



Science lesson 3 - Teacher notes

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Learning aim:

To analyse and interpret data on biodiversity and explain the importance of biodiversity.

Curriculum links and Skills Builder focus skills chart:

England
The national curriculum
(England)

Biology – ecosystems
Pupils should be taught about the importance of biodiversity.

Scotland
SQA National 5 Biology

Biology: life on Earth – ecosystems
Definitions of ecological terms: species, biodiversity and population.

Wales
WJEC GCSE Science (double award)
specification

Biology - Classification and biodiversity
Learners should be able to demonstrate and apply their knowledge and understanding of the term biodiversity: the variety of different species and numbers of individuals within those species in an area; why biodiversity is important and the ways in which biodiversity and endangered species can be protected including issues surrounding the use of legislation.

Skills Builder Framework Focus Skills

Problem solving – The ability to find a solution to a situation or challenge

Problem solving step 3
I complete tasks by finding the information I need myself.

Creativity – The use of imagination and the generation of new ideas

Creativity step 6
I use creativity in the context of work.

Main skills developed and how:

- Language building - Students will develop understanding of biodiversity and related key words.
- Analysis - Students will analyse and draw conclusions from data on biodiversity.

Equipment required:

- Highlighters
- PowerPoint
- Calculators
- Student worksheet

Suggested layout of the session:

5 minutes – Introduce the task and scenario. Before the students get started on helping Dallan, they need to answer questions 1, 2 and 3 on their worksheet. They can do this individually or in pairs. Then run through the answers.

13 minutes – Students need to look at question 4. The graphs are on the PowerPoint ready for display and on their worksheet. Answer question 4 together as a class and then students can complete the rest of the questions on their worksheet. This can be completed individually, in pairs or in small groups. For question 6, they can be creative.

7 minutes – Introduce peer marking of the answers with WWW (what went well) and EBI (even better if) comments written by peers. End with the reflection at the end of the PowerPoint. Take 1 answer from each student (for question 1), pair or group. Challenge students to not repeat what any of their peers have said.

Ways to differentiate:

- Students could calculate the percentage change from graphs for each insect or the percentage change in number of species at each site. This would allow them to use data in their blurb.
- Students could produce a bar chart to show changes in numbers of the 4 types of insects or changes in numbers of species to use in their blurb.
- Students could write a post for Instagram on how to increase biodiversity in the outside space in your home (balcony/yard/communal area) using as many of the key words from question 2 as possible.

How to extend the session – if required:

- Students could design their own biodiversity idea for Ace Engineering and label it to show Dallan, the junior executive.

