



Climate School 180 Nature and Sustainability

Who is this information for?

This guidance document is for whoever is leading your climate adaptation and education project and for those involved in making any changes to your school grounds.

It provides an overview of how your school grounds can be part of your strategy to help you support nature and ecosystems in your grounds.

These changes can also help you when considering the 'Biodiversity and Adaptation and Resilience' themes of your Climate Action Plan.

Introduction

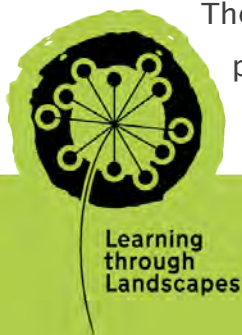
Climate Change can have an impact on the ecosystems that make up your school grounds – that is 'all the plants and animals that live in a particular area together with the complex relationship that exists between them and their environment.'

As temperatures and rain patterns change, this has an impact on the plants and animals that make up the ecosystems within your school grounds. Plants that have lived successfully in your grounds for years may now be struggling to survive. This has a knock-on effect on the wildlife that relies on these plants for food and habitat. In addition, some animals are directly affected by changes in temperature, for example fertility rates in some butterflies drop as temperatures rise.



Other pressures include the way that habitats are managed. For example, short mown grass is generally less diverse than grass that is cut less frequently. This, in turn, means a lower range of wildlife that thrives there. There are also many schools who still use pesticides and fungicides.

These reduce the biodiversity over a wide area, not just where they are applied, and pose health risks to the children and young people who use the space.



We also already know that over 80% of the space in school grounds is made up of tarmac or mown grass, neither of which are particularly biodiverse. It is important, therefore, to recognise that even modest improvements in your grounds can have a significant benefit for wildlife.

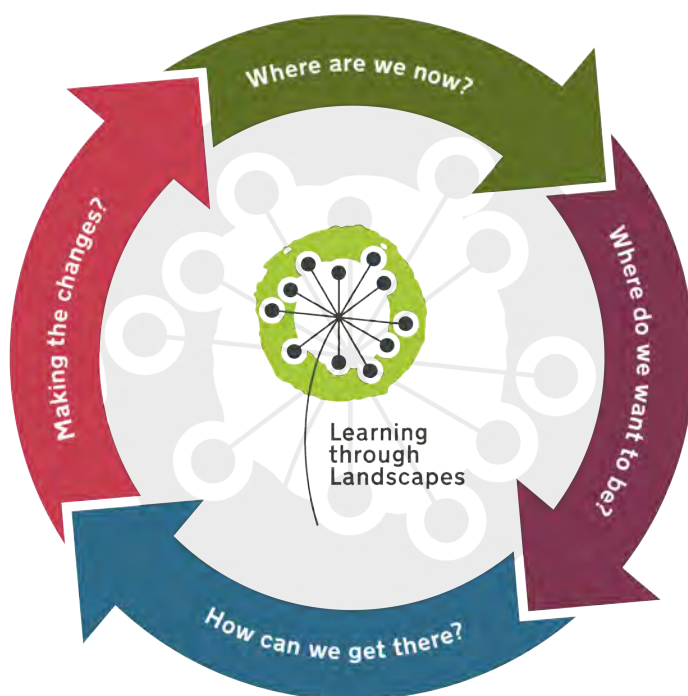
In this guidance we will focus on increasing biodiversity across your grounds and will link to resources that you can use to help you with this process.



Working through the Learning through Landscapes (LtL) process of change

This simple process of change is a structure LtL encourages schools, and those who work with them, to use. It helps to ensure that schools do not rush into making changes to practice or their grounds without properly considering their needs. We are using this process as we look at nature and sustainability in school grounds.

Use the introductory resource '[Engaging your pupils from start to finish](#)' to help you plan how your pupils, and others, can get involved in this process of change.





Stage 1: Where are we now?

Before you can improve the biodiversity of your school grounds you need to see what is already there. The National Education Nature Park '[Mapping Your Site](#)' resources include simple surveys to help you identify the different types of habitat you have, and more in-depth biodiversity surveys are following to help you to discover what lives there. The number and variety of these surveys will grow over the next few years and can be used by schools across the UK (although the apps for GIS mapping habitats are currently only available in England).

Alternatively, you can use our [Natural Nations Surveys](#) from the Projects section of the Learning through Landscapes website. These will help you to survey pollinators, minibeasts, birds and habitats but will not allow you to record and map them in the same way the National Education Nature Park does for schools in England.



Stage 2: Where do you want to be?

Use your survey information to prioritise where you need change to happen. Don't worry about what that change will be at this stage, that is for the next, problem-solving stage. Try to keep an open mind, exploring all the possible solutions and combinations of interventions that are available to you before considering which suit you best. By going through a process properly, you may identify new options or more creative solutions.

At this stage, you will be looking at the specific needs of your school. Have an honest conversation about how biodiverse your site is now. Identify which areas are already positive for nature and consider how you can protect those areas while creating and connecting new opportunities for biodiversity. Also, think about how you ensure that wildlife and children's needs are balanced. It may be some areas are freely used for learning and play, while other areas remain 'out of bounds' to protect the nature benefits.



It is good to have a vision for the whole of your site before you work out, 'What are your priorities?' So that you start where the need is greatest, but then continue once that has been completed.



Stage 3: How can we get there?

This is the problem-solving stage, the stage where you look at different options for change and where decisions are made.

For each space or feature, review the options for what you can change, looking at the pros and cons of each. You will find information about this in the links included at the end of this document. Pupils can research the needs of different trees, plants and animals that you would like in your grounds. This includes soil types and structures for plants and both food and habitat needs for the wildlife. Some insects, for example, need different plants to feed on at different stages of their life cycle.

Also, think about stages in the programme so that you are not planting a full forest in one go, perhaps your planting will be over a couple of years or focus on one area at a time.

At this stage you will also want to think about making sure you are using sustainable resources, ideally from local suppliers, the cost of change and the maintenance implications. The good news is that 'soil, seed and plants' are often available in various grant schemes or are very modest in cost.



Stage 4: Making the changes

Once you have decided on the changes you need to plan who will be involved in making the changes and when this needs to be done.



Then back to: Stage 1: Where are we now?

Whatever you do, remember to go back to see what difference you have made. Do this straight away, but also annually so that you can record the impact you have had. From here, you can start to plan the next thing on your list of priorities.

And don't forget to celebrate change too!

Planning for the future

Any changes you make will have maintenance implications, so start to plan for this right at the beginning of the process. Creating a management plan can be a useful way to do this and the [Polli:Nation Maintenance Guide](#) will help you to put this together.

Useful definitions

Biodiversity – ‘is the variety of plant and animal life in the world or in a particular habitat, a high level of which is usually considered to be important and desirable.’ (Dartmoor National Park)

If you have a space that only has a few plant species in it, adding more is likely to make it more biodiverse. However, that does not account for what kinds of plants you add – you might accidentally add an invasive species which might make an area more biodiverse for a while but ultimately lessen the number and variety of species in an area or not support a wide range of wildlife.

Ecosystems – ‘An ecosystem is all the plants and animals that live in a particular area together with the complex relationship that exists between them and their environment.’ (Collins Dictionary)

An example of an ecosystem is your soil which includes all the micro-organisms as well as larger plants and animals that live there. A healthy ecosystem can help to provide clean air and water, produce food and medicines, slow flooding, capture carbon and more.

Sustainability – is defined by the United Nations as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”



We can see how this definition can be applied to different aspects of climate change education in schools and not just environmental sustainability. Think about how you are going to maintain any changes you make to curriculum, culture, community and campus– see the Policy and Practice guidance note for more information on this.

Looking more specifically, sustainable development is often defined as development ‘that meets the needs of the present without compromising the ability of future generations to meet their own needs.’ We might want to extend that to take a broader look at how what we do has an impact on the environment and nature, both locally and globally. This will include considering the materials you use in your grounds, the features you add, the plants you grow and the way you manage your grounds.

You may also want to think about other related definitions that you may come across.

Nature - If you search for a dictionary definition of nature some will tell you that people are part of nature, and some will separate people from nature. You may want to discuss this with your pupils and see whether they think they are part of nature or not. Researchers at Derby University are looking at how much people feel part of or separate from nature – this is their ‘Nature Connectedness’. Do visit their [research](#) if this is something you would like to learn more about.

We believe that people are part of nature, that we are interconnected and what we do affects other parts of nature whilst nature also impacts us. This is important in how we respond to nature. If we feel we are part of nature, then we are more likely to care about it and want to look after it. This is key to supporting the aims of Climate School 180.

So for this project we will use the Collins Dictionary definition of nature:

Nature – according to the International Union for the Conservation of Nature (IUCN) Nature encompasses both the non-living components (i.e. geodiversity) and the living components (i.e. biodiversity) of the natural world.

We have produced some ‘How to’ guides especially for the LtL Climate School 180 project and suggest you also use resources on the [National Education Nature Park website](#). These will help your pupils to plan and make changes to their grounds for the benefit of nature and for your whole school community.



For all other climate change resources, please visit www.ltl.org.uk/climate