



Big Ideas - Investigating Apples

Suggested participants – Second and Third level

Apples offer a rich, versatile context for interdisciplinary learning. As a familiar and accessible fruit, apples can be used to explore healthy eating, plant biology, seasons, sustainability, numeracy, literacy, and even expressive arts. Through hands-on investigations, such as tasting different apple varieties, examining their structure, exploring their life cycle, or planting seeds, learners can develop key scientific inquiry skills and deepen their understanding of food and health. Apple-themed activities also provide meaningful contexts for developing descriptive vocabulary, data handling skills and creative expression. Using apples as a context can encourage learners to make real-world connections between food, health, and the environment.

What this pack contains:

- All the resources to undertake 'Investigating apples' activities with your class.
- Learning Intentions, Success Criteria and Suggested Experiences & Outcomes.
- Learning for Sustainability links.
- Lesson plan.
- Suggested additional activities.
- Teacher information and learner worksheets.

Learning Outcomes

- We are learning to appreciate a diversity of foods.
- We are learning how apples contribute to a healthy diet.
- We are investigating where different foods come from.
- We are exploring seasonal, sustainable foods.

Success Criteria

- I can try new foods.
- I can share information about where different foods come from.
- I can understand the role of vegetables in a healthy diet.

Experiences and Outcomes

- **HWB 2-30a** By applying my knowledge and understanding of current healthy eating advice I can contribute to a healthy eating plan.
- **HWB 3-30a** By taking part in practical food activities and taking account of current healthy eating advice, I can prepare healthy foods to meet identified needs.
- **HWB 2-35a** When preparing and cooking a variety of foods, I am becoming aware of the journeys which foods make from source to consumer, their seasonality, their local availability and their sustainability.
- **SCN 2-01a** I can identify and classify examples of living things, past and present, to help me appreciate their diversity. I can relate physical and behavioural characteristics to their survival or extinction.
- **SOC 2-09a** Having explored the ways journeys can be made, I can consider the advantages and disadvantages of different forms of transport, discussing their impact on the environment.
- **SCN 3-01a** I can sample and identify living things from different habitats to compare their biodiversity and can suggest reasons for their distribution.

Learning for Sustainability

- **Goal 2 Zero Hunger** End hunger, achieve food security and improved nutrition and promote sustainable agriculture.
- **Goal 4 Quality education:** achieve literacy and numeracy.

Introduction

- Share/discuss the learning intentions and success criteria.
- Find out more about what is in season when using our [Good Food calendar](#) resource.
- Have a go at tasting some different apples and graph your results.
- Use our [apple facts sheet](#) as a discussion tool to prompt the design of a poster.
- Cut open some apples and extract the seeds. Do different varieties of apples have different numbers of seeds? Can you carry out a germination test with apple seeds?
- Look at where orchards are located in the UK - Orchards in the UK are mainly found in regions like Herefordshire, Kent, Somerset, and Worcestershire, where the climate and soil conditions are ideal for growing apples, pears, and other fruits. These areas benefit from mild temperatures, good rainfall, and fertile, well-drained soils that support healthy fruit trees. Many of these regions also have strong historical traditions of fruit growing and cider making, which have shaped local agricultural practices. In places like Kent, known as "The Garden of England," orchards thrive due to both favourable growing conditions and easy access to markets.

Suggested discussion points

- What fruits have you tried before?
- How many portions of fruit should we eat each day?
- What fruits are in season just now?
- Encourage pupils to **consider preservation methods** (e.g. dried, canning, freezing)? Have any additional ingredients been added (e.g. sugar) to preserve them? Do these ingredients **affect the taste**? Does the **preservation method** change the **texture** of the fruit? Are the preserved versions **softer, chewier, or less firm**?
- Focus on **taste** – can pupils describe what they notice? Are the apples **sweet, sour, salty, bitter, or savoury** (umami)?
- Do the apples have a smell?
- Discuss how **peeling** fruit can remove a lot of their **vitamins**, many of which are found in the **skin**. **Freezing** helps to **preserve vitamins**. Discuss possible uses for apple peel if not eaten. Apple peel can be used to make **apple crisps** and also add flavour to cakes, teas, or homemade cleaners.

Learning

- **Health & Wellbeing:** The ability to explore and discover where foods come from.
- **Social studies:** The ability to discuss the importance of different types of agriculture/growing in the production of these foods.

Additional tasks

- Make your own **apple crisps**: thinly slice apples, pat dry with kitchen towel, toss in a little Scottish rapeseed oil and a little sugar and air fry at 180 C for 15 minutes turning frequently to prevent burning.
- If you have the resources you could also make an [apple crumble](#), looking at the journey of all the different ingredients.

More information

- You can find a wide variety of learning resources in our [Story of Vegetables padlet](#).
- You can request a farmer to talk to your class about vegetables [via this link](#).

Social media

Please tag [therhet.bsky.social \(Bluesky\)](#) or [@TheRoyalHighlandEducationTrust \(Facebook\)](#) in your lesson photos/comments.

Learner worksheet

Apple Facts

Apples are the UK's most popular fruit, with millions eaten every day. They're enjoyed fresh, cooked, or juiced, and grown in orchards across the country. Each apple contains about 5-10 seeds, depending on the variety.

When you grow an apple tree from seed, the tree that grows will be genetically unique. This means the fruit it produces will not look or taste like the apple that the seeds came from.

Apple tree grafting is a way of growing new apple trees by joining two parts of different trees together. The bottom part (called the rootstock) is chosen for its strong roots, and the top part (called the scion) comes from the apple tree we want to grow. When the two are carefully joined, they grow into one tree. This helps farmers grow the same kind of tasty apples every time.

Apples in the UK

- The UK grows over **2,500 apple varieties**, more than almost any other country in the world.
- Some well-known UK-grown varieties include **Cox's Orange Pippin, Bramley, Egremont Russet**, and **Discovery**. The **Bramley apple** originated from a single seed planted in 1809 in Nottinghamshire.
- **Kent, Herefordshire**, and **Somerset** are among the most famous apple-growing regions due to their ideal climates and rich soils.
- Apples are grown for eating, cooking, juicing, and cider-making.
- The UK's apple season runs from **late August to early November**, depending on the variety.

Apples in Scotland

- Apples grow in Scotland, though the cooler climate limits the number of commercial orchards.
- Traditional Scottish varieties include **White Melrose, Scotch Bridget**, and **Tower of Glamis**.
- Many communities and schools in Scotland are now planting **heritage orchards** to help preserve old varieties.
- Scottish orchards are often found in sheltered areas such as the **Borders, Angus**, and **Fife**.

Health & Sustainability

- Apples are high in **fibre, vitamin C, and antioxidants**, making them a healthy snack.
- Apple cores should be composted rather than put in the landfill as conditions here are **low in oxygen**, which slows down or even stops the natural breakdown process. Instead of rotting harmlessly, the apple core may **produce methane**, a powerful greenhouse gas that contributes to climate change.
- Choosing **local apples** reduces food miles and supports sustainable farming.
- Apple trees (like all other trees) help absorb **carbon dioxide** and support **pollinators**. The fruit forms once the flowers are visited and pollinated by bees, wasps and other insects.



Learner worksheet

Apple Facts



1. How many varieties of apples are grown in the UK?

2. For how many months of the year are apples in season?

3. Can you name one apple growing region?

4. Where on the map is the apple growing region located?



5. What type of environment do apple trees like?

6. What is grafting?

7. Why do farmers bother to graft apple trees?

Recipe card

Apple crumble

WHAT YOU NEED:

- 200g plain flour
- 100g butter
- 75g caster sugar
- 600g cooking apples
- 200ml water
- 25g demerara sugar

EQUIPMENT

- Large bowl
- Measuring scales
- Chopping board
- Chopping knife
- Oven proof dish

HOW TO MAKE IT

1. Heat the oven to 200°C/Gas 6.
2. Place the flour, butter and caster sugar in a mixing bowl. Cut and rub in the butter until the mixture resembles breadcrumbs.
3. Peel, core and thinly slice the apples and layer in a 1.8 litre oven-proof dish.
4. Pour the water over the apples.
5. Sprinkle the crumble mixture evenly over the apples.
6. Sprinkle with demerara sugar.
7. Bake for 45 minutes until golden-brown and the apples are soft.

