

STUDY SEEDS

Summary of project

The project focuses on high school students learning about seeds and growing. Through the project, the students have encountered seeds in many ways throughout school: By sowing and collecting seeds in the school garden; by counting the seeds on one rye plant during the agricultural unit; by cooking with seeds in the school kitchen and by analysing seeds in food chemistry. Here we will describe how the students study seeds in their botany lessons and how this study connects with subjects like art, nutrition, geography, trade and politics.

Who is involved?

The second-year high school students at the Waldorf School in Bergen, Norway start their botany lessons each year by studying seeds together with the biology teacher and the art teacher.

Key steps

The students sit around a large table and observe a handful of seeds that they are given. Working with a partner, they find words to describe what the seeds have in common. The descriptions are discussed one at a time around the table. We try to distinguish between what we can observe and what we think we know. Words like hard, small, earth-coloured, spherical, symmetrical, etc. are connected to the role of the seed in the life cycle of the plant. The students



discover that all the seeds come from the kitchen cabinet and are a part of our daily diet. After a discussion, they choose three seeds to draw on a poster. A short piece of informational text on seeds is written to accompany the drawings.

How are the children involved?

The students are given the seeds to observe with all of their senses. First, they look individually, then find descriptive words for the common characteristics together with another student. After each group has added to the description, the students participate in a discussion about how the traits of the seeds relate to their importance as food, as one of the largest items of world trade (such as grains and coffee, cacao etc), as an object of patents, as a cultural heritage, etc. the students select three seeds they wish to draw on a poster and write their own texts about seeds next to the drawings.

How is the project linked to food and farming?

The seeds that are studied are all collected from the kitchen. Not everyone has cacao beans or all the seven grains in their kitchen, but if we consider raw products, then we have around 50 seeds which belong to our daily menu: grains for bread, porridge, etc., oilseeds such as sunflower, canola and soya; protein seeds such as peas, beans and nuts; seeds for drinking such as coffee, herbal teas and cacao; and spices such as pepper, mustard, vanilla etc.

In addition, we discuss the use of grains and soya as concentrates for industrial meat production and what this means for farmers in countries that produce such products for export. Farmers rights to keep their own seeds, the danger of monocultures and loss of genetic variation are also considered. What are hybrid seeds and GMO seeds and what is their influence on food production is an important topic, as well as questions about food and the role of multi-national companies.

How is the project linked to the school curriculum?

As described above, the study of seeds involves many different subjects in the school curriculum. Nutrition is an important part of human biology and is also important in organic chemistry. Food sovereignty and farmers rights to seed are topics for social studies and politics. Loss of genetic variation and genetic modification belong to natural science subjects.

Positive outcomes

The students express appreciation for understanding how sustainability and food production are connected. Many are surprised about our dependence on seeds in our daily food and see how what we eat affects people in other parts of the world.



**FIELD
TO SCHOOL**

CASE STUDY



Co-funded by the
Erasmus+ Programme
of the European Union





FIELD TO SCHOOL

CASE STUDY

