

## WJEC England Biology GCSE 6.3 - Biodiversity

Flashcards

This work by PMT Education is licensed under CC BY-NC-ND 4.0











What tool could be used to record the abundance of different plant species in a habitat?











What tool could be used to record the abundance of different plant species in a habitat?

A quadrat







### What do transects measure?













What do transects measure?

The change in the distribution of organisms in an area









How do you set up a transect?







### How do you set up a transect?

- Transects are lines that quadrats are placed along
- They are often long tape measures laid on the ground and quadrats are placed at regular intervals along them









What tool could be used to record the abundance of different flying insect species in a habitat?









What tool could be used to record the abundance of different flying insect species in a habitat?

A sweep net









What tool could be used to record the abundance of different small crawling animal species in a habitat?











What tool could be used to record the abundance of different small crawling animal species in a habitat?

A pitfall trap











### Describe the mark-release-recapture method











### Describe the mark-release-recapture method

- Use a trap to capture some animals
- Mark the captured animals
- Release the animals
- Set up the trap again in a couple of days
- Note the number of animals in the recapture and the number of those that are marked









## What issues do small data samples present?











What issues do small data samples present?

They are often not accurately representative of the sample area











## How do you calculate population size from a mark-release-recapture investigation?











How do you calculate population size from a mark-release-recapture investigation?

M1 - Marked in the first sample

M1 x M2 M2 - Total caught in the second sample

M3 - Marked in the second sample



М3

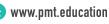








If a sample of 30 mice are captured, marked and released and a sample of 30 are recaptured with only 5 marked individuals, estimate the population size









If a sample of 30 mice are captured, marked and released and a sample of 30 are recaptured with only 5 marked individuals, estimate the population size

$$M1 = 30$$
 $M2 = 30$ 
 $M3 = 5$ 

Population size = 
$$\frac{900}{5}$$
 = **180**











## Define biodiversity









### Define biodiversity

The variation between organisms









### What is an indicator species?













What is an indicator species?

Any species which can be used to measure conditions in an environment, often by the presence or absence of that species









### Give 5 negative impacts that humans have on the environment











### Give 5 negative impacts that humans have on the environment

- Hunting
- Deforestation
- Pollution
- Land use
- Pesticides











## Give 5 positive impacts that humans have on the environment











# Give 5 positive impacts that humans have on the environment

- Sustainable farming
- Captive breeding programmes
- Creating nature reserves
- Recycling
- Preserving habitats









## Give 3 benefits to maintaining biodiversity













### Give 3 benefits to maintaining biodiversity

- Ecotourism provides money for the local economy
- It can prevent extinction
- Some animals or plants may have useful medicinal properties









## Give 2 challenges to maintaining biodiversity









### Give 2 challenges to maintaining biodiversity

- It is sometimes difficult to gain political agreement on policies
- Maintaining biodiversity is expensive









### State 2 methods of pest control













### State 2 methods of pest control

Biological control

Pesticides











## What is biological control?











What is biological control?

It is a method of controlling plant pests by deliberately introducing organisms that feed on the pests to decrease the number of them









### Give 3 disadvantages of pesticides











### Give 3 disadvantages of pesticides

- They are not specific and so can kill other insects that are not pests
- They can contaminate water sources
- They have to be applied more than once









## Why has the approach to using biological control changed recently?











Why has the approach to using biological control changed recently?

New scientific research has helped to understand its use more which has changed the regulations to require more in-depth research and trials before it can be used





