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Seed Gathering - Stratify

Very few tree seeds will germinate (shoot or sprout) without exposure to the cold of at least one winter. Other species take even longer, needing the following summer plus another winter before showing signs of life. This is because of a natural defence mechanism built into the seeds, which ensures that they do not grow during the winter months when the young seedlings might be killed by the cold.

Tree growers have developed a technique called **stratification** which aims to mimic this natural process.

Introduction

Ask your students to think about the best time for the seed to start germinating. Autumn? Winter? Spring? Summer? Why?

Ask your students to think about where the best place to store the seeds from now until they germinate would be. Why? What could happen to the seeds if they are not stored properly?

Explain that stratification is a basic technique which mimics a cold winter, as the seeds are programmed to germinate in the spring when the temperature rises.

Resources

- Seeds
- Big containers
- Wire mesh
- Peat free potting compost
- Coarse material such as bark chips, sand or grit

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Activity

1. Discuss why stratification is important (slides 2-4). *When would be the best time for a seed to germinate? What might happen to the seed if it's not stored appropriately?*
2. Talk through how to stratify the seeds (slides 5-6).
3. Stratify the seeds you have collected.
4. Now you need to wait. In the spring, tip out your mixture and find the seeds that are showing small shoots or roots. These seeds are germinating and are ready to grow. Put any seeds that haven't germinated yet back into your stratification medium. Check your seeds every week during the spring to find the ones that are germinating.

Once the seeds have started growing, it's important to sow them quickly.

If some of your seeds haven't germinated by the end of spring, don't worry! They might need two winters to germinate. Check that none of your seeds have rotted before you continue to stratify.

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Useful videos and online resources:

- [The Tree Council's Seed Identification booklet](#)
- [The Tree Council's Guide to Growing Trees from Seed](#)
- A plant's lifecycle: <https://www.youtube.com/watch?v=AcSgaUBwln4>
- [Seek By iNaturalist](#) - a free app to help identify trees and nature in your school grounds
- [Treezilla](#) – a free app to help you identify trees and work out their value and CO₂ storage capacity

Other activities:

- Instruction writing - how to stratify seeds
- Tree/plant life cycle (stop motion animation)
- Observing and researching seasonal changes
- Plant reproduction
- Use your microscope to look at the seeds in more detail
- Research trees - <https://www.wildlifetrusts.org/wildlife-explorer/trees-and-shrubs>

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