

Light on Small

Preview educational
materials

Introduction

In this brochure you will find the most important information of the free educational materials ZOOM: Light on Small. Are you getting excited? Than you can register your class for ZOOM: Light on Small trough www.eco-schools.nl/zoom-light-on-small-en. After this you will receive all the needed information.

Goal

To explore one or more ecosystems (schoolenvironment, forest, pond) using the fieldmicroscope.

To discover through detailed observation that every ecosystem exist of multiple different components.

Target group

The educational materials that is used in combination with the fieldmicroscopes is suitable for the first and second class in high school. Are you a teacher in primary school and did you give regulary attention to natural history educacion? Than you can use this material with the last class of the primary school.

Costs

None. Nikon will pay for this project. The educational material is available till the end of schoolyear 2020.

Introduction on the material

Nikon wants to raise the interest of the students for the little things. That is why Nikon developed educational materials in relation with the fieldmicroscope (binocular). Other with a regular microscope, you can look at the little objects in 3D. The educational materials include three theme's, each theme include three worksheets and a sheet with background information. Also there is a introduction lesson with a worksheet and a closing lesson where students can create an informationbord (on a poster) for their ecosystem. The students will work in groups of 4 or 5 at one set of worksheets and per class there will be a few fieldmicroscopes available.

Time investment

Lesson	Theme	Time	Content
1	Introduction lesson	1 class hour	Collecting and mapping the ecosystem.
2	Theme: Ecosystem	1-2 classhour*	Looking in detail at the ecosystem.
3	Theme: Plants	1-2 classhour*	Researching construction, way of life and reproduction of plants.
4	Theme: Animals	1-2 classhour*	Researching the construction, way of life and behaviour of animals.
5	Creating a poster	1 classhour	Creating a informationbord about the researched ecosystem.

* This depends on how far you want to go with the learning material and the level of your students. This is the choice of the teacher.

Students are looking at plants in detail. What are the parts of a plant? How does a plant drink? How reproduce a plant itself? The students explore that plants are not just growing, but also move and perceive.

Lesson 4 Theme: Animals (three worksheets)


Goal

Students will look at animals in detail. What is an animal? How do animals move? Which bodyparts are they using for movement and how many parts from such a little creature are moving at all? What is their behaviour in cases of disturbance or danger?

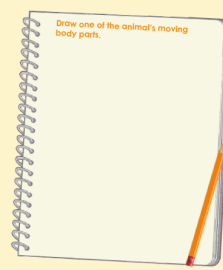
8. How does an animal move?

Study part of an animal's body that moves. Examine the body part using the field microscope. Draw it and take a photo. For three other animals, study which of their body parts can move. Can you compare these movements with humans?


Name of the animal	
Body part	
Where is the body part?	
How big is the body part?	
Number of sections	
How does it move?	




Draw one of the animal's moving body parts.



How many moving body parts does this animal have? (Count at least six parts from when I count all six legs or wings)



Name of the animal	Which body parts move?	What kind of movements does the animal make?	Compare this with humans



Light on Small - Animals

Group:

Lesson 5 Poster

Goal

The students are making an informationbord for their ecosystem. Wich specials things did they find in their ecosystem? Students could be asked to be creative with the presentation of the information. They should be making some choices, because not everything fits on the bord. What is the most important, most suprising or exciting stuff that you came across? The students summarise the most important information, present it for the group and learn about the importance of writing captions.

For questions on ZOOM: Light on Small lesson package you can contact
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