



# Lighting and noise in the classroom

<b>Duration</b>	<b>2-3 hours</b>
<b>Time of year</b>	<b>Any</b>
<b>Place</b>	<b>Classroom</b>
<b>Materials</b>	<b>Paper, pencils, drum, tape recorder or mobile phone with recorded noises, poster paper</b>
<b>Aims</b>	<ul style="list-style-type: none"><li>● <b>To highlight the role of proper lighting and low noise levels in creating good learning conditions</b></li></ul>
<b>Methods</b>	<b>Games, discussion, brainstorming</b>

## DISCUSSION

### What's going on in the classroom?

- ▶ Ask the children whether they can all clearly see what you write on the board. Can they hear your questions without difficulty? Can they always hear what their classmates are saying? If they are unable to see and hear clearly and easily, what is the reason? Is it too bright or too dark in the room? Is there too much noise coming from outside? Is it too noisy inside the classroom?

## GAME

### The fairy tale

- ▶ Draw a picture on the blackboard, or display a poster that tells a story, preferably using large and small elements, and with many different colours. Lower the blinds or shades so that the classroom is in semi-darkness. Ask the children to list all the elements they can see in the picture, and to write down the story it is telling, as they perceive it. After 5 or 10 minutes, open the blinds and switch on the lights. Ask the children to identify any elements they were unable to see before.

Use the following questions as a basis for classroom discussions:

- Did the lack of light affect the number of elements the children could see in the drawing?
- Did appropriate lighting change the story, or enrich it with additional elements?
- How did the children feel working in semi-darkness and with the lights switched on?



**GROUP WORK****Identifying sounds**

- ▶ **Part 1:** Take the children outside into the school yard and ask them to write down every sound they hear in a period of 15 minutes. When the children return to the classroom, divide them into small groups and ask them to compile their lists on a large sheet of paper to share with the rest of the class.

Small groups of children might also be asked to list only those sounds made by animals, human beings, machinery etc.

- ▶ **Part 2:** Inside the classroom, show the children pictures of various objects or living things that make a noise. Play them recordings of a series of sounds (e.g. a chainsaw, traffic, a cat purring, a dog barking, an alarm clock, a rocket launch) and ask them to identify each noise.

Use the following questions as a basis for classroom discussions:

- Which sounds could damage someone's hearing?
- Which sounds might disrupt reading and discussions in the classroom?
- Do all children agree about which sounds are pleasant or helpful? (Some might love listening to music while they do their homework, while others need silence in order to concentrate.)

**EXPERIMENT****Inside the ear**

- ▶ Ask the children to draw an ear. They will probably draw only the outer part of the ear. Explain how there are mechanisms inside their bodies that work together in order to enable them to hear sounds. Show them a diagram of the different parts of the ear and explain how sound travels through the ear canal to the eardrum. Gently tap a small drum and let them feel it vibrate. Explain that the same thing happens in the middle ear. The eardrum vibrates and causes the bones called the hammer, anvil and stirrup to move. The vibrations of these bones pass to the inner ear, which is called the cochlea. Very tiny hairs in the cochlea move up and down and send signals to the brain. Now bang the drum hard and let the students feel the difference in the vibration.

Use the following questions as a basis for classroom discussions:

- What happens when they hear an excessively loud or disturbing sound? Do their ears hurt? Do they get headaches?
- Do they ever have trouble hearing their friends talk? Do they sometimes find it difficult to concentrate on a classroom activity? What are the reasons?

