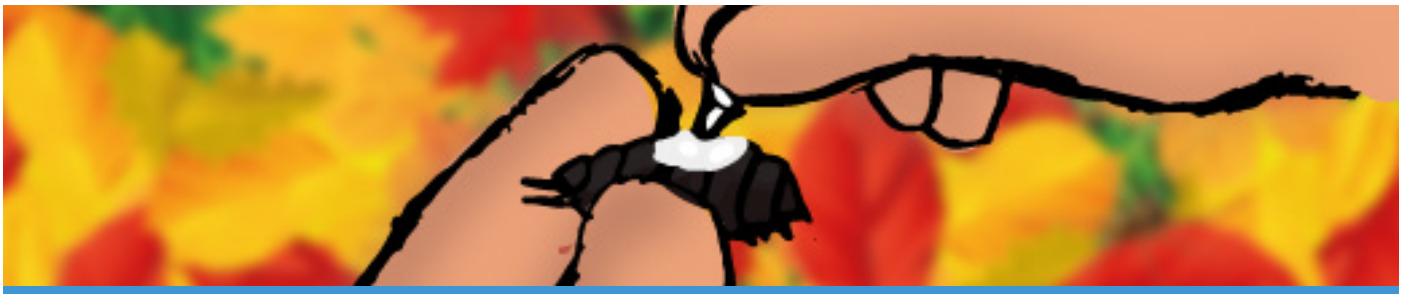
Capture/recapture technique worksheet

Name .....



You are going to estimate the population of woodlice living in a 2m² area of leaf litter.

The equation you will use to do this is shown below:

M = The number of animals first marked and released
R = The number of marked animals in the second sample.
C = The number of animals captured in the second sample

$$N = \frac{MC}{R}$$

Enter the virtual garden to collect your data:

	Number of woodlice
M	
R	
C	

Calculate the population you found:

$$N = \frac{\square \times \square}{\square}$$

Population of woodlice = ☐

Evaluation

For this estimate of the population size to be reliable four conditions are really important:

1. **The time between samples must be long enough for the marked organisms to mix back into the population.**

2. **Organisms are not going to migrate to or from the area.**

3. **The technique used to mark the animal does not harm or kill it or make it easily identifiable to predators.**

4. **The technique does not make the organism easier to see and so more likely to be caught in the second sample.**

Underline the statements in the box which could improve the experiment.

Leave a longer interval between samples.

Take a smaller sample by spending less time collecting the sample.

Use a UV pen to mark woodlice which can only be seen under UV light.

Leave a shorter interval between samples.

Take a bigger sample by spending more time collecting the sample.

Use a permanent method to mark the sample.

Give reasons why the selected methods above would improve the technique.