What are some of the ways that we get rid of the things we no longer want or need (our waste)? - There are a range of ways that we can get rid of the things we no longer want or need. This includes mending and repairing, selling or giving away things, reusing and repurposing (when you use something for a different purpose than what was originally intended), recycling, composting, and finally, sending products to landfill.

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What is composting? - Composting is the process of breaking down organic material, such as food waste, garden waste (like leaves and old plants) and manure in a large container or heap. Organisms living in the compost heap or container will decompose the waste and turn it into nutrient-rich soil material that can be used in a garden. Compost is the material that goes into the compost heap or container.

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## How can you make compost?

- 1. Begin your compost by placing a layer of twigs or sticks at the bottom of your heap or bin. This will help to assist with aeration and drainage.
- 2. Start adding materials to your compost. Try to alternate the layers of what you put in. You can have 'green' layers (food scraps, green garden waste, tea leaves and coffee grounds) and 'brown' layers (dry leaves and grass, shredded paper and cardboard). The brown layers will take longer to break down, so more green stuff is better.
- 3. Keep your compost moist but not wet.
- 4. Turn your compost once a week to speed up decomposition.
- 5. It will take between 2 and 6 months for your compost to become soil. You'll know it's ready when it has a dark and crumbly texture.

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## What can go into compost?

Green materials

- Vegetable and fruit scraps
- Fallen leaves (in layers and in small doses)
- Garden prunings and grass cuttings (in layers)
- Dead flowers
- Tea leaves, tea bags and coffee grounds
- Small quantities of pasta, rice and bread (too many of these can attract rats)

## Brown materials

- Dry leaves and dry grass
- Vacuum cleaner dust and hair
- Eggshells
- Straw
- Old shredded newspaper and cardboard, including pizza boxes (in layers and in small doses)
- Sawdust (not from treated timber e.g. treated pine)
- Wood ash from a fire



## What should you keep out of compost?

- Meat scraps and bones
- Dairy products
- Fats (small portions of used vegetable cooking oil is ok)
- Cat and dog faeces
- Diseased plant material
- · Large branches
- Magazines and glossy paper
- Metals, plastic and glass
- Large amounts of citrus peel

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What happens to waste in compost? - Composting begins with the breakdown of organic waste material by bacteria and other decomposers. This process produces carbon dioxide, water, and small amounts of heat. Beneficial organisms such as bacteria, fungi, and worms feed on the organic material and help to break it down further. These organisms also help to create a healthy soil environment by releasing nutrients, such as nitrogen and phosphorus, into the soil. As the composting process continues, the organic material becomes more and more broken down until it is finally transformed into a nutrient-rich material that can be added to the soil in your garden.

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What types of creatures live in compost? - In a pile of mature compost, there may be a wide variety of organisms present. Bacteria and fungi are the most important organisms in the composting process, as they are responsible for doing most of the work of decomposing the organic material. Earthworms and other decomposers help to break down this material and make it easier for bacteria and fungi to do their work. Other organisms that can be found in compost include nematodes, mites, protozoa, springtails, millipedes, mites and slugs. These organisms help to break down the organic material and release nutrients into the soil. Other invertebrates - like spiders, centipedes and scorpions - may be present as they like to eat the smaller plant-eating organisms.

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Why is composting important? - Composting helps to reduce the amount of waste that ends up in landfills, as we are able to turn something that would otherwise be thrown away into a useful product. Additionally, composting helps to improve soil health, through the essential nutrients that the compost adds to the soil. Adding compost to soil also helps to improve water retention in the soil. Both of these are important factors in growing healthy plants and contributing to a healthy environment. Healthy soils also absorb more Carbon Dioxide which helps to meet the challenges of climate change.



What safety precautions should be taken when handling compost? - Compost is usually pretty safe to handle. However, it's sensible to apply the usual garden hygiene rules when handling any soil or compost in your garden:

- 1. Wear gloves, and make sure any cuts are well covered.
- 2. Wash your hands with soap and running water after handling compost (especially before eating), even if you've been wearing gloves.
- 3. Keep anti-tetanus protection up to date.
- 4. Be careful when using a garden fork to turn your compost those spikes are sharp and can cause nasty injuries.
- 5. Be careful when sticking your hands into compost there may be sharp things like plant cuttings or bits of wire.
- 6. Keep your hands away from any dangerous-looking invertebrates, such as spiders, centipedes and scorpions.
- 7. Report any sightings of mice, rats or snakes to your teacher.

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