

5.3 Learner Activities

5.3.1 Any context

SESSION TITLE

SOUND OF INSECTS



ACTIVITY IN A SENTENCE:

Through the process of creating a film with sound, learners understand the value of insects within our ecosystem by sharpening their senses for their auditive and visual appearance.

DISCIPLINES INVOLVED IN ACTIVITIES:

Biology, Ecology, Sound, Music, Fine Arts, Film

RECOMMENDED AGES:

7 – 11

LEARNING ENVIRONMENT (CONTEXT SETTING):

Classroom, outdoor area around school, children's homes

LEARNING OUTCOMES:

- Encourages listening to the surrounding sounds
- Learn to abstract sounds and get into a creative process
- Get to know many insects and their anatomy
- Know about the importance of insects for our ecosystem

"Sound of Insects" provides an interdisciplinary approach to this topic by combining biology, music and visual arts. This creative approach makes this important topic accessible and tangible to children on an emotional level. They get a very personal connection through the way they explore it. The concept makes an important contribution to species conservation according to the motto "You can only protect what you love". In order to be able to love something, the knowledge about it and the intensive perception of it are the most important prerequisites.

RECOMMENDED EXPERTISE:

No special expertise is necessary

SDG LINKS:

- **Goal 15:** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss

TIME IT TAKES TO COMPLETE:

150 – 180 minutes

MATERIALS / RESOURCES NEEDED:

- Everyday objects for sound samples
- A3 paper and drawing utensils
- Smart phone
- Projector

TIPS FOR SCALING FOR DIFFERENT AUDIENCES:

The aim of the workshop is to perceive and investigate objects from a certain angle. With a different focus, the workshop could be adapted for older learners. It could, for example, serve as preparation for a product design exercise which has a sound aspect.

Activity

Introduction:

The workshop is targeted at children of ages 7-11 who are still very playful and have a creative approach towards learning. The learners are encouraged to learn more about the role of insects in our ecosystem. In the first part of the workshop, the children get to know several insects by observing and listening to them. In the second part, they draw several insects in order to create a film. In the third part, they try to find sounds of daily objects that are similar to the sound of the drawn insects. Finally, the children compose an audio track with the collected sounds and perform their composition simultaneously with the film.

Part 1

1.1 The World of insects

The learners are introduced to the world of insects. They are encouraged to talk about their knowledge of insects. Give some guidance and suggestions (see Material 1-2).

MATERIAL:

- Listening to insects
 - Download Free Insect Sound Effects | Mixkit
 - Listening to insects
- Watching insects:
 - What's that chirping?

1.2 Talking about insects

- **Which insects do you know?**
 - How many insects were mentioned in total?
- **Why are insects so important for our ecosystem?**
 - Insects help to keep the balance in our ecosystem. They loosen the soil so that plants can survive. They pollinate a wide variety of fruits and vegetables, allowing them to grow.
 - Insects help to create the perfect balance in forest ecosystems by eating fallen leaves and shredding old tree barks. This material becomes soil after a while.

Ask the learners to think of more reasons to protect insects.

- **What can we do to protect insects?**
 - There are several ways to protect insects:
 - Leave areas and margins in the garden where the grass is not cut. Insects can thrive in these areas.
 - Create an insect hotel where insects have a protected area to survive and procreate.
 - Grow wild plants that are not cultured. Insects will more likely visit these plants than cultured plants.
 - Reduce use of insecticides in the garden and for agriculture.

Ask the learners for more suggestions.

- **Do insects have ears?**
 - Yes, they have 'ears' with which they can feel vibrations.
 - For example, the cicada has ears on the abdomen, the cricket on the forelegs, the praying mantis on the belly. Insects feel high and low vibrations like we feel the vibrations of a musical instrument.

Part 2**2.1 Creating an insect film**

In the next step each child draws an insect they like. They can use one of the insects mentioned in the

workshop already or they could find inspiration and pictures in biology books or on the internet. The pictures can be drawn with ink, coloured pencils or crayon.

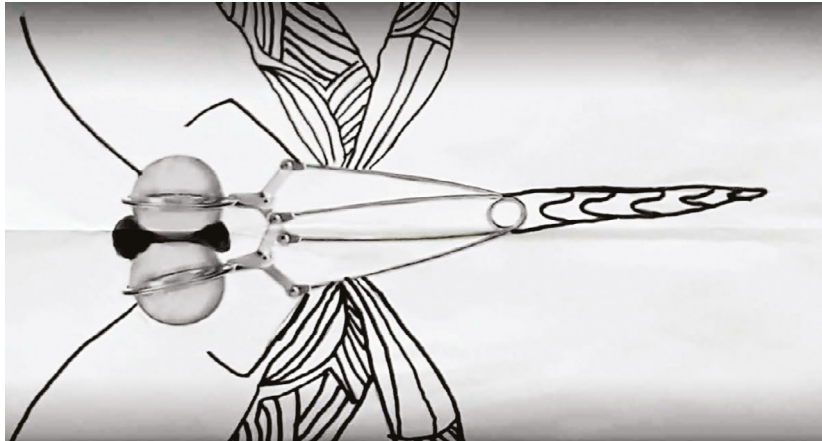


Figure 5.2: Example of an insect drawing, assisted by the use of household objects. Credit: VS Abtenau.

Afterwards the children stick the drawings together on the back with tape so that all the pictures become a film strip.



Figure 5.3: Example of an insect drawing, assisted by the use of household objects. Credit: VS Abtenau.

With your help, the children now produce the film: one person points the smartphone steadily at the floor where the film strip is located. When the recording team gives a sign, two children pull the film strip under the camera so that the pictures are slowly moved – 3-4 seconds for every picture; total length 2-3 minutes.

Part 3

3.1 Discovering insect sounds

The learners are encouraged to find and collect daily objects that make the following sounds: buzzing, rattling, chattering, humming, scratching, cracking.

They can also imitate sounds from nature: wind, water, rustling of leaves etc.

Give advice on how to find these objects. A kitchen or a garage can be a wonderful place of inspiration to discover sounds. Tools from the classroom such as a ruler or pencil are possible instruments. Tools from the arts and crafts room can be especially suitable. Possible objects could be a kitchen grater, sandpaper, ripped paper, a measuring tape, a file, a plastic bag, water etc. Materials from nature like leaves, branches or stones can also be used.

Maybe the learners can also make insect sounds with their voice. Children often have great ideas themselves to find suitable sounds.

The workshop can be linked to other subjects like arts, crafts and biology.

3.2 Composing an insect piece

First, the learners sit in a circle and present their sound ideas in turn. Next, they compose an insect piece out of the collected sounds (around 2-3 minutes, depending on the length of the film). Encourage them to differentiate between long and short sounds.

With your help, the learners now find out how to structure the sounds. Some “instruments” which make long sounds can be used as a permanent sound layer during a long part of the piece (like wind or water) while others can produce short sounds like insects do in a certain rhythmical structure. Short sounds can be repeated in a pattern. The class may decide that one pattern will be repeated four times during the piece, the other pattern maybe five times (see Figure 9 below).

Now decide which sounds fit together well. It is important to discuss when to play soft sounds so that they are not “overrun” by very strong sounds.

The learners can draw a draft of the composition if necessary (see Figure 9 below). After some rehearsals the composition can be recorded. The learners listen to the recording and discuss if they want to change anything.

Part 4

4.1 Presenting the film with live sound

The film will now be presented on a screen while the children are playing the composition as a live performance.

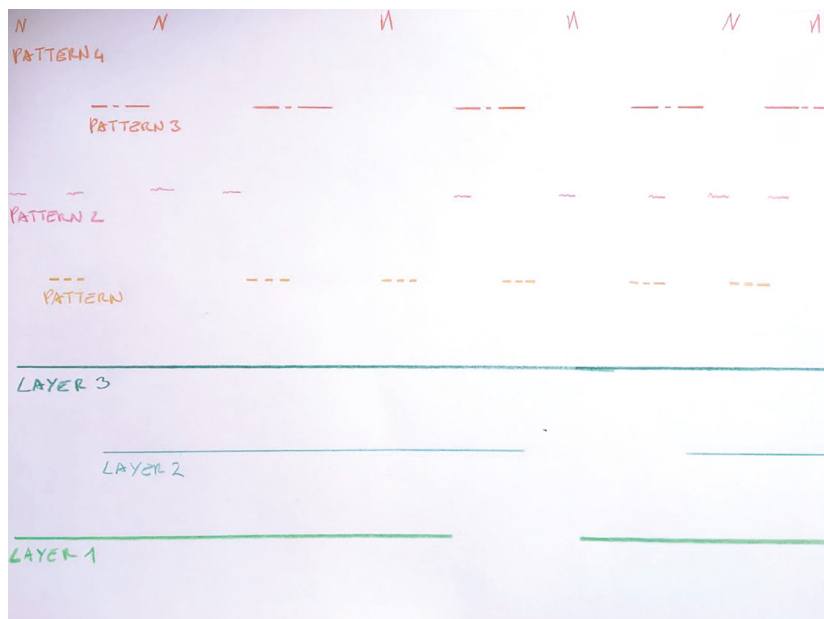


Figure 5.4: A composition of sound patterns. Credit: Veronika Groissberger.