

**A Study of Tracks and Trails
(Become a Red Ridge Detective)**

Unit 9

This is half-day unit of study and could be undertaken in conjunction with the minibeast study.

Summary of the Day

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| 0900 | Introduce the investigation to the children |
| 0930 | Begin investigation |
| 1230 | Return to Centre |

This is a practical science investigation. The extension activity game could be played without following the unit of study.

Two Activity Support Sheets are included.

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Introduction

This unit introduces the children to the following ideas:

- every environment contains some living things;
- evidence of the presence of some creatures in the environment can be seen in the tracks and signs they leave behind.

Overview

Like detectives scientists must be prepared to look at everything, sift through it and select the most important or most relevant point. Worms for example, leave worm casts in the grass or soil, ants often leave piles of dust at the holes they use to go in and out of their nest, birds leave feathers or droppings, slugs and snails leave trails of slime. Footprints of birds, dogs and cats can often be seen on damp, muddy ground or snow.

Holes in trees indicate the presence of wood-boring insects or birds. Holes in the leaves of plants may indicate that insects are present. Encourage the children to look for evidence and to ask themselves and their partner questions to find out what animals they find traces of.

Aims: To enable children:

- To turn ideas suggested to them, and their own ideas, into a form that can be investigated;
- To decide what evidence should be collected.

Organisation

This unit could be organised as a class activity, however, it is more effective if the class is split into two groups, each attended by an adult.

Resources The day before undertaking this activity it is helpful if the children pin or weight large sheets of paper (eg old wallpaper) around the grounds of the Centre and leave them overnight
Clipboards and paper
A mixture of plaster of Paris in a container
Card for the plaster cast collar and paper clips to hold it together
Hand lenses and string
Soft brush

Time This is a half-day activity or could be undertaken in the early evening.

Method:

- 1 *Indoors*
Introduce the study to the children and help them to identify the range of tracks and trails that they might expect to see.
- 2 *Outdoors*
If the weather has been snowy, wet or damp, take the children outside to look for footprints and tracks.

If the weather is dry, throw a few buckets of water on the ground and ask some of the children to try walking, running and jumping across it. Can their friends tell from the trail how they were moving?

They can compare their prints with bird prints.

Can you tell whether the birds were hopping, walking or running?
- 3 The children could now examine the paper placed on the ground, the evening before, to look for tracks of birds and animals. Can they identify them?
- 4 Signs of minibeasts. The activity support card shows a number of signs and clues, which show the presence of various minibeasts. For instance, worms leave distinct casts where they have been at work and beetles leave tunnels and holes where their homes have been. The children should work in pairs and be allotted a small grid of ground each, so that they can search for signs.
- 5 The children could look for evidence of insects and other damage to trees - eaten leaves, stripped bark, leaf galls and mining beetles.

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6 Organise the children into pairs again. One child should lay a metre of string on the ground. The other child, using a hand lens following the string, describing the journey along the string, through the grass and round stones. This activity is good for focusing on tiny changes in the environment.

The children then change places and do this activity in another area.

7 Each pair is now asked to select the best print that they have found from all the above activities. They surround the print with a cardboard collar and pour a running plaster mixture in to make a caste. Allow this to dry and come back later. Brush it with a soft clean brush. The children could record their findings.

8 Now take the children on a walk and suggest that they construct a Red Ridge Detective Trail. Encourage the children to look for signs of trails and tracks of people, animals, minibeasts, and birds. There should be stops in this trail and ask the children to think of interesting questions for each stopping place - called stages - that will stimulate other people who follow the trail and cause them to think. Each of these stages could be marked with a numbered piece of card and a question written for each stage. The children could even ask them if there is anything they have noticed that the children missed so as to extend the trail.

9 As the class has been split into two groups and there are now two trails set up, the groups swap so that they can follow the other trail and test it out.

10 Return to the Centre.

National Curriculum References

Science AT1 1a, c,

Extension Activity

Play the tracks and trails game. An example is given on the activity support card and you can add other tracks and trails for the children to find. They should work in pairs and only play the game within the area that they set and define. They score points for the number and range of tracks and trails observed. The prize is to be the Red Ridge Tracks and Trails Detectives of the Week.