Session Plan – Plant Detectives KS1 & KS2

This session lasts one hour and is suitable for a maximum of fifteen children.

Learning Objectives

- Children understand that the natural world around them holds a diversity of fascinating plants
- Children understand that plants are structurally adapted to their lifestyles
- Children understand that our lives depend heavily on plants and their habitats

Personal Development Objectives

- Children work in groups to achieve common goals
- Children learn to assess risk and behave accordingly
- Children are inspired with a sense of responsibility towards other organisms

Curriculum Links

KS1

Pupils should be taught:

- 3a. to recognise that plants need light and water to grow
- 3b. to recognise and name the leaf, flower, stem and root of flowering plants
- 3c. that seeds grow into flowering plants
- 4b. to group living things according to observable similarities and differences
- 5a. to find out about the different kinds of plants and animals in the local environment
- 5b. to identify similarities and differences between local environments and ways in which these affect animals and plants that are found there
- care for the environment

KS2

Pupils should be taught:

- 1b. that the life processes common to plants include growth, nutrition and reproduction
- 1c. to make links between life processes in familiar animals and plants and the environments in which they are found
- 3a. the effect of light, air, water and temperature on plant growth
- 3b. the role of the leaf in producing new material for growth
- 3c. that the root anchors the plant, and that water and minerals are taken in through the root and transported through the stem to other parts of the plant
- 3d. about the parts of the flower (stigma, stamen, petal, sepal) and their role in the life cycle of flowering plants
- 4b. how locally occurring animals and plants can be identified and assigned to groups
- 4c. that the variety of plants and animals makes it important to identify them and assign them to groups
- 5a. about ways in which living things and the environment need protection
- 5b. about the different plants and animals in different habitats
- 5c. how animals and plants in two different habitats are suited to their environments
- 5e. how nearly all food chains start with a green plant

Safety Considerations

Refer to relevant risk assessments for the site and session.

Resources

Laminated cards: parts of a plant, parts of a flower, plant growth stages.

Introduction

Explain to children that during this session they are going to investigate plants, how they work and the things they do for us. Discuss what a plant is. Compare and contrast respiration and photosynthesis. Ask children what plants do for us and explain how plants (in most cases via the process of photosynthesis) produce:

- the oxygen we breathe
- the food we eat (including animal products higher up the food-chain)
- many of the materials from which we build our houses
- many of the materials we use in our homes and schools
- many of the materials from which we make our clothes
- many of the compounds from which we make our medicines

Discuss also the fact that plants play an important role in making our surroundings pleasant and therefore in giving us quality of life.

Explain that children should only touch plants they are told to touch, should never put plants in their mouths and should wash hands before eating.

Activities

- Using the laminated plant part cards, ask the children to construct plants. Encourage them to think about what each part of the plant does and why it fits where it is on the plant. Encourage them to observe real plants and describe the differences they observe in how they fit together.

- Along the boardwalk, find several flowering plants. Identify the different parts of the flower using laminated pictures to help. Explain what the different parts of the flower do. Explain the difference between wind and insect pollination.

- Along the boardwalk, find plants which are fruiting or in seed. Using laminated cards, discuss what seeds are and how plants grow. Look at real seeds and discuss how they move around to find a place to grow. Show examples of wind, bird, mammal and ballistic seed dispersal.

- At the interface of swamp carr and reed-bed, discuss how plants are adapted to their habitats. Compare the shapes of plants growing in each habitat and compare how closely they grow together.

Conclusion

Discuss how plants are the basis of almost all food chains and how all biodiversity, including ourselves, depends on plants. Once again prompt children to list the many things plants give us in our daily lives and how it is the process of photosynthesis which produces most of them.

<u>Updated 25/2/10</u>