

Composting is Cool!

Visit of Airyhall Primary School to The James Hutton Institute, Aberdeen as part of the British Science Association, National Science and Engineering Week – 12 March 2012

Over 26 children and six teachers/parent helpers arrived in the afternoon, excited to hear about soil and its exciting inhabitants. The session started with a brief talk from Lorna Dawson featuring soil and the food that we can grow on it (Healthy soil-healthy food-healthy people) and showcasing the Hutton soil characters, greatly enjoyed in an animated fashion, with one little boy saying, in reference to 'Sandy' that: "Sandy is really cool, he's got a golf ball in his hair!"



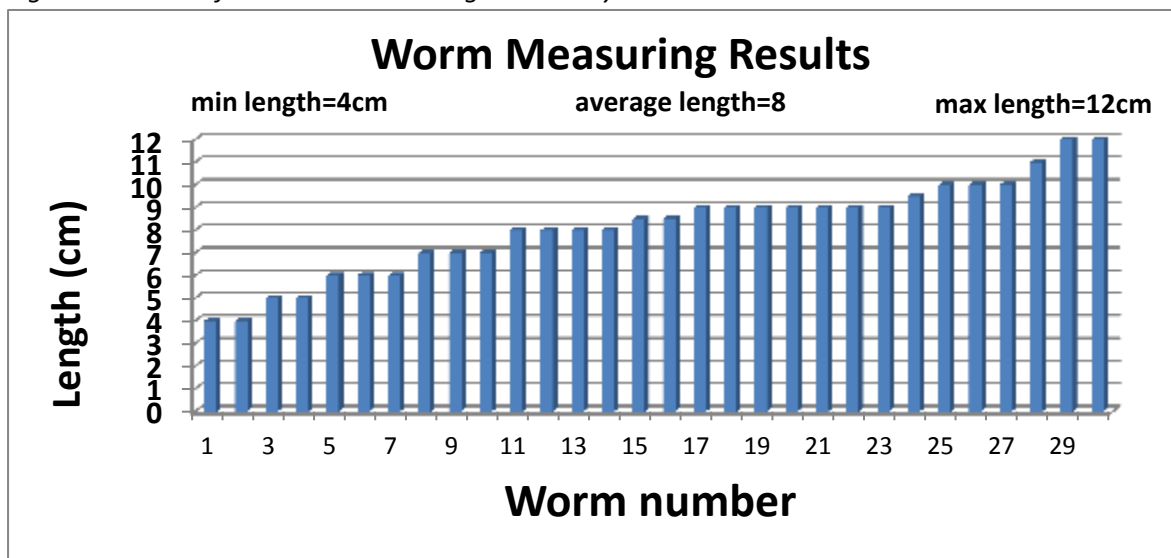
'Sandy' soil

They also seemed to imagine that the soil characters flew off out to the back of the room towards the door after their short video appearances*Harry Podzol and the Profiles of Doom*....

Then they spilt into four groups. The groups had great fun, one by one building their own worm farm, as demonstrated by Kenny Hood, with very enthusiastic pupils, all wanting to find the longest worm with two accidentally pulling the worm as they tried to measure it, only to discover that they are stronger than the worm and they ended up with two small worms. They all went away happy with their new pets and also delighted with their purple gloves. One little girl asked; "Is this really what you do in *real life*? really? wow!".

They were also able to look at the data they had generated themselves (figure 1) - all young scientists in the making.

Figure 1 Results of the worm measuring exercise by the children



Children making their own wormeries with instruction from Kenny



Measuring the worms that the children had found in the compost with Lorna



The second station was a 'Search for the Creatures in Slime' game, which got the children (and Jane and Jenna) all rather messy – much to their delight! One little boy asked Jane and Jenna if the butterflies live in soil and that got an interesting answer all about the insect larval stages.

Exploring the hidden life in soil and slime



The third stage was the infamous 'Drain Game', hosted by Jason and Diane, and yes, we did count all the marbles back at the end. They showed the principle of water movement through soils and the effect of soil texture on the rate of flow.

Playing the Drain game and learning about soil water movement with Jason and Diane





The fourth stage was an examination of the mature wormeries and a demonstration of the effects that the addition of natural compost to plant growth (green beans) can have. It appeared as a 'Jack and the Beanstalk' in real life as they searched for the giant bugs hidden in the leaves. Here Claire showed them the wonders of using a magnifier to see into the secret life of soil and zoomed up to 50 times magnification showing them collembola, worms and mites as they scurried about the healthy composted soil (the macro and micro-organisms).

Claire showing the pupils how to examine soil invertebrates and soil structure



The fifth station was a calmer table, with very happy children colouring images of a range of soil living creatures. What a bunch of budding artists! The last stage involved juice and biscuits, after they had removed their gloves and cleaned their hands.

A great afternoon was had by all (including the teachers and Hutton staff) and it seemed to stir up lots of stories and imagination. One of the teachers said that it was an ideal and engaging event as they were currently studying friction (we showed them dancing worms on sand versus running worms on the shiny table) as well as the art of measurement and the use of equipment such as the Dynalite magnification system and how to measure their own worms using a ruler. However, one of the little boys had to be restrained a little after he used the camera to view the back of his hand and in his friend's hair; a biologist in the making.

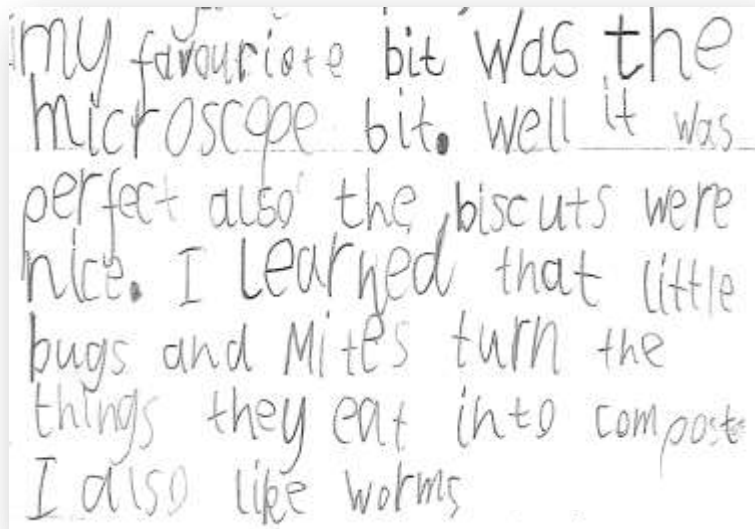
Colouring in the soil bugs



This afternoon event was followed up with a visit by Kenny to the school the following day to talk about their allotments at the school and to help them with a bit of 'after care' and advice for looking after their own worm farms/composters. They were also given a copy of the bar chart and associated data that they generated themselves. They were able to work with the results of their very own experiment to examine the length within a population of worms, thus introducing them to the idea of experiments, numbers, measurement and also to the idea of variability in the natural world. We heard that in the evening after the event one little girl went home still wearing her gloves and took her little brother on a worm hunt in their garden; knowledge exchange in action.

A grand day out! "*Composting is really cool*" say the Airyhall children and their teachers!

We also received some lovely letters thanking us for an enjoyable day out:



my favourite bit was the
microscope bit. Well it was
perfect also the biscuits were
nice. I learned that little
bugs and mites turn the
things they eat into compost
I also like worms

A day of hands on fun exploring soil and its inhabitants!



Staff involved: Lorna Dawson, Kenny Hood, Claire Ghee, Jason Owen, Diane Smith, Jane Lund and Jenna Gray

Thanks to the British Science Association for funding this great experience for the young Airyhall pupils and to the Scottish Government for funding the science behind the event.

