

Farm Detectives

Extension Activities



THE UNIVERSITY of EDINBURGH
Easter Bush
Science Outreach Centre

Dear Teacher,

To follow on from your Farm Detectives workshop we have a few ideas for you to explore with your very own farm detectives!

If you do any of the activities, please let us know by tweeting your pictures @EBSOClab or email us at EBSOC@ed.ac.uk

We look forward to seeing what you do!

Kind regards,

Jayne Quoiani

Easter Bush Science Outreach Centre Officer

Disappearing Rubbish

During Farm Detectives, we spoke a lot about *Salmonella*, harmful bacteria that can make humans, cows and many other animals sick. However, there are many microorganisms that are not harmful, but are beneficial.

Have your pupils create a bottle containing various types of rubbish to show that microorganisms are responsible for breaking-down (decomposing) rubbish

Timings:

The activity takes one class to create, but the decomposition process takes place over weeks/months.



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Materials:

Plastic bottles

Fruit and vegetable scraps

Plastic food wrapper, foil,

Dry leaves or grass

Newspaper, magazine paper

Permanent marker

Method:

1. Ask the pupils to bring a large clear water or drinks bottle (one per group).
2. Pupils choose which type of rubbish they are going to add (fruit and vegetable scraps, plastic food wrappers, leaves, paper etc.)
3. Pupils add 2-3 cm of their chosen rubbish and mark the top of the where the rubbish sits in the bottle. **Do not open the bottles**, you may want to tape the top of the bottle closed.
4. Each week the pupils mark the height of the rubbish. By doing this, they are observing the rate of decomposition. They could measure the height difference with a ruler and recorded it each week.
5. After 6-8 weeks they should discuss their observations, use the following question prompts:
 - Did all the rubbish you put in breakdown (decompose)?
 - What happened to the food scraps? What happened to the paper?
 - Did the height of the rubbish increase or decrease over time?
 - Did you see any mold or mushrooms (both types of fungi) growing in the compost?
 - What made the vegetable, fruit and paper decompose? *Microorganisms like bacteria and fungus.*
 - What would happen if we didn't have decomposers like bacteria, fungus and worms? *The rubbish would build up.*
 - Is it better to use plastic or paper shopping bags? *Paper because it decomposes.*
 - Why do supermarkets like us to re-use our bags? *So that less plastic bags are thrown away.*
6. Dispose of the bottles, do not open them.

Get hands-on
with real-life
science

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Developing the Young Workforce

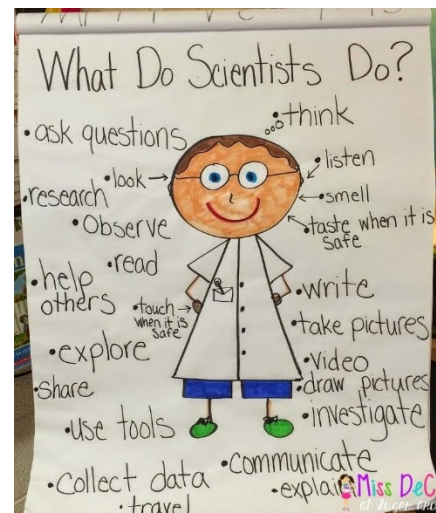
During Farm Detectives, your pupils got the opportunity to meet and speak with some of the scientists that work in The Roslin Institute.

This activity is designed to explore these DYW “I can” statements.

- ‘I can discuss the relevance of skills to the wider world and make connections between skills and the world of work.’
- ‘I can explain to others my ambitions/what I would like to do and look for ways to achieve them/that.’
- ‘I believe I can maximise my potential in any type of work.’

Instructions

1. Write the question *What do Scientists Do?* on the board.
2. Give each group a large piece of paper and coloring pens. Encourage them to think back to the workshop, the scientists they met and the activities they did themselves.
3. Prompt them to think about the skills they (your pupils) need to do an experiment.
4. When finished, ask the pupils to swap poster with one other group and to compare their poster.
5. Give each group their poster back and give them five minutes to add to their poster, if they wish to.
6. Stick all posters up on the wall and discuss their findings.



Discussion prompts:

- Which of these skills do you have?
- Would you like to work in a science?
- Would you like to be a scientist?

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Hand-Washing Campaign

During Farm Detectives, our pupils investigated the importance of handwashing. Have your pupils, in groups, design a poster outlining:

- Why it is important to wash hands after using the bathroom and before eating.
- The best way to wash your hands.

Hang the posters in the lunchroom or bathrooms (depending on the poster) to help raise awareness about handwashing in your school.

Interactive Online Games



[Stop the Spread!](#)



[Bacteria in the Cafeteria!](#)

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