

Top tips for schools to engage with biodiversity



“Every child... born into this world has an innate pleasure..., delight..., interest and curiosity in the natural world.”

Sir David Attenborough

Introduction

Biodiversity is life. Scientists use the word to describe the links and variety between all living things on the planet – including humans.

You may think of biodiversity as the environment, or as nature, wildlife, plants and animals, but the important thing to remember is it's all inter-connected. That includes every person too – we all rely on biodiversity for our survival, because of the vast number of goods and services our planet provides for us.

All too often, economic growth and social progress neglects the essential need to consider and care for the environment. Yet the conservation and sustainable use of biodiversity is critical for both the global economy and for the basic resources needed to support our planet's growing population.

The world is changing, and by engaging with biodiversity, schools can improve their own performance, while equipping pupils with the skills, understanding, and confidence to adapt to these changes and to succeed in the future. At the same time, they will also be benefiting biodiversity – in the school grounds, local community and all around the world.

Top Tips:

1

Taking the first step and opening eyes

You don't need to have experts in ecology to engage with biodiversity in schools, and it's very simple to develop and build confidence once you get started. An easy first step is to go outside the classroom and look around at what wildlife, nature, plants and animals are there. Giving children five minutes each day outdoors to notice environmental changes and animal behaviour is more beneficial than teaching lessons without context.

Beyond the immediate school building and grounds, local communities also offer many opportunities for learning about biodiversity, including parks and canals. Further afield, a variety of biodiversity and natural environment organisations offer good quality, safe teaching and learning experiences, from half-days to residential visits.

2

Opening all the doorways

Engaging with biodiversity in your school will help you to tackle all aspects of the DCSF Sustainable Schools framework. At the core of Sustainable Schools are three competencies of care: for oneself; for others; and for the environment.

Many of the following biodiversity tips help schools become sustainable by approaching the framework 'doorways' in a variety of ways across their curriculum, campus and community. Once you have tried these, why not look at the other available top tips for more ideas on how to approach the doorways?

3

Using biodiversity for relevance and context setting – across all curricula and ages

Biodiversity fits well with science and geography curricula, and with a little imagination it can easily link in to all subjects. For instance, taking learning outside the classroom by monitoring and recording biodiversity provides a wealth of data which can be used back in the classroom to support numeracy lessons. More widely, looking at the seasons and animal migration can help introduce ideas about changes over time. For centuries, nature has provided inspiration for poetry, art and literature too; with many plants and animals also having great cultural symbolism.

Biodiversity can also be the context for citizenship discussions, and when approaching the Key Stage 3 cross-curriculum dimensions. In addition, at secondary level it can help develop an ecological thinking approach (systems thinking and how everything is

connected). This can be expanded by looking at the chains within ecosystems – for example, the impact of natural processes on human well-being, in relation to food or water, can help pupils to understand the connections and inter-relationship between species, habitats, and people.

4

Creating places for wildlife in your school grounds

Creating a place for wildlife in your school grounds has never been easier. For example, with the help of Breathing Places Schools, nature can be nurtured and encouraged in schools for children to enjoy and explore. Each term, schools are asked to ‘Do One Thing’ for nature. To date, activities have included seed planting, creating mini-beast habitats, feeding wildlife, creating wildlife homes and water habitats. As well as Breathing Spaces Schools, there are many other organisations out there who could offer help and support to schools with ideas about wildlife gardening.

Developing and managing inspirational spaces in and around the school provides teachers with the opportunity to build life skills such as planning, budgeting, scheduling, negotiation and project management. It encourages teamwork, inter-generational activity and can also be used to stimulate individual research.

5

Thinking critically, locally to globally

Biodiversity also links into local and global institutions and issues. For instance, human rights and responsibilities can be connected to the way we think about nature, or animal rights – at the same time developing critical thinking and communication skills.

Climate change and poverty can also be linked to biodiversity. Taking this approach towards biodiversity is valuable in helping young people develop and explore their own rights and responsibilities in caring for themselves, others, and the environment.

Locally, supporting biodiversity also helps local authorities meet their duties under the 'Natural Environment and Rural Communities Act' and can be part of their 'Local Biodiversity Action Plans'. This can lead to further support for the school from a variety of staff in the local authority, and can also help to reinforce the importance of schools in sustainable local communities. Students involved in a practical project also gain confidence and a sense of agency.

6

Building for a biodiverse future

It's not just people who get shelter and protection from buildings – animals, insects and plants do too. It can be simple to include measures to benefit biodiversity and the school community, whether you're designing and constructing new buildings, or adapting existing ones. For instance, having a 'green roof' on your school provides a home for plants and bugs. These then provide vital food for other wildlife that can also use school buildings to nest and live (especially if specific spaces are built-in), including rare and threatened species of bats and birds. Not only that, but a green roof can also provide insulation (and reduce energy costs) and slow rain from rushing down the drain (or assist with its harvesting for use elsewhere around the school).

A green roof might not be possible for many schools but there are other measures that you can take in and around your buildings that are less challenging; for example, why not have hanging baskets filled with wild flowers to attract bees or bird boxes for nesting?

Benefiting pupils, helping teachers, improving schools...

Contact with nature has a range of positive learning and health benefits associated with it. Howard Gardner identified nine multiple intelligences, including a 'naturalist intelligence'. Those with this intelligence learn best when involved with experiencing, collecting or analysing something in nature or closely related to nature, and therefore learn more through being outside.

There are also physical health benefits from contact with nature and natural play, including reducing the effects of childhood obesity, and improving mental health and emotional well-being. For instance, findings suggest improved engagement with learning and a reduction in instances of attention deficit hyperactivity disorder (ADHD) amongst pupils following contact with nature.

Specific information and guidance related to the tips can be found at the following:

DCSF resources:

- Sustainable Schools website
- S3: Sustainable Schools self-evaluation
- Planning a Sustainable School
- Top Tips

www.teachernet.gov.uk/sustainableschools

Learning Outside the Classroom:

www.lotc.org.uk

www.lotcqualitybadge.org.uk

Learning Maths Outside the Classroom at Primary and Secondary levels:

www.ncetm.org.uk/resources/9268

Qualifications and Curriculum Development Agency curriculum:

<http://curriculum.qcda.gov.uk>

Ecosystems Approach:

www.defra.gov.uk/wildlife-pets/policy/natural-environ/eco-approach.htm

Breathing Places Schools:

www.bbc.co.uk/breathingplaces/schools

BRE's Environmental Assessment Method for all new schools buildings and major refurbishments:

www.breem.org/schools.html

Schools for the Future – case studies of designs of sustainable schools:

www.teachernet.gov.uk/_doc/10675/SustainCS.pdf

Additional online resources supporting biodiversity in schools:

Amphibian and Reptile Conservation Trust:

www.arc-trust.org/education

The Bat Conservation Trust:

www.bats.org.uk/pages/resources_for_teachers_youth_leaders.html

Botanic Gardens Education Network:

www.bgen.org.uk

Bristol Natural History Consortium:

www.bnhc.org.uk

British and Irish Association of Zoos and Aquariums:

www.biaza.org.uk/public/pages/education/index.asp

BTCV:

www2.btcv.org.uk

Buglife:

www.buglife.org.uk/discoverbugs

Butterfly Conservation:

www.butterfly-conservation.org/learn

Eco-Schools:

www.eco-schools.org.uk/nine-topics/biodiversity.aspx

The Eden Project:

www.edenproject.com/schools-and-colleges

Farming and Countryside Education:

www.face-online.org.uk

The Field Studies Council:

www.field-studies-council.org

Forestry Commission:

www.forestry.gov.uk/england-learning

The Great Plant Hunt:

www.greatplanthunt.org

Groundwork UK:

www.groundwork.org.uk

Growing Schools:

www.growingschools.org.uk

International Year of Biodiversity 2010

www.biodiversityislife.net

Kew Gardens:

www.kew.org.uk/learn

Learning through Landscapes:

www.ltl.org.uk

National Association for Environmental Education (UK):

www.naeeuk.plus.com

National Parks:

www.nationalparks.gov.uk/learningabout

The National Trust:

www.nationaltrust.org.uk/learning

Natural England:

www.natural-england.org.uk/information_for/students_and_teachers/default.aspx

Natural History Museum:

www.nhm.ac.uk/education

Plantlife:

www.plantlife.org.uk

Pond Conservation:

www.pondconservation.org.uk

RSPB:

www.rspb.org.uk/schools

Royal Horticultural Society:

www.rhs.org.uk/children/For-schools

SEEd:

www.se-ed.org.uk

The Wildlife Trusts:

www.wildlifetrusts.org/education

Wildfowl and Wetlands Trust:

www.wwt.org.uk/learn

Wildscreen:

www.wildscreen.org.uk

The Woodland Trust:

www.woodlandtrust.org.uk/en/learning-kids/schools/Pages/stuff-to-do.aspx

WWF-UK:

www.wwf.org.uk/oneplanetschools

Zoological Society of London:

www.zsl.org/education

Education and Public Understanding Group of the England Biodiversity Strategy, November 2009

“Schools should ... ensure that all pupils have access to out-of-classroom learning to support their understanding of the need to care for their environment and to promote their physical and mental well-being.”

Ofsted report “Education for Sustainable Development: improving schools – improving lives”

December 2009



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