



Growing an apple tree from seed

Time needed for activity 30 minutes

Location Indoors or outdoors

Context

This activity plan highlights the importance of sustainably managing our natural resources, focusing on growing fruit trees from seed to support biodiversity.

Natural Resources Wales' purpose is to pursue sustainable management of natural resources in all of its work. This means looking after air, land, water, wildlife, plants and soil to improve Wales' well-being, and provide a better future for everyone.

Curriculum for Wales

Science and Technology

- **What matters** - The world around us is full of living things which depend on each other for survival.
- **What matters** - Being curious and searching for answers is essential to understanding and predicting phenomena.

Objectives

By the end of this activity learners will be able to:

- Describe what a seed requires to germinate
- Explain how to grow an apple tree from a seed

Equipment and resources

- Apples
- Knife
- Paper towels
- Sealable box
- Plant pot
- Saucer or something to put underneath your plant pot e.g. the cut bottom of an empty plastic bottle
- Soil or peat free compost

Background information

Most fruit trees are not grown from a seed because their variety cannot be guaranteed to be the same as the tree the fruit was picked from. Therefore, most fruit trees tend to be grafted. A grafted fruit tree is made up of two parts of different trees joined together to ensure the desired variety of fruit can be grown. Rootstocks make up the base of grafted trees, they provide the root portion, while a scion consists of the fruiting section of the tree; see our **Information note - Rootstock and grafting** for more information.



What to do

1. Remove the seeds from an apple ensuring they are clean of any fruit and allow to air dry. Use more seeds than are required as only 30% of your seeds will germinate.

2. If possible, do this step over winter so the sprouts will be ready to plant in early spring, after the last frost.

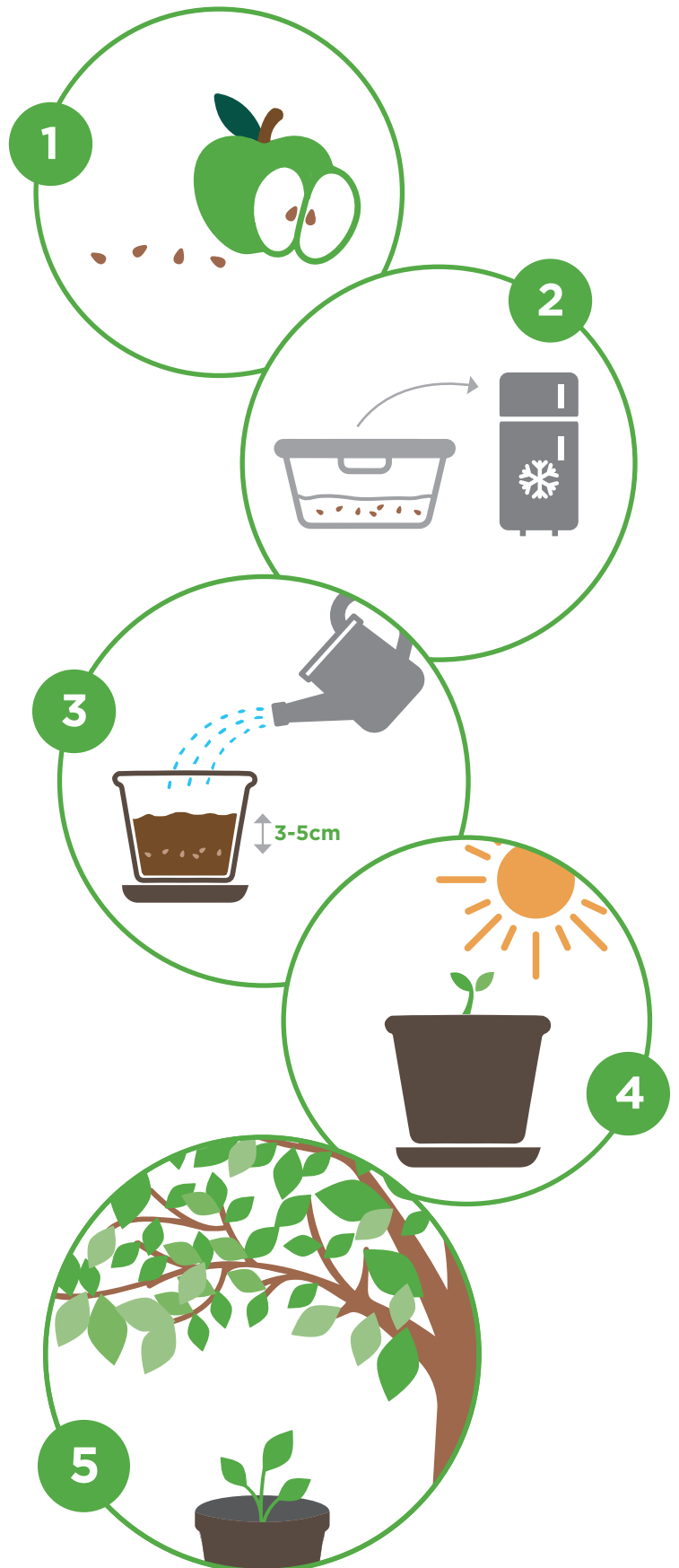
Wrap the seeds in a wet paper towel and place them in a plastic bag or a sealable plastic box. Place the sealed container in a fridge. It will take roughly a month for the seeds to germinate but check every few days to ensure the paper towel doesn't dry out as the seeds may not germinate if it does. Once your seeds have white sprouts (germinated), they are ready to plant.

3. Place the germinated seeds in a pot part filled with soil then cover the seed with soil roughly 3-5cm deep. Apple seeds grow best in soil with a neutral pH level. Fertilizer is not needed but leaf mulch or compost can be added to give the seeds an extra boost. Water immediately so that the soil is damp but not waterlogged, allowing the soil to settle around the seed.

4. Keep the pot at room temperature with access to sunlight for a good part of the day and water daily. If the seedling outgrows the pot, transplant it to a larger pot.

5. Once the sapling is large enough, usually around 1-2 years old, it can be transferred and planted outside in the ground or a large planter.

See our **Activity plan - Planting a fruit tree in a pot** or **Activity plan - Planting a tree in the ground** for more information.





Suggested key questions

- Why are fruit trees important?
- What do seeds need to grow?
- How can we protect the trees from pests, diseases and weather?

Adapting for different needs/abilities

More support

- Provide learners with pre-cut apples to remove the need for tool use.
- Learners can work in pairs or small groups.

Less support

- Ask learners to research how other types of fruit seeds are grown.
- Provide pH testing kits for learners to test the soil.

Follow up activity/extension

- Visit a local tree nursery or garden centre to learn how other plants are grown and sold.
- Design and plan an orchard on your setting's grounds, see our **Information note - Designing an orchard** for more information.
- Research and taste-test different varieties of apples.

Other resources

Try our other tree, woodland and orchard resources:

- **Activity plan - How a tree works**
- **Activities and games - Seed dispersal**
- **Activity plan - Why orchards are important**

Looking for more learning resources, information and data?

Please contact: education@naturalresourceswales.gov.uk or go to <https://naturalresources.wales/learning>

Alternative format; large print or another language, please contact:
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