



Let's Talk



Plants Matter

Teacher Guide

This activity aims to provide teachers with a resource which will help them to raise environmental science issues with their pupils. It is written for pupils at CfE second level or Key Stage 2 but it could be modified to be used with younger or older pupils.

Plants Matter

This activity could be used when pupils are studying plants and the environment. The activity aims to encourage the pupils to discuss some of the issues and conflicts associated with preserving forests, providing habitats for wild animals within farmland and the importance of plants in the oceans.

The lesson could begin with a general discussion about the ways in which plants are important and the pupils are asked to imagine places they have been where they appreciated the plant life. The teacher then reads out 12 words and the pupils write down the first plant-type word which comes into their head associated with the word the teacher has read out.

1) Forest	5) Seeds	9) Pollen
2) Green	6) Perfume	10) Buds
3) Carbon dioxide	7) Leaves	11) Photosynthesis
4) Flowers	8) Fruits	12) Habitat

The teacher now puts the class into groups of about 5 pupils and each group looks at the words to see if anyone in the group wrote down the same words.

The pupils then pick the 5 most popular words for their group and use them to make a short poem or a song or a sentence about why they feel plants matter.

An example of a poem which this activity inspired:

*Did you ever try
Living your life like trees
Though you can't move or fly
You still can feed the bees*

*Did you ever try
Living your life like a plant
Never would you complain or cry
Though days don't go to plan*

What matters most?

Then, still in groups, the pupils are given one of the plant environment pictures and asked to rate the importance of the statements. In each picture there are 10 statements the pupils have to give each statement an 'importance mark' out of 5 but they only have 35 points to give out. For example if a group was looking at the farm and decided that the statement 'Farms throughout the world provide almost all the food which we all need to survive' was very important they would assign a score of 5 to box F on the pupil sheet. They need not use all their 35 points but must not use more than 35 points. They record their points in the tables provided for each environment.



Teachers might find it helpful to copy the list of statements, provided on the separate sheet, so that the pupils can keep track of which statements have been used.

The lesson ends with another discussion. The teacher could discuss the difficulties which exist in making the decisions about 'what matters most' and that there is no 'correct' answer. The teacher could ask the pupils who should make the decisions and then get them to vote to see who most pupils think should decide.

Useful website links:

<http://www.rainforest-alliance.org/kids>
<http://www.face-online.org.uk/en-gb/exploring/fact-sheets-exploring>
<http://ocean.nationalgeographic.com/ocean/>

Curriculum Links

SCOTLAND - Curriculum for Excellence (CfE)

<http://www.educationscotland.gov.uk/learningteachingandassessment/curriculumareas/sciences/index.asp>

This activity supports the following CfE outcomes:

- I can explore examples of food chains and show an appreciation of how animals and plants depend on each other for food [SCN 1-02a].
- Through carrying out practical activities and investigations, I can show how plants have benefited society [SCN 2-02b].
- I have collaborated on investigations into the process of photosynthesis and I can demonstrate my understanding of why plants are vital to sustaining life on Earth [SCN 3-02a].
- I understand how animal and plant species depend on each other and how living things are adapted for survival. I can predict the impact of population growth and natural hazards on biodiversity [SCN 4-01a].

Additionally the activity develops the skills required to fulfil the requirement from the **Science Principles and Practice:**

- making informed personal decisions and choices
- expressing opinions and showing respect for others' views
- developing informed social, moral and ethical views of scientific, economic and environmental issues
- discussing and debating scientific ideas and issues

The activity also supports the **Life on Earth** units of National 3 and 4 Biology: <http://www.sqa.org.uk/sqa/45723.html>

National 3

Key areas - Sampling and identifying living things from different habitats to compare their biodiversity and suggest reasons for their distribution.

Exemplification of key areas - Habitat is the place where an organism lives. The range of types of organisms, the biodiversity, varies greatly between habitats. Different habitats support different organisms because the organisms are adapted to exist in the particular sets of conditions.

National 4

Key areas - Animal and plants species depend on each other.

Exemplification of key areas - Investigate a variety of ecosystems/biomes e.g. rainforest, tundra, desert, arctic, temperate, local ecosystems.

Key areas - Impact of population growth and natural hazards on biodiversity.

Exemplification of key areas - Investigate examples of human population growth and how these affect biodiversity. Investigate human influenced environmental disruptions on biodiversity.



ENGLAND AND WALES

<http://www.education.gov.uk/schools/teachingandlearning/curriculum/primary>

This activity support the following areas of the Science and Citizenship curriculum:

Science - Key Stage 2: Sc2 Life processes and living things

Pupils should be taught:

- **Life processes**

- 1. c. to make links between life processes in familiar animals and plants and the environments in which they are found.

- **Living things in their environment**

- 5. a. about ways in which living things and the environment need protection.

- **Adaption**

- b. about the different plants and animals found in different habitats.
- c. how animals and plants in two different habitats are suited to their environment.

- **Feeding relationships**

- d. to use food chains to show feeding relationships in a habitat
- e. about how nearly all food chains start with a green plant.

Citizenship - Key Stage 2

Pupils should be taught:

- 1. a. to talk and write about their opinions, and explain their views, on issues that affect themselves and society.

NORTHERN IRELAND

http://www.nicurriculum.org.uk/key_stages_1_and_2/areas_of_learning/the_world_around_us/

This activity support the following outcomes from the *World Around Us* area of learning:

The World Around Us - Key Stage 2

Interdependence

Pupils should be enabled to explore:

- How they and others interact in the world;
- How living things rely on each other within the natural world.

Place

Pupils should be enabled to explore:

- How place influences the nature of life;
- Ways in which people, plants and animals depend on the features and materials in places and how they adapt to their environment;
- Positive and negative effects of natural and human events upon place over time.

Change over time

Pupils should be enabled to explore:

- How change is a feature of the human and natural world and may have consequences for our lives and the world around us;
- The effects of positive and negative changes globally and how we contribute to some of these changes.



Farm

A Farmers throughout the world provide almost all the food which we all need to survive.

Farm

B Farmers spray crops to kill insects and other living things which are pests and would destroy the crops.

Farm

C People can have family holidays on farms and learn all about what happens there.

Farm

D Wild flowers grow on the farmland and insects and birds find places to live there.

Farm

E Farms provide work for local people and for all the people who transport and sell the food.

Farm

F Farmland gets sold and used to build houses for people.

Farm

G Farms are wonderful green areas full of plants which are giving beauty, food and oxygen.

Farm

H In some places the food grown on the farm is sent away to other countries and the land is not used to grow food for the local people.

Farm

I In some places farms are not looked after well and people do not get the food they need.

Farm

J In some places too much food is grown and it gets thrown away.

Rainforest

A The forest trees provide oxygen which is needed by all living things.

Rainforest

B Local people can eat the forest fruits and seeds or sell them.

Rainforest

C Trees can be cut down to provide local people with fuel for cooking.

Rainforest

D The plants help to keep the soil stable and prevent erosion.

Rainforest

E Plants found here can be used as medicines to cure disease.

Rainforest

F It is a lovely place to have a holiday and local people get jobs.

Rainforest

G The forest's trees help to trap the moisture which falls as rain.

Rainforest

H Trees can be chopped down and sold to provide money for the people who live here.

Rainforest

I The trees can be cut down and food crops can be grown in their place.

Rainforest

J The forest trees provide oxygen which is needed by all living things.

Seashore

A The sea and seashore are beautiful and we must preserve them.

Seashore

B The plants in the marine environment help to stabilise our climate.

Seashore

C When countries run out of fresh water they can use sea water to drink by taking the salt out of it.

Seashore

D The seas are full of plants which provide oxygen for all marine life.

Seashore

E Plants in the sea provide all the food for the animals.

Seashore

F The seas are full of undiscovered plant and animal species which may be very important to humans.

Seashore

G The seas and the seashore are great places for humans to relax and have holidays.

Seashore

H If the marine plants are polluted many living things will become extinct.

Seashore

I The seas provide a place for humans to get rid of their waste.

Seashore

J Fish eat small marine creatures which eat marine plants and the fish provide jobs and food for people.