

Challenge 1 - Composting

What to compost

You need to know about the 2 types of materials that go into the bin. It is important you put both **green** and **brown** materials into the bin in equal measure; so 1 bucketful of brown material goes in at the same time as 1 bucketful of green materials.

Green materials include:

- Fruit scraps from your free fruit scheme such as apple cores and banana skins
- Tea leaves, tea bags and coffee grounds
- Garden weeds and dead flowers
- Grass cuttings
- House and garden plants

Brown materials include:

- Scrunched up cardboard and some paper. If possible collect thinner cardboard such as toilet roll tubes, egg boxes and similar packaging. You can also use scrunched up paper towels and newspaper.
- Hedge trimmings and small twigs
- Straw and hay from guinea pig and rabbit bedding
- Wood chippings and sawdust

Do **NOT** put these into the bin:

- Cooked food
- Sandwiches
- Raw meat and fish, including bones
- Dairy products
- Diseased plants
- Coal or coke ash
- Cat or dog litter

Siting the compost bin

Ideally the bin should be placed in a convenient and easily accessible area on bare soil in a fairly sunny place and sheltered from the wind. Don't forget that wasps can be attracted to fruit, so just make sure fruit waste is mixed in well with your brown items and try to avoid placing the bin near any windows. If the school suffers from vandalism the bin may

get upturned so try and place it out of sight or put it in a fenced-off area if you have one.

How to start

Once the bin has been sited put a 15 cm thick (6 inches) layer of twigs or thin branches in the bin to assist air circulation. Then add equal amounts of green and brown materials. You should have been provided with a classroom caddy to collect your waste material in. It is most likely that this will be used for fruit waste produced in the classroom or playground by the children. It may also be worth placing one in the school office to collect more of the brown items. As long as you are adding equal caddyful's of both green and brown items to your compost bin - your compost should be fine. If you find you are producing a lot more of one than the other - for example more browns than greens, it's a good idea to store the extra brown items in a cardboard box until you can add it at the same time as a caddyful of green items. If you are producing more greens than browns then it is advisable to dispose of the excess in the normal way. Remember, your school compost bin is intended to be used primarily as a practical educational project; not as a disposal unit for all organic waste produced in your school. Remember, to get the best results out of your compost bin you need to put the right mix of ingredients in!

It is also worth thinking beforehand who will be responsible for taking the green and brown waste from the classroom out to the bin. You will need to make sure this is done on a regular basis, so you might want to employ the assistance of the caretaker if they are willing to help out? Or maybe the children could get involved?

Mini-beasts and brandling worms will find their way into the bin from the soil so there is no need to add worms or any other creatures. They will start to eat away at the waste material and the levels of the green and brown items will reduce as the days go by, though this slows down markedly in the winter when it is cold.

Adding air

The microbes and mini-beasts in the bin breathe air and if they do not get enough of it they will die. You can provide them with air by adding crunched up cardboard and other "browns" which contain air spaces. Turning the compost from time to time with a garden fork or a compost aerator is also beneficial.

Don't let your bin get too dry or too wet

The mini beasts in the bin also need water, so the material should have the right level of moisture in it. Test it by taking a gloved handful and squeezing it. If one or two drops of water emerge then the moisture level is just right. If not, or if the materials look dry and dusty, simply pour a watering can of water over it all!

You may find that you have a lot more fruit waste available than dry brown waste. If this is the case your compost bin is at risk of becoming too wet. If your compost has become a wet sludge then you do need to add more brown items like paper towels, newspaper and cardboard and give it all a good mix with a fork or broom handle so that the composting process can start again. Make sure you have good access to the contents of the bin to do this. If it is easier it might be worth lifting the bin and scooping the contents out and mixing them on the ground with the browns before putting them all back into the bin again (see below for more detail). Once the balance of green and brown material is equal you can add a fresh layer of greens to get the process going again. Then continue adding equal amounts of greens and browns as normal.

How long does it take to compost?

Compost can take between 8 to 14 months to form depending on the siting of the bin and what you put into it. It should be dark brown and crumbly and frequently is rather wet. You should not be able to see any of the waste items from which it was originally formed except for a twig or two or maybe an eggshell. Anything that hasn't fully broken down can be put back in the bin to rot down with the next load.

How to use the compost

An easy way to empty the bin is to take a sheet of plastic, place it on the ground next to the bin and transfer any unrotted materials from the top of the bin onto it. Then lift the bin and the compost can easily be removed using a garden fork or spade and transported in a barrow or bucket. Then replace the bin into its original position and put the unrotted materials into it.

Now you are ready for the next load!

The finished compost can be put on the soil around plants, dug into the soil for growing vegetables or put in a layer on top of your school planters where it will feed the plants and reduce water loss.