



Green-Schools

An Taisce

Beginners Composting Guide for Schools



What is compost?

- Compost is a natural process that breaks down organic matter, such as food scraps and garden waste into a dark nutrient-rich material that can be added to soil. This process is carried out by microorganisms, such as bacteria and fungi, as well as larger organisms such as worms. Together, they break down the organic waste and turn it into compost.
- Anything that was once living can generally be composted, although some materials take much longer to break down than others. Common compostable materials include fruit and vegetable scraps, grass cuttings and other plant-based materials.
- During composting, microorganisms use the organic matter as a source of food and energy. As they break it down, heat is produced and nutrients are released. Over time, the organic material decomposes and forms compost.
- Composting is a good way of managing food waste because it reduces the amount of waste sent to landfill and returns valuable nutrients back to the soil.

What are the benefits of composting?

- Soil Health - Compost adds nutrients and organic matter to soil, helping plants grow healthier and stronger. It also improves the soil's ability to hold water.
- Reduce Waste - Composting keeps food scraps and garden waste out of landfill. This reduces the amount of waste that needs to be disposed of.
- Reduce Greenhouse Gas - When food waste is left to decompose in landfill with 'general' waste, it emits methane emissions as it is deprived of oxygen. Organic waste needs oxygen to decompose safely. Composting allows food to break down with the presence of oxygen instead of releasing greenhouse gases.

Holding Compost System

Let's find out what composting system would best suit your school...

Holding compost systems are one of the simplest and most common ways to compost. They are used on a continuous basis: as garden and suitable food waste is produced, they are simply added to the compost bin. A holding system can be as simple as a plastic compost bin with a lid (available from garden centres). Schools can also make their own using reused or recycled materials, such as four wooden pallets joined together, old timber or plywood.

Advantages

- Easy to set up and use.
- Requires relatively little time and maintenance.
- Materials can be added as they become available.
- Can provide a useful, hands-on learning opportunity for pupils.
- Homemade systems can make good use of reused materials.



Holding Compost System

Top Tips

For the best results, try to maintain a good mixture of materials. Combine 'greens', such as fresh grass clippings, weeds and fruit and vegetable scraps, with 'browns', such as dry leaves, cardboard, small twigs and woody garden material. Avoid adding cooked food, meat, fish, dairy products or pet waste to a basic school compost heap unless the system is specifically designed to handle them

Choose a shady or partially shaded area to help prevent the compost from drying out, while still allowing some airflow.

Place the compost bin somewhere accessible but not too exposed, ideally on bare soil so that worms and other helpful soil organisms can enter. Keep the material slightly damp, but not wet. Adding materials in a mixture of different sizes will help air circulate through the heap.



Place the compost bin in a convenient location close to the school garden, kitchen, or other area where food scraps and compostable materials are collected. This makes it easy for pupils and staff to add materials regularly.



Turning Compost System

Let's find out what composting system would best suit your school...

Turning compost systems are a good option for schools that want to produce compost more quickly and have enough space and materials to manage the heap regularly. Unlike a holding heap, a turning system is actively managed by mixing and moving the compost to add air and encourage the composting process. Turning systems can range from a multi-bin system to a compost tumbler. The key feature is that compost is made in batches.

Multi-bin Systems

A three-bin system works well for schools. A new batch of composting materials is built up in the first bin and allowed to heat up. After around 10–14 days, when the temperature begins to fall, the material can be turned into the second bin. This mixes the materials, adds air and helps maintain good composting conditions. The first bin is then available for a new batch. After another 2–3 weeks, the compost can be turned into the third bin, where it can finish breaking down, mature and used in the school garden.

Roll Bins and Tumblers

For schools with less space, a roll bin or compost tumbler can be a useful alternative. A batch of materials is added to the bin and then the container is rolled or rotated by hand every few days. This helps to mix the materials and introduce oxygen. After approximately 2–3 weeks, depending on the materials and conditions, the contents can be emptied out to finish curing while a new batch is started.



Turning Compost System

Top Tips



Try to get the mix right. Combine nitrogen-rich materials such as fruit and vegetable scraps and fresh grass with carbon-rich materials such as dry leaves, shredded cardboard and small twigs.

Make compost in batches. Collect enough material to build a good-sized batch rather than continually adding small amounts.

Plan ahead for school holidays. Decide who will monitor and turn the compost when pupils and staff are away.

Have brown materials ready to go. Schools producing lots of food scraps should keep a supply of shredded cardboard, dry leaves or other carbon-rich materials nearby.

Prioritise turning the bin safely. Moving a full compost bin can be heavy work!

Turn the bin regularly. Turning introduces oxygen, mixes the ingredients and helps the compost break down faster.



Wormery

Let's find out what composting system would best suit your school...

Wormeries are a simple way to compost small amounts of suitable food waste using composting worms. Food scraps are added to the wormery, where the worms break them down and produce nutrient-rich compost and liquid fertiliser. Wormeries can be purchased ready-made or schools can make their own using suitable reused or recycled containers.

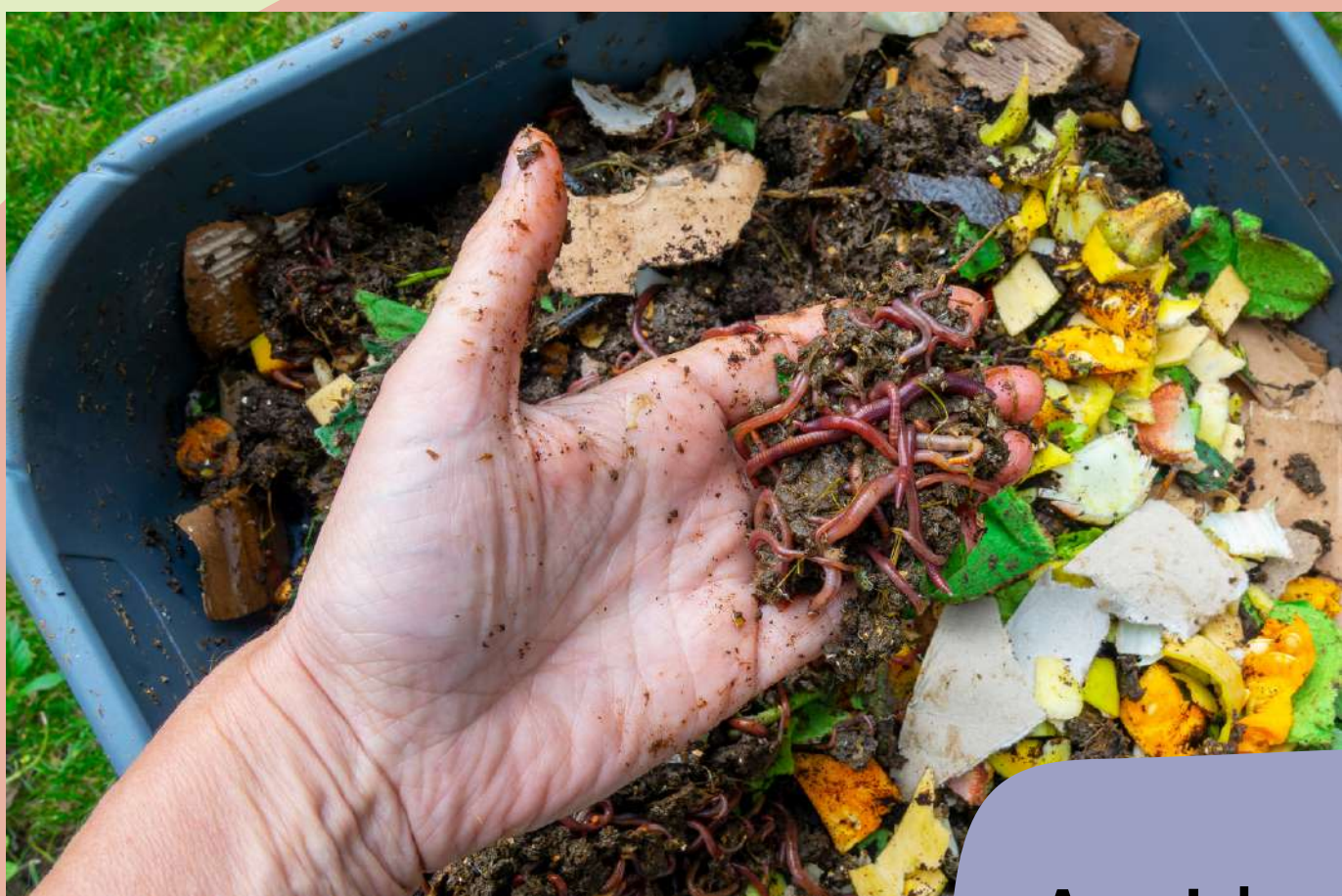
Advantages

- Easy to set up and maintain.
- Provides a useful way to recycle small amounts of food waste.
- Produces nutrient-rich compost and liquid fertiliser for use in the school garden.
- Pupils learn about worms, decomposition, recycling and soil health.



Wormery

Top Tips



Begin with a manageable amount of food waste and increase it gradually as the worm population grows.

Keep the wormery somewhere shaded and sheltered from extreme heat, cold and heavy rain.

Avoid meat, fish, dairy, oily foods and cooked leftovers.

Shredded, uncoated cardboard or paper helps provide the worms with bedding and keeps the wormery balanced.

Keep a lid on the wormery, this helps maintain the right conditions and prevents unwanted visitors.

The contents should feel like a damp sponge. If it is too wet, add dry shredded cardboard or paper.



FAQ'S

Smelly Bin

Why is this happening?

- Not enough air
- Pile is too wet
- Meat and fish added to pile

How to fix this:

- Turn it, add coarse dry stalks, hay, leaves or other dry garden waste
- Limit food scraps to fruit and vegetables

Slimy/Ammonia smell

Why is this happening?

- Too much fresh grass

How to fix this:

- Leave grass cuttings on lawn & allow them to dry first
- Mix in brown leaves, straw, hay or other dry garden waste.
- Note: should have 50/50 green and brown materials

Too Dry

Why is this happening?

- Not enough water
- Too much woody material
- In sunny location
- Pile may be too small

How to fix this:

- Turn it & moisten materials
- Cover pile
- Add fresh green material
- Put in shady location

Damp/Not Composting

Why is this happening?

- Materials are too big
- Lack of green materials

How to fix this:

- Chop/ shred materials smaller
- Turn and mix in some green materials i.e. grass cuttings or animal manure

Too many flies

Why is this happening?

- Pile is too wet
- Food scraps are placed on top

How to fix this:

- Mix in dry materials/ add some on top
- Bury food scraps within pile
- Cover pile with wet newspaper or a plastic sheet/ tarp

Rats

Why is this happening?

- High protein food waste in pile
- Food waste on thought
- Warm and dry

How to fix this:

- Stop adding animal products to bin
- Bury food scraps in pile
- Turn pile frequently to disturb nesting
- Place mesh under/around the base of the pile

COMPOSTING DO'S AND DONT'

Read below to find out what you CAN throw away in your schools composting bin.

Vegetables & Food Waste

Vegetables both cooked and uncooked, fruit skins and cores, bread, crackers, cakes, rice, pasta, popcorn

Some paper waste...

Newspapers, egg carton, paper towel/napkins, paper plates/ cups (without shiny coating, this is plastic), clean or soiled cardboard. Be sure to break these up very small before putting in compost pile.

Garden Waste

Grass cuttings, plants, vegetable plants, weeds before they go to seed/ flowers removed, moss, leaves

Animal Manure

Many schools have chickens or other small animals. Herbivore pet waste can be composted. This waste is high in nitrogen and must be mixed in with straw, wood shavings, sawdust or leaves.

COMPOSTING DO'S AND DONT'

Read below to find out what you CANNOT throw away in your schools composting bin.

Meat, fish, Skins,
grease, bones or
shells

These can attract pests and create
foul odours.

Dairy Products

Spoiled milk, cheese and yoghurt can
attract pests and can create foul odours.

Nappies, sanitary
towels or wipes

These all contain plastic or moisture
absorbing polymers that do not break
down naturally. Can also contain
harmful chemicals.

Shiny card/
bright coloured
paper

Some inks contain heavy metals. Some
cardboard and shiny paper have plastic
coating. Large quantities of paper should
go into recycling bin.

Perennial or
pernicious weeds

Weeds that spread by root (e.g. bindweed,
ivy, briars and scutch grass). Invasive
weeds and weeds that have gone to seed/
flower - these can survive composting and
spread again.

COMPOSTING



DO...



DON'T...

