



## WELCOME TO THE WONDERFUL WORLD OF GARDENING!


Whether you have a big garden or a small windowsill, you can make the world a greener place. Gardening is one of the best hobbies in the world and it's good for you, your neighbourhood and our planet! People have been gardening in one way or another for thousands of years, so you will be continuing a very long and important tradition.

In this book, you'll learn about how plants work, how to grow your own vegetables, how to encourage wildlife to your garden and why protecting plants is important for our lovely planet. Along the way, there will be plenty of activities and experiments for you to try for yourself – mostly using everyday materials you can find at home.


What are you waiting for? Let's begin!

# ALL ABOUT SOIL


Soil is the brown earth that plants grow in and it plays a very important role in supporting life on our planet. The best way to keep your plants happy is to take care of their soil!



Once a seed has sprouted, the soil helps to anchor the plant's roots in the ground. From here, the roots can absorb water, nutrients and minerals from the soil that help the plant to grow.



Soil is teeming with life. Did you know that there are more living things in a handful of soil than there are humans on Earth? Soil is full of tiny living organisms such as plants, fungi, insects and bacteria.



These organisms have special functions. Worms, for example, are little underground helpers. They munch on things at the soil's surface, then dig tunnels deep down. As they dig, they poop out what they have eaten, which is like a special kind of food for the soil.

## GET TO KNOW YOUR SOIL

Soils vary around the world, but they all contain sand, silt, clay, moisture and air. As a gardener, it's important to get to know your soil. If a plant is from a sandy part of the world and you try growing it in a wet clay soil, it won't be happy! Similarly, a plant from a damp area won't like to grow in a sandy soil.

1. Using a trowel (see pages 24–25), collect a soil sample from your garden. Lay it out on a piece of paper, remove any twiggly bits, then using your trowel, crush the soil so it's as fine as possible.
2. Next, part fill a large jar with the soil sample, cover with water, put the lid on tightly and then give it a good shake before leaving it for at least 24 hours to settle.



3. You should now be able to see the different layers of your soil. The parts of soil are different weights and the heavier ones – like sand – fall to the bottom first. Clay will settle last and even make the top layer quite cloudy for a while, as its tiny particles float in the water.

# GARDEN FOES

Sometimes your garden might be visited by some not so welcome wildlife visitors – munching their way through your plants and obliterating weeks of hard work. Rather than using harmful chemical pesticides, there are some natural ways you can discourage any unexpected visitors to your garden.

## ENCOURAGE BENEFICIAL ANIMALS

You can control pest populations naturally by encouraging beneficial creatures such as ladybirds, wasps, hoverflies, birds and frogs in your garden. Try planting flowers that attract these insects, making a bug hotel or adding a bird feeder.



## PROTECT PLANTS

You can cover your plants with netting to stop birds swooping down for a tasty snack.



## PEST REPELLENTS

To repel insects, you can make an organic pest spray using a mixture of water, garlic, onion and chilli.

## KEEP AN EYE OUT FOR PESTS

Slugs and snails can eat a whole batch of seedlings overnight. You can try adding a barrier such as gravel because they find it more difficult to slither across. Remember to check your pots every day for hiding snails – gently picking them up and putting them in another part of your garden.



# PLANTS THAT HELP OTHER PLANTS

Did you know that certain plants can deter or encourage insects to your garden? Growing particular plants together can also aid pollination, prevent disease and even keep pest numbers down.

*The strong smell of French marigolds deters the pest whitefly when grown with tomatoes.*



*When planted near strawberries, the borage flower attracts pollinators and can enhance the strawberries' flavour.*



*Onions, garlic and leeks deter pests from carrot and parsnip plants.*



*Nasturtiums are so tasty that slugs, snails and other nibblers are drawn to them rather than your plants, so it can be helpful to plant extra as a decoy.*

# GROW CUPS OF NASTURTIUMS

Did you know that you can eat the petals from certain flowers? Nasturtiums are bright and colourful, and they taste a bit peppery! You can add them to a salad for a burst of extra flavour.

## YOU WILL NEED:

- Old cups or mugs
- Gravel
- Compost
- Nasturtium seeds
- Water



1. In the bottom of each cup, add a layer of gravel. This is to allow the water to drain away from the roots because the cups do not have any drainage holes.

2. Fill each cup with compost.

3. Poke a couple of holes in the compost and drop in the seeds.



4. Cover with a little extra compost and add water. Be careful not to soak the compost – remember the water can't drain away as well.

5. After a week or two, the seeds will start to shoot. Make sure to keep giving them water, little and often.



6. In a few more weeks, flowers will appear. You can harvest them whenever you like. If any die on the plant, just pull them off and a new one will grow in its place.

