**Investigating a correlation between a named species and a biotic and/or abiotic factor STUDENT**

**Introduction**

In this activity you will decide the sampling method to investigate a correlation between the abundance of a named animal species and a biotic and/or abiotic factor.

**Aim**

To use a sampling technique to investigate a correlation between the abundance of a named animal species and a biotic and/or abiotic factor*.*

**Intended class time**

* 1 hour to collect data (mathematical processing and presentation of data can be carried out at a later date)

**Equipment (per group)**

* Quadrat
* Tape measure
* Marker pegs
* Pitfall traps
* Nets suitable for the habitat in which you will be working
* White sheet
* Light meters
* Suitable pots/vials for collecting soil samples
* Flow meters
* Trays or other containers to hold animals during sampling
* Chemical testing kits for water samples
* Soil pH kit
* Key or method of identifying species in area of study
* Recording sheet with clear folder / plastic bag to cover in case of rain
* Method of generating random numbers e.g. calculator

**Procedure**

*Note: in this practical activity you will work in small groups to decide the biotic and/or abiotic factor to investigate and decide on the method of sampling to be used. You should have carried out sampling techniques before trying this activity.*

1. Your teacher will tell you about the habitat you are visiting and the animal species you will be investigating.

**Habitat…………………………………………… Species…………………………………………………….**

1. Decide which biotic and/or abiotic factor you will investigate.
2. Using the equipment available, devise a method of sampling to investigate whether there is a correlation between abundance of the named animal species and the biotic/abiotic factor you have chosen.
3. Check your plan with your teacher and carry out your method recording data in an appropriate table.
4. Make a labelled, annotated drawing of the species you have been investigating.
5. Plot a suitable graph(s) of the data you have collected.
6. Using your data, draw a conclusion as to whether you did observe a correlation between the abundance of the named animal species and your chosen biotic and/or abiotic factor.

**Extension questions**

1. What is the binomial name of the animal species you investigated?
2. What is the difference between biotic and abiotic factors?
3. Evaluate the sampling method you carried out. Were there any limitations? Could you improve your procedure if it was to be used again?
4. What did you do to ensure ethical treatment of the animals you were investigating?

**To submit**

For this piece of work to count towards Practical Activity Group 3 of the Practical Endorsement, you need to have evidence of the method you devised, the raw data you collected and a biological drawing of the animal species. You should have drawn a conclusion about whether there was a correlation between the animal species and biotic/abiotic factor you chose. You also need to consider the above questions as the answers to these questions will aid you in preparation for your written examinations.