Climate School 180

Tree Planting

Introduction

The benefits of planting trees in your school grounds are many and varied. Planning, planting, and access to trees, offers a wealth of cross curricular opportunities, including measurement and mapping, instructional writing, creativity, science, and citizen science. In addition to this, health and wellbeing is enhanced by physical activity while planting and caring for trees, as well as the promotion of healthy eating by consuming fruit crops and related fruit products.

Alongside the associated learning benefits, planting trees can promote a sense of achievement, helps to reduce stress, connects pupils with the natural world, and has a positive impact on the wider local community. With regards to mitigating the effects of climate change, planting trees is one of the best activities you can undertake in your school grounds. Suitable for pupils of all ages, trees in school grounds:



Provide shade, moderate temperature, and help to reduce wind speed



Support biodiversity and play an important role in a balanced ecosystem



Reduce the risk of water run-off and subsequent flooding



Capture and store CO2, one of the key greenhouse gases



Improve air quality by capturing pollutants and reducing noise pollution

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Climate School 180
Tree Planting

Making the change

Plan

Identify the best location for your trees. If you are planting specifically to help reduce wind speed, or to improve air quality, then this will help inform the location, otherwise a sunny spot away from the main school building is ideal. Remember trees need water, but they won't thrive if you plant in areas of poor drainage.

The type of tree species chosen will depend on a variety of factors, including the reason why you have decided to plant trees in the first place (for example to create shade, to encourage wildlife, to reduce wind speed or to grow food). Have a look at what species are growing locally and in the grounds already and contact relevant organisations like the Tree Council and the Woodland Trust for advice and support.

Ensure your trees will be accessible for all but are sited away from areas where they might be damaged (for example adjacent to the football pitch). Young trees should be planted approximately 2m apart, and an irregular pattern creates more of a natural feel than planting in straight lines. Depending on the age and stage of the pupils involved, planning and preparing a planting plan to scale is a great way of incorporating the use of maths in a real life context.

Contact the local authority to check there are no underground services you should be aware of and ensure the grounds maintenance department are aware of your plans in terms of their mowing contract.



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Climate School 180
Tree Planting

Prepare

Mark the location for each tree (training cones from the PE cupboard work well for this) in advance of planting. If you source bare root trees, ensure the soil stays moist by covering the roots with soil until needed and then standing the trees in a bucket of water on the day of planting.

Undertake a tools safety talk with pupils. Simple tips like ensuring there is enough space for planting, keeping one foot on the ground and using the ball of your other foot on the spade and agreeing a location for tools when not in use will help avoid accidents.

Plant

Two of the most common ways to plant a tree are slit planting and pit planting. Whichever technique you choose, your trees should be planted between the end of November and the end of March.

Slit planting is a quick and easy way to plant small saplings with a small root ball. Simply slice into the soil with a spade and open up the slice to create a gap wide enough to push the tree in to and deep enough to cover the root ball. Hold the sapling upright, use the heel of your foot to close the gap around the root ball and press down well.

Pit planting involves digging a hole wide enough and deep enough to fit the roots of your tree. Again, hold the tree upright whilst backfilling the soil, pressing down well so the tree is stable and secure in the ground.

Depending on the size of your trees and how windy your site is, you may need to secure saplings with a bamboo cane and larger trees with a wooden stake and a rubber tree tie.

Protect

If young trees have been planted into grass, support their growth by removing the grass around the base of each tree and replacing with bark chippings or a mulch mat. This helps reduce weed growth and, therefore, the competition for soil nutrients.

Using chippings or mulch mats also highlights the presence of young trees to the contractors who mow the grass.

If rabbits or deer are likely to visit your grounds, make use of tree guards to protect the trees as they grow. Biodegradable and recycled tree guards are now widely available.

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Climate School 180
Tree Planting

Planting trees for fruit and nut crops

Planting fruit and nut trees can help pupils makes sense of where food comes from and can also support the development of community links. Many fruit and nut tree species are suitable for UK schools. They include apples (eaters and cookers), pears, plums, greengages, damsons, cherries, elderflowers/berries, walnuts, sweet chestnuts, and hazelnuts.

As well as eating the fresh fruit, pupils can make juice, cordials, smoothies, jam and fruit puddings. Produce can also be used in the school canteen or offered to families, the wider community, or a local food bank. Fruit orchards are traditionally spaces for gatherings and celebrations, so this is another way to encourage community links.

For secondary pupils, creating a forest garden on permaculture principles where fruit trees are planted and then underplanted with soft fruit and other crops, can provide insights into sustainable growing and signpost to possible careers in agriculture and horticulture.

Hands-on curriculum and learning opportunities through planting fruit trees include:

- Seasons and life cycles of trees [Science – Planet earth]
- Sustainable ways to protect crops from pests; seed dispersal and animals; nutrition and digestive system; fruit pollination and pollinators [Science – Biological systems and Biodiversity and interdependence]







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- Training fruit trees (cordon/fan/espalier); pruning; coppicing hazels; tool use [Science – Biodiversity and interdependence]
- Apples in myth, legend, culture, e.g. apple wassailing* [Expressive arts – Music and Social studies – people, past events, and societies]
- Instructional writing about planting fruit trees and using produce; recipes [Literacy and English – Creating texts]
- No-waste food – healthy eating, storing, conserving and composting [Health and wellbeing – Physical wellbeing and Science – Biodiversity and interdependence]
- Planning and pricing up an orchard; counting, weighing, pricing, and selling produce, fruit stall, farmers market [Numeracy and mathematics – Number, money, and measure]

*Curriculum themes are headings from Scotland's Curriculum for Excellence.

Planting trees for rewilding and zoning your school grounds

In addition to mitigating the effects of climate change by reducing water run-off, planting trees can help schools to rewild parts of their grounds. Once established, even small clusters of trees can create varied habitats and wildlife corridors that support mammals, birds, insects, micro-organisms, as well as wild plants.

By designating wild or woodland spots, even comprising just a few trees, it is possible to create different activity zones around the school grounds. This might be, for example, to reduce wind speed, to create varied outdoor learning areas or to create social gathering spaces within previously featureless open spaces. Planting small tree clusters with specific purposes can enable rich learning and play experiences, while still increasing the biodiversity of the school grounds. For example, planting trees for rewilding in one area where daily activity is calm and non-intrusive and planting a separate wooded spot specifically for den-building, woodland, and mud-play.

Hands-on curriculum and learning opportunities through planting trees for rewilding and zoning include:

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Climate School 180
Tree Planting

- Planning, mapping and designing a rewilding or zoning project [Expressive arts – Art and design and Social studies – people, place and environment]
- Minibeast safari; the needs of wild animals; habitat monitoring, biotic and abiotic factors; wildlife monitoring; seed dispersal; photosynthesis; bioblitz and citizen science projects (e.g. bird and butterfly counts) [Science – Biodiversity and interdependence]
- Sensory experiences and physical activity during the planting and enjoying the areas as they rewild [Health and wellbeing – Physical, Mental and emotional wellbeing]
- Creating interpretation boards explaining the rewilding project and purpose of the spaces [Literacy – Organising and using information and Expressive arts – Art and design]
- Seasons; changing colours - EYFS colour-matching leaves [Science – Planet earth, Processes of the planet]



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Tree Planting

Planting trees for natural resources

It is worth considering planting trees to create access to your own natural resources in the school grounds. As well as sticks and leaves, which are extremely useful for maths, literacy, art and play activities, trees can be planted for pupils to be able to cut greenwood for whittling and woodworking projects, amongst other things.

Two fast growing tree examples for natural resources:

Willows: for willow weaving; creating living willow sculptures; teaching about maintenance and pruning; making a shady outdoor classroom; making living fences and wattle panels for fencing or for history, experimenting with wattle and daub; growing and seasoning your own wood for fires and fire lighting.

Elder trees: flowers and berries for cordial and elderflower fritters; berries for making dyes and paint; greenwood for whittling projects and making hollow beads.

There are Willow and Elder species native to the UK. Both grow easily and can be treated quite robustly and cut without compromising their growth.

Management and maintenance

Ensure the grounds maintenance team are aware that new trees have been planted and where. Consider cordoning off the space whilst young trees establish or work with the pupils to create suitable signage.

Maintain a 1m weed free zone around the base of young trees for at least the first three years and water during extended periods of dry weather.

If stakes and tree ties have been used, check they are not rubbing against the bark as the trees grow. Remove when the trees are sturdy enough to grow without additional support and recycle tree guards.

Remember to take into account long term maintenance implications, e.g. pruning. See our Climate School 180 guidance on Planting Orchards for more information, or consider consulting an arboriculturalist for support.

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Climate School 180
Tree Planting

Green careers and qualifications

Have you considered that pupil involvement in planting trees of any kind is a real-life link to a variety of green awards and careers? Tree planting and maintenance would give pupils some experiences relevant to Forestry and Arboriculture, as well as careers in Horticulture, Ecology, Alternative Energy and Habitat Management.







Example of in-school awards and qualifications

John Muir awards

Royal Horticultural Society School Gardening Awards

Duke of Edinburgh programme ideas (skills)

Useful resources linked to green careers

Lantra (land-based industries careers guidance)

Soil Association

Royal Horticultural Society (RHS) qualifications and training

Centre for Alternative Energy (CAT)

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Climate School 180
Tree Planting

Useful resources and sources of more information

The Tree Growers Guide (Tree Council)

Tree Tools for Schools (Woodland Trust)

How to stake a tree (RHS)

Example risk-benefit assessments for tool use, gardening, and tree planting (Learning through Landscapes)

School Grounds Orchards (Learning through Landscapes)

Polli:Nation school grounds maintenance guide (Learning through Landscapes)

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