

The Schools' Biodiversity Action Plan aims to encourage and assist schools to develop and use outdoor areas in their grounds and those found locally. It promotes the potential for school grounds to contribute biodiversity and through teacher training encourage the use of school grounds and local outdoor spaces for learning and teaching about local wildlife.

What is biodiversity?

Biodiversity is the variety of life - all living things around us. This includes the plants, animals and insects in our woods, mountains, rivers, seas, gardens and parks, right down to the things living in our window boxes and soils.



Why is biodiversity important?

Maintaining biodiversity is vital for our survival. Biodiversity provides us with crucial resources like fresh air and clean water for our daily lives so it is really important that we look after it properly. This is not a simple, easy task – it needs the help of many different people to achieve this.



Why is schools' biodiversity important?

School grounds and local outdoor spaces hold a multitude of wildlife. Children play and learn there. Through schools' biodiversity projects there are direct benefits to the environment as well as influencing young people's interests and attitudes. In addition, caring for the environment and outdoor learning improve children's health and well-being. School grounds and local outdoor spaces could also be open to other members of the community and therefore biodiversity projects can provide an important focus for families and local community groups.



How we developed our outdoor space - West Park Primary School

Our playground was becoming overcrowded with learners and they asked if they could have more room so we formed a working party, which included the school council, who came up with the idea of creating individual areas that were interesting and inviting places for children to rest and play. This provided us with the opportunity to fill our school grounds with things that would stimulate the children's curiosity and support them in becoming self-motivated educators by giving them things that would interest, puzzle and inspire them.



We now have places where our learners can be active like the climbing frames and areas where they can go and reflect or just chill out. We were very fortunate to have an area of woodland as part of the school grounds, which with the help of parents, volunteers and local partners has been turned into an area where learners can explore the natural outdoor environment. This outdoor space is full of interesting plants, scents and textures where the focus is very much on experiencing and investigating the outdoors whatever the weather.

We have noticed that when our learners are working in their outdoor environment they are physically more active. They initiate and take part in activities that encourage them to engage in personal interactions. They talk more openly and have conversations with each other and will negotiate in situations that need a resolution like settling a dispute.

Five easy steps to increasing biodiversity

By changing a small area in your school grounds into a wildlife garden you will be providing a valuable habitat for local wildlife. The wildlife garden will also be an outdoor classroom where you can discover the natural world and develop your understanding of environmental issues through first-hand experience. Simply planting some native plants and providing attractive conditions for wildlife such as insects and garden birds to shelter and feed will increase the wildlife population.

1 Hedges, trees and shrubs

Plant trees, shrubs and hedgerows that are native to the area. These will help to attract a wide range of insects, birds and small mammals that feed on them. Choose species with berries or nectar rich flowers (rowan or guelder rose), and that are usually found in local semi-natural habitats (birch, oak, ash, alder, elm and willow).

Plant shrubs closely together in groups or as a hedge to provide living space and food for all sorts of wildlife. Native choices include hawthorn, blackthorn, wild rose, holly, hazel and elder.



2 Bird and bat boxes

With bird and bat populations decreasing, making bird and bat boxes is an excellent idea to help our flying friends live and breed. January and February are the ideal times to build the box and use in the spring. Make sure the boxes don't face the sun and are not exposed to the rain.



3 Bird and butterfly feeders

By providing food for birds and other animals you will help to attract them to your grounds where they can be watched and studied. Different birds eat different foods in different ways and different places. Provide nuts, seeds, fat and kitchen scraps in feeders, trays and on the ground to allow for the various diets and feeding methods of many species particularly in winter. Move feeding places occasionally to guard against predators, disease and unwelcome visitors such as rats.

Make a butterfly border of long-flowering, sweet-smelling, sun-loving plants such as Buddleia (butterfly bush). Plant them in a sheltered sunny spot and arrange to have some plants in flower all year round. Moths are attracted to night-scented stocks such as honeysuckle and evening primrose.



4

Wet areas

Water is vital for all living things, providing a source of water in your school grounds will increase the range of plants and animals that can survive there.



5

Wild areas

Undisturbed 'wild' areas where grass and wildflowers grow can provide valuable shelter and food for wildlife, including minibeasts. Damp log piles create an ideal winter home for hibernating frogs, toads and newts.

You could even build a 'bug hotel', as this photo shows.



What does 'biodiversity' mean to me?

They [animals and plants] need a home. There are lots of homes.

Jac, aged 5

Keeping all the animals and plants alive even if we don't like them!

Ruby, aged 8

It's all the things in the world that are living and making sure they stay there in the right place it keeps the Earth alive.

Oskar, aged 11-14

It is the range of flora and fauna in a given habitat. We need to maintain biodiversity because it preserves all the genes that we could one day use to help the human race.

Ben, aged 14-16

Connecting learning and life

Children and young people learn by what they observe and experience out of class. Well-designed school grounds or a local area that enhances biodiversity will underpin messages about biodiversity from classroom teaching. The Foundation Phase framework concentrates on both indoor and outdoor learning equally. It expects children to experientially learn, not just about the environment but to use their outdoor spaces as an additional classroom. The Science programmes of study for all key stages, and the area of learning in the Foundation Phase entitled 'Knowledge and understanding of the world' focus on the importance of interdependence of all living things and their dependence on their environment. The Geography programmes of study require learners to study their own locality and environment and consider how to ensure environments are sustainable in a global world. Also within the Personal and Social Education framework for all key stages there is a central core relating to Education for Sustainable Development and Global Citizenship (ESDGC).



How biodiversity fits with the school curriculum

Foundation Phase

Personal and Social Development, Well-Being and Cultural Diversity

- activities in the indoor and outdoor learning environments
- activities that allow them to begin to understand how they can protect the environment and become environmentally friendly in their everyday lives.

Knowledge and understanding of the world

- learn about where their locality is
- identify natural features, e.g. rivers, hills, beaches, and the human features, e.g. buildings, roads, bridges, of their own locality
- begin to recognise differences between their own locality, localities in other parts of Wales and in different parts of the world
- identify and describe natural and human features, e.g. weather conditions, types of buildings
- identify similarities and differences to describe, compare and contrast places and environments
- describe the causes and consequences of how places and environments change, e.g. by season; from past to present; the need for sustainability
- observe differences between animals and plants, different animals, and different plants in order to group them
- identify some animals and plants that live in the outdoor environment
- identify the effects the different seasons have on animals and plants.

Key Stage 2

Science

- through fieldwork, the plants and animals found in two contrasting local environments, e.g. identification, nutrition, life cycles, place in environment
- the interdependence of living organisms in those two environments and their representation as food chains
- the environmental factors that affect what grows and lives in those two environments, e.g. sunlight, water availability, temperature
- how humans affect the local environment, e.g. litter, water pollution, noise pollution.

Geography

- identify and describe natural and human features, e.g. weather conditions, types of buildings
- identify similarities and differences to describe, compare and contrast places and environments
- describe the causes and consequences of how places and environments change, e.g. by season; from past to present; the need for sustainability.

Personal and Social Education

- appreciate the natural world as a source of inspiration
- take an active interest in varied aspects of life in school and the wider environment
- how the environment can be affected by the decisions we make individually and collectively.

Key Stage 3

Science

- the interdependence of organisms and their representation as food webs, pyramids of numbers and simple energy-flow diagrams
- how and why food webs are affected by environmental factors, e.g. light intensity, water availability, temperature, and their fluctuations
- how human activity affects the global environment, e.g. acid rain, greenhouse effect, and the measures taken to minimise any negative effects and monitor them, e.g. by Earth observation satellites.

Geography

- describe and explain physical and human features, e.g. the features of a river, characteristics of economic activity
- explain the causes and effects of physical and human processes and how the processes interrelate, e.g. causes and consequences of tectonic activity, impacts of migration in Europe
- explain how and why places and environments change and identify trends and future implications, e.g. population increase, climate change, globalisation.

Personal and Social Education

- develop a sense of personal responsibility towards local and global issues, e.g. protecting biodiversity
- the key issues of sustainable development and global citizenship, e.g. climate change, and the need to reflect on personal decisions about lifestyle choices.

Key Stage 4

Science

- ethical, social, economic and environmental issues and their interaction with science
- the effects of human activity on the environment can be assessed using living and non-living indicators.
- the surface and the atmosphere of the Earth have changed since the Earth's origin and are changing at present.

Personal and Social Education

- recognise the rights of future generations to meet their basic needs
- take personal responsibility for changing their own lifestyle as a response to local and global issues and to understand:
- the interdependence of global economic systems and the effects of human development on natural systems
- the tensions between economic growth, sustainable development and basic human needs, e.g. the causes of inequality within and between societies.

Creating quality learning environments

The development and management of biodiversity projects often lies with school staff, learners and volunteers in the community. Biodiversity projects in school grounds can contribute to the health and wellbeing of pupils, their families and other members of the local community. In addition, they encourage an active interest in the outdoor world and health-giving physical activity.

Biodiversity and sustainability are closely interconnected. Biodiversity projects can contribute to creating school grounds that are more sustainable.

Designing a landscape for biodiversity is not necessarily more expensive than 'normal' landscaping.

For example:

- Planning for biodiversity in the early stages of a building project helps to minimise cost.
- Maintenance costs for biodiversity projects can be lower, for example where grass is cut less often.
- Biodiversity projects can attract volunteer involvement, making a limited budget go further.



How to develop a biodiversity project

1 Decide on the aims of the project.

2 Review:

- What habitats are found in Bridgend County? ([hyperlink 1](#))
- Species action plans – a table giving information as to the conservation of specific animals and plants in Bridgend County ([hyperlink 2](#))

You could also review the source document for these - Bridgend's Biodiversity Action Plan ([hyperlink 3 – external to these materials](#))

3 Carry out a site audit to review the animals and plants actually living in the area. ([hyperlink 4](#))

4 Consider introducing new types of habitats and features to improve biodiversity.

5 Check who might be able to help:

- Bridgend Environmental Education & Sustainability (BEES) Partnership, 'BEES Partners' and 'Funding' at <http://bees.bridgend.gov.uk/>
- Eco-schools at <http://eco-schools-projects.org/>
- Parents and families

Local organisations, such as:

- RSPB, Wildlife groups etc.
- Local companies for 'green' sponsorship
- Landscape architects
- Grounds maintenance services
- Local Authority services that support biodiversity, such as Sustainable Development/ Environment Services

More details can be found at Check-list for making a Biodiversity Action Plan ([hyperlink 5](#)).