



You can create an experimental garden to investigate how plants will grow in different types of soil. You can mix different soils, experiment with banana peels, eggshells and coffee grounds. What are the optimal conditions for your plants? You can also measure how acidic your soil is. In that case, download the instructions to make a pH meter at [togethersciencebus.eu](http://togethersciencebus.eu).

What do plants need to grow, except daylight and water? What is the recipe for fertile soil or good compost? A little acid, a little lime, a few fungi? Different trees and plants need different minerals from the soil. Plants in the coastal sand dunes need a lot of lime, while plant on the moors like a more acidic soil. An orchid always has a layer of fungi covering its roots. If you feed the fungi well, the orchid is also fed. That's why you can better give orchids humid air instead of water.

### Introduction

This is how the final result will look like:

check out [togethersciencebus.eu](http://togethersciencebus.eu)

doing it together science

waag society

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# DO-IT-TOGETHER SCIENCE BUS

collecting folk remedies  
do it together & find out how things work

## Grow your own vegetables

# Grow your own vegetables

What is the recipe for fertile soil or good compost? A little acid, a little limestone, a little...? Make an experimental garden and learn more about the life of plants:



1

Download the template file via this link: [togethersciencebus.eu/soil](http://togethersciencebus.eu/soil) and print this file on thick paper (180 grs.) Cut the perimeter and fold the dotted lines with a ruler.



2

Glue the flanks with all-purpose glue and carefully assemble the box. **Tip:** use pegs as a kind of mini clamps. This makes it easier to let the glue dry without getting your hands dirty.



3

Take a small yogurt cup of approx. 6x6 cm (right in the image). This will be your container to grow your plants in. Do you have a different shape? It might not fit. Use [www.template-maker.nl](http://www.template-maker.nl) to create your own custom template.



4

Crush the eggshells to small pieces with a crusher or a small hammer and mix this with a small amount of soil.



5

Cut the banana peel into tiny pieces and mix this with another bit of the soil.



6

Coffee ground is very suitable as plant fertiliser and can be directly mixed with soil just as it is.

**Tip:** you can also mix the different kinds of soil in a blender with a little water. Easy!



7

Put the different types of soil in different containers. Put the containers in the boxes and close them. Label each box with the type of soil inside, the kind of seeds planted and your starting date.



8

Replicate the ruler of the downloaded template on a small piece of flat wood. Use a hand saw to cut out the form and sand the edges. Place it in the container to measure how fast your plants are growing.



9

Keep a record of how the plants grow, e.g. by making notes in a logbook or making photos at regular intervals. Experiment with different soil mixes and seeds to find out which combinations work best for your favourite vegetables and fruits.