We're going on a bug hunt!

A bug hunt is an excellent way of building skills around scientific enquiry. The following guide gives some pointers on how to run one on your school grounds.

What you will need

- A Google map of your school grounds
- Clipboards
- Pencils
- Spotter sheets (see links at the end of this document)
- Recording sheet
- Collecting jars/pots with lids
- Magnifying glasses
- If available – sweep nets, trays, white sheet

Before you start

1. Using a Google map of the school, identify areas that can be surveyed and label them A, B, C, D etc.
2. Decide how long you will spend surveying each area (depends on how much time is available and how many areas are chosen). We'd advise at least 15 minutes per area. Identify a logical order to survey them in to reduce loss of time. Explain to the students that this is to make it as close to a fair test of which area is the best for insects.
3. Decide what level of identification you are going to do – into groups or down to species (time and accuracy are worth considering).
4. Briefly describe the techniques and determine which ones will be used (see below). Divide the tasks to specific groups if necessary. Ensure each group has the relevant equipment and recording sheets/clipboard/pencil.
5. Ask students to predict what they will find, and which area will be best or worst for number and variety.

Techniques

1. Habitat survey – identify the type of habitat that is most common in the area (refer to resource 1)
2. Log/stone turn – students turn over logs/stones carefully and record what is seen underneath. Ensure that the log/stone is put back as these are our insects homes.
3. Tree/hedge beating – this is a useful technique for seeing what lives in a tree canopy. Lay out a white sheet or tray beneath the tree or hedge. One student beats/shakes a branch to see what falls onto the sheet. Others identify as quickly as possible – the insects are likely to fly or run away fast!
4. Sweep nets – these are a great way to survey long grasses. You can buy them or make your own **www.lostladybug.org/files/SweepNet09.pdf** Students move through long grass sweeping the net backward and forward to see what falls in. Use pots to gently collect and identify what is in the net.
5. Pitfall trap – if you want to create a trap for crawling insects, these can be done the day before (but not left longer). Dig a small pot into the ground (yoghurt pot) and then place a couple of stones and a raised lid over the top to stop rain getting in. Passing insects will fall into the trap and can be identified (and released) the next day.

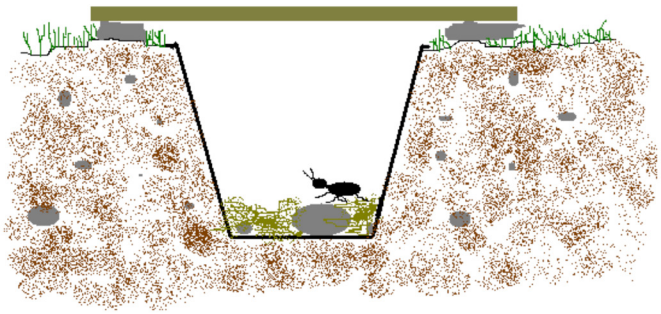

Figure 1 Pitfall trap

During the survey

1. Students record the area on their sheets and the main habitat in it.
2. Start the timer and set the students to record what they find on their recording sheets.
3. Give time warnings. Move on and repeat.

After the survey

1. Students reflect on what they have found and how it compares to what they had predicted.
2. Use data to create graphs/results and draw conclusions about insects types, number, variety and location. What does it tell us about the school?
3. Where are the best and worst places on site? How can they be improved?

Photo: Lyndsey Young

Safety considerations

It is always important to check the site before identifying areas you will survey. Do a walk over on the day to remove hazards.

Risk assess the areas for hazards such as water, sharps or stinging plants. Be aware that some of the "bugs" bite and sting!

Weather will affect results significantly – warm, dry days will produce more than cold wet days, so consider this in the planning.

Use the Wildlife Trust's handy spotter sheets here **www.wildlifewatch.org.uk/spotting-sheets** and search for:

- Bees
- Beetles
- Caterpillars
- Damselflies and dragonflies
- Ladybirds
- Moths
- Shieldbugs
- Snails
- Spiders
- Woodland butterflies
- Other unidentified minibeasts

Photo: Redaktar

Survey Recording Sheet

Area **Habitat**

Ants	Beetles	Butterflies, caterpillars & moths	Bees & wasps
Millipedes	Centipedes	Grasshoppers & crickets	Flies
Bugs	Worms	Mites	Earwigs
Snails	Woodlice	Spiders	Damselflies & Dragonflies
Slugs	Other		