Climate School 180

Planting Orchards

Introduction

The benefits of planting fruit trees in your school grounds are many and varied! Schools across the UK have discovered that a school orchard can be an effective and practical way of enriching learning and school life in many ways, without the need for lots of space, funding, or technical knowledge.

In this advice sheet we'll cover the benefits and the basics of why, when, and how, including simple maintenance tips and cross curricular links. Our hope is that this summary advice will provide you with the inspiration to find out more and then work with your pupils to plan, plant, and enjoy access to your school orchard for years to come.



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Benefits of planting a school orchard

An opportunity to enhance your school grounds

As well as increasing the aesthetics of your grounds, planting a school orchard creates an opportunity for pupils to connect with nature, socialise, play, and escape the business of the main playground.

Whether you have smaller grounds with less green space and you choose to plant containerised fruit trees, or you have lots of green space and you plant directly into the ground, in the planning section of this advice sheet we'll look at the importance of location and allowing pupils access to the trees year-round.

Supporting biodiversity

Orchards are great examples of mosaic habitats, meaning that the variety and diversity of the space supports a wide range of species. From the long grass and wildflowers that grow as a result of reduced mowing, to the trees themselves as they grow and mature, orchards offer a wealth of food and shelter to a wide range of insects, birds and mammals.

Healthy eating

Growing your own fruit and using it in school to eat raw, make juice and cook with is an excellent way to encourage children to eat more fruit. Growing your fruit without the use of chemicals, such as herbicides and pesticides, enhances the health benefits to both the pupils and the natural environment. Orchards require minimal maintenance over the summer holidays and fruit is ready to harvest during term time.

Outdoor learning

Orchards provide a wealth of outdoor learning opportunities across the curriculum. From science, numeracy and maths, literacy and English, developing enterprise and business skills to supporting health and wellbeing, the list is extensive and year-round.

In the curriculum section of this advice sheet, we'll look at a range of ideas throughout the year to get you started.

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An opportunity to involve the whole school and the wider school community

A school orchard offers a wide variety of opportunities to involve pupils of all ages, as well as staff, volunteers, and parents, in the planting of trees, their maintenance, harvesting and sharing of fruit.

Exploring the history of orchard planting across the UK, and the associated folklore and traditions, might lead you to establish a community wassail, the annual tradition of blessing orchards, through music and dance, to ensure a successful fruit harvest in the year to come!







Mitigate the effects of climate change

Tree planting is well documented as having a positive impact on our changing climate. As well as capturing and storing carbon, trees provide shade, moderate temperature, reduce wind speed, improve air quality, and reduce surface water run off after heavy rain.

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Planning your orchard

Print off a map off your school grounds and head outside to identify the best location for your fruit trees, given the following basic criteria:

Fruit trees need sunshine!

Track the sun's movement across the school grounds during the day to help identify the sunny and shady spots. Planting fruit trees into an area of existing trees might mean your trees are in shade, and they will also be competing for soil nutrients as they grow.

Espalier is the term referred to growing a fruit tree along a flat surface, for example a wall, by training the branches to grow along wires on a fence rather than upwards towards the sky. In this instance, a south facing wall will catch the most sunshine.

Fruit trees need space

If you are planting directly into the ground, space your fruit trees out to reduce competition between trees and allow room for root and canopy growth over time. A good rule of thumb is to leave 1.5–2m between trees.

If space is limited and/or the grounds lack green space, then planting 'dwarfing rootstock' trees, or planting trees in containers to constrain growth, is a good option.

Avoid excessive cold and wet areas

Fruit trees will not grow well in very wet ground or areas of standing water after rain so, for this reason, avoid poorly drained areas within your grounds.

Frost is no friend to flowers and fruit buds, so avoid areas of the grounds that stay frosty for longer, for example at the bottom of a slope or in the shadow of the school building.

Avoid very windy areas

Some fruit species tolerate wind more than others, for example plum trees fare better than apple trees. In any case, a very windy site can hamper growth. An opportunity to enhance your school grounds.

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Other considerations when planning your orchard

Soil quality

Digging test pits and testing soil in various locations will help determine soil quality. Look out for the presence of worms, they are great indicator of good soil quality, and avoid poorly drained and compacted or clay soils. Soil, can of course, be improved with compost and mulch when you plant, but support healthy root growth as much as possible by not planting in soil that contains lots of rocks or stone debris.

Access and use

Does the location of your fruit trees lend itself well to year-round access for play, learning, and socialising? Do you need to incorporate informal seating or adapt the surface to reach the trees, for example?

Consider the shape of your orchard once the trees have been planted – an irregular shape supports flow and movement around and amongst the trees and is, arguably, more aesthetically pleasing than planting in straight rows.

Avoid planting trees next to an area that conflicts with healthy tree growth, for example an area popular with informal football matches. Also, consider how your trees will be watered during an extensive dry period, for example.

Underground services and avoiding the mowers

It is important you liaise with your local authority to check there are no hidden service pipes under the ground in the area where trees will be planted. Once planted, raising awareness of the trees with the authority grounds maintenance team will help avoid mower damage.

Choosing your tree species

It is important to grow fruit that pupils like! Consider other fruits as well as apples, for example plums, pears, and cherries, and undertake some research about what species used to grow, or currently grow well, in your local area.

To grow specific varieties, most fruit trees are grafted. This comprises joining a piece of scion wood (which determines the fruit variety) with a rootstock (which refers to the lower part of the stem that has the roots attached). To avoid growing trees that get too big, source trees grown on dwarfing or semi dwarfing root stock, as this will mean pupils and staff can easily pick the fruit and prune the trees over time.

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Planting and protecting your orchard

Bare root trees need to be planted between the end of November and the end of March. Container grown tress can be planted at any time of the year.

Pit planting involves digging a hole wide enough and deep enough to fit the roots of your tree. You may wish to include some compost to add more nutrients to the soil before placing the tree in the hole. Hold the tree upright whilst backfilling the soil, pressing down well so the tree is stable and secure in the ground. If the tree requires staking keep the stake vertical for bare root trees and secure at an angle if planting a tree from a container, so it doesn't interfere with the existing root ball.

Water well, secure the tree near the top of the stake with a tree tie and add a mulch mat or layer of bark chippings around the base of the tree to reduce competition from weed and grass growth. Ideally mulch mats or bark chippings should extend around the base of the tree by about 1m.

Depending on the location of your school grounds, you may need to consider protecting your trees from rabbits and deer by including biodegradable tree guards. It's also a clever idea to highlight the boundary of your orchard to help avoid damage from mowers.



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Ongoing maintenance

Water the trees in periods of dry weather for the first few years whilst they are establishing and keep the weed growth to a minimum by replacing the mulch mat or topping up the bark chippings. If you have used a tree tie and stake, adjust the tree tie over time to accommodate the new growth.

Thin any overcrowded clusters of fruit by hand in late June to leave one or two fruits per cluster. Pruning trees with fruit that contains pips should take place over the winter months when the leaves have fallen, and the trees are dormant. A good rule of thumb is to use sharp secateurs, remove damaged or diseased branches (and any branches that cross over each other), and to avoid having one main branch growing taller than the others. There is lots of advice and guidance regarding simple pruning techniques online.

Involve as much of the school community as possible in valuing, enjoying, and looking after the orchard over time. Whole school events, related celebrations, actively using and sharing the fruit, encouraging year-round use of the space for play and outdoor learning, and putting a simple maintenance plan in place are all examples of ways to sustain interest.

Taking learning outdoors: helping to deliver the curriculum

Planning, planting, valuing, and maintaining your school orchard offers a wealth of cross curricular links from the outset. Once established, an accessible and well used orchard continues to offer positive learning outcomes year-round for children and young people of all ages. Here are a few ideas to get you started:

Literacy and language

- Persuasive language and instructional writing.
- Using the natural environment as a stimulus for poetry and descriptive text.
- Investigating associated myths, legends and folklore.
- Create signage, plant labels and interpretation panels.
- Organising events.

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Expressive arts

- Fruit printing.
- Photography.
- Drama and role play.
- Texture paintings, murals and mosaics.

Numeracy and maths

- Estimation and measurement.
- Fruit fractions – halves, quarters, eighths.
- Scale drawings and mapping.
- Orienteering and geo caching.
- Enterprise and budget management.

Sciences

- Pollination.
- Eco systems, food chain, lifecycles and energy transfer.
- Minibeasts.
- Species monitoring.
- Habitat creation.
- Mitigating climate change.

Social studies

- Investigating heritage varieties and finding out where the fruit in local shops comes from. Links to food miles and carbon footprints.
- Investigating associated cultures and traditions associated with orchards and fruits from parts of the world represented in school.







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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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