



Bringing farm STEM to the classroom

Suggested Participants - Primary 5/6/7 pupils

All the food we eat comes on a journey to reach us. Along the journey, farmers, growers and producers use science, technology, engineering and maths to measure, problem solve and collect data. This pack contains a range of simple hands-on activities you can do in your classroom to help answer BIG QUESTIONS that encourage STEM and sustainability learning.

What this pack contains:

- All the resources to undertake the 'Farm STEM and sustainability' experiments with your p5/6/7 class.
- Learning Intentions, Success Criteria and Suggested Experiences & Outcomes,
- Learning for Sustainability links.
- Lesson plan.
- Suggested additional activities.

Learning Outcomes

- We are learning to identify different lifecycle stages.
- We are learning to collect, organise and display data accurately.
- We are investigating physical changes to the properties of materials.
- We are learning to use simple branched keys.

Success Criteria

- I can construct my own branching key
- I can explain physical changes to the properties of materials
- I can describe how butter is made
- I can describe the journey of food from source to plate
- I can undertake experiments

Experiences and Outcomes

- **SCN 2-14a** By investigating the life-cycles of plants and animals, I can recognise the different stages of their development.
- **SCN 2-15a** By contributing to investigations into familiar changes in substances to produce other substances, I can describe how their characteristics have changed.
- **SCN 2-17a** Having explored the substances that make up Earth's surface, I can compare some of their characteristics and uses.
- **MNU 2-20a** Having discussed the variety of ways and range of media used to present data, I can interpret and draw conclusions from the information displayed, recognising that the presentation may be misleading.
- **MNU 2-20b** I have carried out investigations and surveys, devising and using a variety of methods to gather information and have worked with others to collate, organise and communicate the results in an appropriate way.
- **MTH 2-21a** I can display data in a clear way using a suitable scale, by choosing appropriately from an extended range of tables, charts, diagrams and graphs, making effective use of technology.

Learning for Sustainability

- **Goal 4** Quality education: achieve literacy and numeracy.



Bringing farm STEM to the classroom Lesson Plan

Introduction

- Share/discuss the learning intentions and success criteria.
- There are [3 BIG Questions](#) in this activity and you can choose to engage with all of them or just the ones you are interested in.

Suggested discussion points

- What types of food do we produce in Scotland?
- Does anyone know about any examples of technology being used on a farm?

Learning

- **Science outcomes:** The ability to carry out practical activities and investigations. The ability to identify and classify examples of living things. The ability to recognise the different stages in a lifecycle.
- **Technologies outcomes:** The ability to make suggestions as to how farmers may use technologies to support sustainability and reduce the impact on our environment. The ability to recognise basic material properties.
- **Numeracy and mathematics outcomes:** The ability to carry out the necessary calculations to solve related problems. The ability to discuss how mathematics impacts on the world and the important part it has played in advances and inventions.

Additional tasks

- There are a number of other areas you could look into to share the STEM used in farming with classroom activities. You could take part in our [Grow your Own Loaf](#) activity – planting, harvesting and looking at how bread rises.
- We also have a learning resource on [dung](#), linked to food webs.

More information

- Find out more about food, farming and the countryside with our [A-Z guide](#).
- Try the quizzes in our [STEM curiosities resource](#).

Social media

Please tag [@TheRHET \(Twitter\)](#) or [@TheRoyalHighlandEducationTrust \(Facebook\)](#) in your lesson photos/comments.