



STEM curiosities on the farm

Level 3

Suggested Participants – S1-2

Farmers use a wide variety of science, technology, engineering and maths on a daily basis. The use of STEM on the farm enables efficient use of money and resources and assists with maximising yields and identifying illnesses. The range of STEM utilised varies depending on the type of farming enterprise with dairy units in particular maximising the potential STEM has to offer.

Our STEM curiosities on the farm resource provides an interactive platform for students to find out more about STEM on the farm as well as comprehensive notes for you to guide learning.

What this pack contains:

- All the links and content required to deliver our 'STEM curiosities on the farm' activity.
- Learning Intentions, Success Criteria and Suggested Experiences & Outcomes.
- Learning for Sustainability links.
- Lesson plan.
- Suggested additional activities.

Learning Outcomes

- We are learning about the science, technology, engineering and maths used on the farm.

Success Criteria

- I can discuss some of the actions farmers are taking to be climate friendly.
- I can use real farm data to solve problems.
- I can discuss how scientists in Scotland are undertaking innovative research.
- I can discuss the role of STEM on the farm in minimising environmental impacts.

Experiences and Outcomes

- **MNU 3-03a** I can use a variety of methods to solve number problems in familiar contexts, clearly communicating my processes and solutions.
- **MNU 3-07a** I can solve problems by carrying out calculations with a wide range of fractions, decimal fractions and percentages, using my answers to make comparisons and informed choices for real-life situations.
- **SCN 3-20a** I have collaborated with others to find and present information on how scientists from Scotland and beyond have contributed to innovative research and development.
- **SOC 3-08a** I can identify the possible consequences of an environmental issue and make informed suggestions about ways to manage the impact.
- **TCH 3-05a** I understand how scientific and technological developments have contributed to changes in everyday products.

Learning for Sustainability

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



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Lesson Plan

Introduction

- Share/discuss the learning intentions and success criteria.
- Hear from Emily a farmer discussing some of the STEM she uses in sheep production. Talk to your class about STEM on the farm and let them explore [the STEM curiosities resource](#).

Suggested discussion points

- How do you think STEM is used on the farm?
- How can STEM be used to minimise environmental impacts on the farm?

Learning

- **Science outcomes:** The ability to discuss the innovation and research taking place on farms in Scotland. The ability to explain how STEM is used to reduce environmental impacts on the farm.
- **Numeracy outcomes:** The ability to solve problems using real life data sets.
- **Technology outcomes:** The ability to discuss how technology and science have shaped the production of everyday items like milk and bread.

Additional tasks

- You can find out more about food and sustainability with our '[Exploring food and sustainability](#)' pupil platform.

More information

- There is more information on a range of STEM food and farming careers in our '[There's a role of everyone](#)' resource.

Social media

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