Sounds of Forest

Forest education module 5

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SABUKO
Society for Nature Conservation

გერმანიის თანამშრომლობა
DEUTSCHE ZUSAMMENARBEIT

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

თბილისის მერია

Sounds of forest

Required time:	≈ 3 hours
Material needed:	Blank cards
	Animal picture cards, 2 of each kind, enough for 1 card per child
	Recorded animal sounds
	blindfolds
	Small bells
	3 small bags with seeds
	Crown caps, nail, hammer, threat

Relevance in context to the curriculum

- Neighborhood. Describe location and function of public spaces
- Senses. Function , experience

BACKGROUND INFORMATION

Sound

Sound is an audible vibration, which is mostly transferred through the air. If someone shouts, air particles are heavily moved. If someone whispers, the air particles are only slightly moved. The vibration is handed over to other particles. In this way a (sound) wave is created. We can catch those waves with our ears. They are transmitted in nervous impulses. The brain decodes those impulses - so we hear.

The pace of the sound depends on the material the sound waves go through. In the air, sound travels with 20 km per minute. The harder the material, the faster the sound waves travel. In wood it reaches 240 km per minute.

But, we can not hear all sounds. It differs between person. Some people can hear even very high-pitched sounds. Age has an impact as well. We loose the ability to hear higher sounds. Some sounds are so high, only animals can hear. Very high sounds can be painful. Even if we do not hear them, they can create discomfort. Some animals use ultrasounds for orientation.

The drumming of woodpeckers

When you hear a woodpeckers drumming on deadwood in spring, it is a male who wants to attract a female. She may respond with a shorter drumming version. He can easily repeat 100 beats in one minute.

Barking from the woods

You may hear an unusual barking, which clearly distinguish from those of dogs. Than you either hear a roe deer, warning its conspecifics, or a fox, who gives a contact call. They may call a partner or mark their territory.

Bird Songs

In spring birds sing to attract a partner and to mark their territories. But, birds produce many more sounds, which all have different communication purposes. Not all birds sing, but all have a variety of calls.

Forest as noise protection

The leave layer reduces noise. Actually, a young forest, or a forest with dense undergrowth has higher noise protection potential than an old forest with just few shrubs and young trees.

AT SCHOOL

Prepare the children for the visit of the forest. Discuss:

- Who has been in a forest before?
- What did you do there?
- How do we behave in a forest?

PREPARATION

Collect a reasonable amount of crown caps before. Or ask the children timely to bring at least 10 per child.

Prepare a collection of animal sounds. A wide selection is available on internet archives.

WHAT TO BRING

Make sure everyone knows how to dress and what to bring!

Everyone should be dressed according to weather. This can be, protection against cold, wind or rain, head cover, sun screen.

It is highly recommended to wear long trousers, as high grasses can be very itchy and spiky plants are very annoying. For the same reason it is preferred to wear closed shoes.

Everyone should bring their own drinking water. Preferable in a reusable bottle. Everyone should have a light snack. It should be made clear, that no trash is left behind!

Have the children bring their notebooks and pencils.

Make sure you have all the materials ready with you, which you may need for your activities.

If it is not anyway mandatory from your school, make sure you have basic first aid with you. At least a small bottle of disinfectant and bandaids.

Have your phone charged and ready with relevant contact numbers.

Sounds of forest

20 minutes

SOUNDS OF THE DAY

Group discussion - 5 minutes

- Which sounds have you heard already today?
- Have those sounds be pleasant or unpleasant?

SOUND MAPPING

Activity - 15 minutes

Everyone needs its notebook or a piece of paper and a pencil.

Everyone quietly sits down separately in the surrounding.

Close your eyes to intensify your hearing. What do you hear? From where do you hear it? Is it far or close, loud or a silent sound?

Create a sound map. Place a marker which presents your position. Place the marks for the different sounds in relation to you.

Discussion:

- What did you hear?
- Did hear hear animal sounds, sounds from trees?
- Could you hear the wind? Or may be water?
- Did you hear, cars, airplanes, other sounds produced by humans?
- What has been pleasant, what unpleasant?
- Has there be a sound you heard for the first time?

How does it sound in the forest?

Part I: Overall time required: 70 minutes

Talk with the children, what ears are able to do. They can hear in all directions. They can hear when it is dark. With our ears we can recognize voices and sounds. With our ears we can determine the distance of a sound source. …

Why hearing may be important for animals.

Activity - 15 minutes

Ask: which descriptive words do we have for the sounds in the forrest? - Write them on your cards.

Place location cards in the center - trees, water, animals, other -. Now let them place their descriptive words to the matching location.

ANIMAL SOUND QUIZ

Game - 10 minutes

Give out the animal cards. Everyone keeps their card secret. Now everyone has to make the sound of the animal on his or her own card. There is a second child representing the same animal. Can you find it?

WHY HEARING IS IMPORTANT

Game - 5 minutes

Play the recorded animal sounds.

Discuss, why do animals produce those sounds?

- Orientation
- Defence
- Territory
- Communication

Not all animals have ears. Nevertheless they can detect sound and the vibrations. Ears of forest animals usually are bigger than our ears, and they can move them in different directions. Usually they hear much better than we humans. But, ears are as well important in the nonverbal communication of some animals.

Group discussion - 5 minutes

What is the difference between human ears and animal ears?

EXPLORE-EXPLAIN

Activity - 20 minutes

- Let the children try, if they can produce an echo at some places at your location.
- Let the children place their hands behind the ears. How does this change the hearing?
- What changes, when you cover your ears?
- Take a branch of deadwood and place your ear on it. A second person scratches on the branch. Even better, if you find a long tree trunk. Have someone positioned at each end. On. One end the child places the ear, the child on the other hand scratches or knocks.
- …

MOUSE AND OWL

Activity - 15 minutes

Although they have good night vision owls hunt mostly by sound. They can hear the footsteps of a mouse in the dark and have evolved silent flight so the prey doesn't hear the hunter's approach and so they can still hear it during the attack.

- Arrange the group in a circle and choose two volunteers.
- Blindfold the eyes of the two volunteers. Tell one volunteer he or she is a mouse and has to get down on to their hands and knees. Tie the bells around each ankle of the mouse. Tell the other volunteer he or she is an owl.
- Tell the rest of the group they are trees. Inside their circle is a forest. It is night-time. Place a bag of seeds at the bases of three trees. Tell them the mouse is going to search through the forest for the seeds. The owl will be trying to hunt the mouse. Tell them that the owl has very sensitive hearing and is a silent flyer so that it can hear the slightest noise in the forest. So, if the mouse does not want to be caught, it will have to be very, very quiet as it searches through the leaf litter looking for seeds. It is a calm, peaceful night so the trees have to be very quiet.
- Start the game. Remind the trees to be silent and to watch the behaviour of the predator and prey. The mouse has to find the three bags of seeds before the owl catches it. An intelligent owl should quickly catch a noisy mouse. A smart mouse will freeze when it senses that the owl is close.
- Choose two different volunteers. Tell the group that because it was a calm, peaceful night, the slightest noise in the forest was easy for the owl to hear. This time it is going to be a stormy night with wind and rain blowing through the trees. Therefore, the trees have to make as much

noise as possible. They will see that the owl has great difficulty hearing the mouse. On this occasion, the mouse may win. Tell the group that, on stormy nights like that, the owl may not be able to find a mouse but may have to survive on worms and other invertebrates.

Eurasian Scops-Owl

Forest music

Part II: Overall time required: 65 minutes

Music is an excellent sound body. Therefor many instruments are made from wood.

Group discussion - 5 minutes

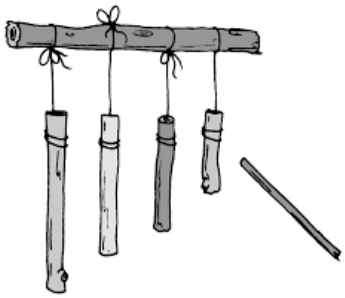
Ask the children: What is the connection between forest and music?

- Which wooden instruments do they know?
- Who plays a wooden instrument?

FOREST ORCHESTRE

Activity - 60 minutes

The forest provides many materials which can be used to create sounds. Let the children explore, what would be suitable. Not only branches. Here a few suggestions.

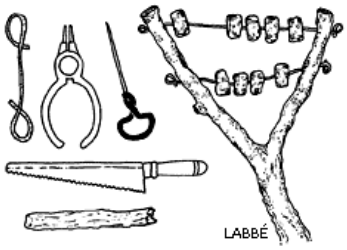


Tonewood

The children look for small branches (2) of about 1 - 2 cm in diameter. The different woods sound differently. Deadwood sounds different than green wood.

Rattle 1

The children need to find a forked branch with almost symmetric endings. The branch can be decorated by coloring it, or with colorful threats. The crown caps need a hole, which is hammered with the help of a nail. Now thread the caps and fix the ends on both branch endings.



Rattle 2

Fill a container with seeds. Depending on what seeds you use and how many you fill in the container, you get different sounds.

Get creative! How can you use leaves? Dry leaves might be more effective. Rocks? …

Give the children time and space to experiment. Sounds can be produced in many different ways. Have them try different rhythms and than compose a small piece of music.

Farewell from the forest

Overall time: 25 minutes

CALM DOWN AND LISTEN

Activity - 5 minutes

After so many sounds, it might be time for some silence. Ask the children to sit down, be absolut quiet, close the eyes, and listen. After 2 minutes let the children compare the sounds they here with the sounds they are used to.

LYRIK

Group discussion - 20 minutes

Ask the children to reflect the day in a lyric. No rhyme is needed, but it has to follow the lyrical form:

l. line - 1 word

2. line - 2 words

3. line - 3 words

4. line - 4 words

5. line - 1 word

They embed their feelings, their experiences of the day reduced to 11 words. They may even use the descriptive words from the beginning.

Have them read their little poems to each other.

Before you leave the forest,
make sure you collect everything you brought
and take it back with you!

Take all your waste home!
Garbage causes damage to the environment and animals.
By polluting the environment, we harm ourselves.

FOLLOW-UP AT SCHOOL

- Reflect the day in the forest. Which sounds did you experience as pleasant, which as unpleasant.
- Where do you experience noise in your everyday live? How can we protect our ears? Where do different sounds in our surroundings come from? What are the possibilities to protect against those noise sources?
- Repeat the meaning of sounds animal produce. Let them create animal profiles to learn more about the animals you have covered.
- Add further experiments. About hearing and sound.

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