step 4: Put it under artificial sounds.

Loud and soft

Step 1: Hit a tin gently. Step 2: Say it is soft. Step 3: Hit it harder. Step 4: Say it is louder.

Board plan

Write the title. Draw a two-column table: natural sounds and artificial sounds. Write loud and soft with an example each. Write hit, shake, rub, blow along the bottom.

Natural sounds	Artificial sounds
Wind blowing	Bell ringing
Rain falling	Drum beating
Birds chirping	Car horn

The finished board

Mistakes to expect

Learners often think	Put it right
A bell is a natural sound.	Ask what makes the bell ring. Explain that artificial sounds come from things people use to make sound.
Soft sounds are not sounds.	Tap the desk gently and ask learners to listen. Explain that to hear a soft sound you must be near.
Only musical instruments make sounds.	Take learners on the sound walk and list birds, wind, people and vehicles.

Differentiation

Learners who struggle

Use only three sounds: a drum, a bell and wind. Let learners point to the object that made each sound and say loud or soft.

Learners who finish early

Ask learners to find two more objects in the yard that make a loud sound and two that make a soft sound, and to say how they made them.

Hearing or visual impairment

For learners with a visual impairment, let them hold each object while it makes its sound and describe it. For learners with a hearing impairment, let them feel the vibration of a drum or a desk, face them and use picture cards.

No projector, no printing

Use tins, sticks, stones in a bottle, a plastic cup and your own hands. Use the real sounds of the school yard in place of recordings.

If time is short

Keep the listening game, the natural and artificial table and making sounds by hitting gently and harder. Move the sound walk and the worksheet to the next lesson.

Evaluation

Question or task	A correct answer shows
The teacher shows picture cards of wind, a bell, a drum and birds. She asks each learner to sort the cards. (a) Which are natural sounds. (b) Which are artificial sounds. (c) Name one more of each kind.	(a) Wind and birds. (b) Bell and drum. (c) Any correct examples.
Bwalya hits a drum gently and then strongly while his friends listen from the back of the class. They tell him what they heard. (a) Which hit sounds soft. (b) Which hit sounds loud. (c) Which sound is heard better from far away.	(a) The gentle hit. (b) The strong hit. (c) The loud sound.

Homework

Chileshe sits outside his house at home in the evening and listens. He hears a radio, crickets and wind in the trees. His mother asks what he heard. (a) Which sound is artificial. (b) Name one natural sound. (c) Name one way to make a sound.

Extra practice with answers

Question	Answer
1. The class hears rain falling on the roof and a bell ringing for break. The teacher asks them to group the sounds. (a) Which is natural. (b) Which is artificial. (c) Which one comes from something people use.	(a) Rain. (b) The bell. (c) The bell.
2. Mulenga has a tin, a stick and a bottle. He wants to make sounds in different ways for his group. (a) How can he make sound with the stick and tin. (b) How can he make sound with a bottle with stones. (c) How can he make a loud sound.	(a) Hit. (b) Shake. (c) Hit harder.
3. A learner whispers to her friend and then shouts across the field. The friend hears the shout from far but must be near for the whisper. (a) Which is soft. (b) Which is loud. (c) Which can be heard from far.	(a) The whisper. (b) The shout. (c) The shout.
4. The teacher plays a recording of a car horn and a recording of wind. The class says what each is. (a) Which sound is artificial. (b) Which is natural. (c) Name another natural sound.	(a) The car horn. (b) The wind. (c) Rain or birds.

Answers to the learners' check-yourself questions

1. Name one natural sound.
   Wind blowing, rain falling or birds chirping.
2. Name one artificial sound.
   A bell ringing, a drum beating or a car horn.

3. What kind of sound can be heard from far away.
   A loud sound.
4. Name two ways of making sound.
   Any two of: hit, shake, rub, blow.
5. Thandiwe goes on a sound walk with her class. She hears birds chirping, a car horn and wind in the trees. Her teacher asks her to group them. (a) Which one is an artificial sound. (b) Name one natural sound. (c) What is making the artificial sound.
   (a) The car horn. (b) Birds chirping or wind. (c) The car.
6. Mwamba hits a tin gently with a stick and then hits it harder. His friend listens each time and tells him what he noticed. (a) What does the gentle hit make. (b) What does the hard hit make. (c) Which sound can be heard from far away.
   (a) A soft sound. (b) A loud sound. (c) The loud sound.

Teacher's reflection

What went well:

What I will change next time:

Learners who need follow-up: