

Can you grow food from kitchen leftovers?

Did you know that every year, a third of fruit and vegetables end up in the bin? During the Second World War, families could not afford to waste food. Food shortages led Kew's Curator of the Gardens to make an amazing discovery: that whole potatoes can be grown from just a slice! RBG Kew continues to use science to answer important questions about food security. Think like a scientist and investigate growing your own food from leftovers.

Materials:

- A selection of fruit and vegetables
- 3 or 4 spring onions with roots
- Scissors
- A small jar or glass
- Water

1 With an adult, go for a walk outside. If possible, head to an area where food is grown, such as a community garden or allotment, or visit the Kitchen Garden at Kew. As you walk, discuss:

🔗 What do plants need to grow?

What are the different stages of a plant life cycle?

Can you find or think of some plants that we eat the root, leaf, seed, stem or fruit of?

2 When you get home, explore some of the fruits and vegetables in your kitchen. With an adult, discuss the plant's that each one comes from. Record your findings in the table below.

☆ **Did you know?** Some foods that we refer to as vegetables are actually fruits. This is because they contain seeds.



| Fruit or vegetable name | Where does it grow? (i.e. on a tree, under the ground) | Edible part of the plant (i.e. stem, leaf, root, fruit) |
|-------------------------|--------------------------------------------------------|---------------------------------------------------------|
| Spring onion | | |
| | | |
| | | |
| | | |

3 To prepare the experiment, cut the green stems off a couple of spring onions, so that one to two inches of the white ends remain. Stand the spring onions root-side down in a small jar. Cover the roots with water, ensuring the tops stay dry. Place the jar on a sunny windowsill.

⚠ **Safety first:** Ask for an adult's help when using scissors.



Age
7+

Royal Botanic Gardens
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4 Think like a scientist and make a prediction in the section to the right.

? What do you think will happen to the spring onions? Why?

5 Leave the spring onion ends in water for a couple of days or until you start to see some growth. During this time, change the water every day.

Record the changes that you see using the box to the right. You could draw a diagram, take photographs or note down your observations.

Did you know?

Propagation is the process of growing a new plant from a parent plant. At Kew Gardens and Wakehurst, our gardens and glasshouses are full of plants that have been propagated using seeds, roots, stems or leaves.

6 After a week, the spring onion ends will hopefully have begun to sprout.

Are the results as you predicted?

Would you have got the same results if you had placed the jar in the dark?

Use the section on the right to record the results of your experiment.

☆ **Top tip:** Use your spring onion greens as a tasty garnish for soups and salads.

Share your photos @kewgardens

Prediction:

I predict...

Record the changes that you see:

Results:

Taking it forwards:

Try placing some carrot tops in a saucer of water, cut side down. After a couple of days, you should begin to see some growth. Why is this different to growing carrots from seed?

☆ Visit kew.org/read-and-watch/foods-of-the-future to find out more about future-proofing food production.