

Minibeast Study (The Red Ridge Safari) Unit 6

This is a one-day study.

Summary of the Day

0900	Introduce the study in the classroom
0930	Outdoor investigation
1230	Return to Centre for lunch, or have a packed lunch out of doors
1400	Continue investigations and prepare presentations
1600	Presentations
1700	End
1800	Dinner
Evening	Extension activities

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

RED RIDGE

Introduction

The unit examines the following areas:

- that there are a variety of minibeasts in the environment;
- that different minibeasts have different characters;
- living creatures, including minibeasts, can be classified and identified by careful observation of their features.

Overview

The Animal Kingdom is divided into two main groups - those with backbones (the vertebrates) and those without backbones (the invertebrates). This unit concentrates on invertebrates, most particularly the tiny animals that may conveniently be referred to as minibeasts. Many people wrongly refer to these animals as 'insects' but insects are only one sub-group in the large world of minibeasts.

One of the most important aspects of children's investigations of minibeasts is learning the need to care for other living creatures - a respect for life. Therefore, the method of collecting and the subsequent care of the minibeasts is crucial to this study.

When collecting the minibeasts the children should be encouraged to respect them and their habitat. Stones that are lifted must be replaced, etc. It is better to keep different kinds of minibeasts separate when collecting - slugs for example produce a slimy trail which can cause the legs of other creatures to stick together. Also some beetles are carnivorous and may eat the other specimens. Children are often worried that their minibeasts will not have enough air when put in a jar. There is enough air in a small jar to satisfy a creature for the time that it takes to return to the classroom. It is there that suitable homes have to be set-up. A large plastic tank with leaf mould or peat and some stones on the bottom and the top covered with muslin or nylon net held firmly in place by elastic will suffice. The specimens should be returned to their habitat after study.

Aims: The unit enables children to collect, identify, classify and observe a wide range of living animals, so that they may understand that:

- different animals are found in different habitats;
- that food chains show feeding relationships in an ecosystem;
- That there are life processes, including nutrition, movement, growth and reproduction, common to animals.

Organisation

The children should be divided up into groups of three or four.

Resources Assortment of small jars, boxes and containers
Nylon netting or muslin, elastic bands
Hand lenses (midi or magnispectors if possible)
Small fish tanks
Shoe boxes
Black plastic sheet or large piece of card
Old white sheet
Sheets of card
Small lengths of wood
Trowel (to dig in soft earth)
Pooters (for transferring small, delicate insets)
Clipboards
Paint brushes/plastic spoons (also for transferring minibeasts into the containers)

Time This is a whole day class activity.

Method:

1 *Indoors*
After introducing the investigation and ensuring that the groups have understood their tasks, emphasise the need for respect and care of the minibeasts.

2 *Outdoors*
Take the children on a minibeast 'safari'. First discuss where they are going to look and what they need to do when they get there. Encourage the children to collect minibeasts from different places and to note where the creatures are found. Look:

- under stones;
- in leaf litter;
- on plants and trees;
- around building;
- in crevices;
- under overhangs - rock outcrops, windowsills, etc;
- dig in the ground

Use the paintbrushes, plastic spoons and pooters to collect the minibeasts. Store each one in a container and number the container.

2a Ask each group to make a pitfall trap. They will need to make a small hole in the ground in a place where they think there are some minibeasts. They need to put a carton or a jar in the hole so that the top of its sides are below the level of the soil. Put some bait in the trap (such as bits of vegetable or bread or small scraps of meat). Put some stones around the trap and rest a card or tile on them to cover the trap, leaving room for the minibeasts to go under it. Leave the trap until later in the day or even overnight.

The children could do a survey by putting pitfall traps in different areas of the Centre grounds and seeing which one attracts the most minibeasts. Do different types of bait attract different types of minibeast?

2b Lay a piece of card or black plastic sheeting on the ground. Do not disturb it until the end of the day. Then pick it up and see what minibeasts are underneath it.

3 The children should record the following for each numbered container:

- Where they found the minibeast?
- What were the conditions like?
- What it was doing?
- How did it move?

4 Place a large piece of old white sheeting on the ground, under low bushes or trees. Shake the tree and collect the minibeasts that fall onto the sheet. Each group should select a different tree or bush, so that comparisons can be made.

5 Encourage the children to look closely at the minibeast and note its characteristics:

- Does it have legs?
- How many?
- What does the body look like?
- Is the body divided into different parts?
- How many parts?
- Does it have wings?
- What do its legs look like?
- Do the legs have joints?
- Are the legs all the same?

The activity support sheet may help with identification.

6 Return to the Centre and carefully place the specimens in the tanks that were prepared for them earlier.

7 After lunch the children should:

- identify the minibeasts that they have collected;
- classify them into groups;
- gather evidence from observation on similarities and differences.

8 Each group should then select one of the following tasks to investigate. Minibeasts select an environment with suitable characteristics. Many marine minibeasts - sponges, anemones, mussels - choose once for life, but land minibeasts can move out of unsuitable conditions. These tasks below are designed as starting points for the children's own investigations based upon their own queries.

- Can the children devise a test to find out if different kinds of minibeasts prefer different colours?

(One way to do this is to paint the inside of some ice-cream tubs with different colours or line them with different coloured paper). Leave them outside to see which ones attract flying insects - the children should design, make, observe and record).

- What conditions do minibeasts prefer - dark/light; dry/damp? (The children could use plastic tubs or plates with plasticine walls, and then create different environments on each plate or tub - the children should design, make, observe, record).