# Census or sample - data collection

As a class, you will be collecting information about the biodiversity of your schoolyard. You will be recording information on the population of living things in different areas around the school. Quietly observe your area and record the species and population numbers you observe using Table 1: Species Observations.

Note: You do not need to know the scientific names, just make sure you record everything you see, including different types of plants. This task is about collecting and analysing the data so you can simply describe the species you observe. Examples of categories include mammals, birds, reptiles, amphibians, fish, insects, trees, shrubs, small plants, grasses, fungi, moss and lichen.

Table 1: Species Observation

Group number	
Description of area:	
Species named	**Populations observed**
Total species:	**Total organisms:**

Display your data using a column graph where the species name as the category on the x-axis and the population observed as the frequency on the y-axis.
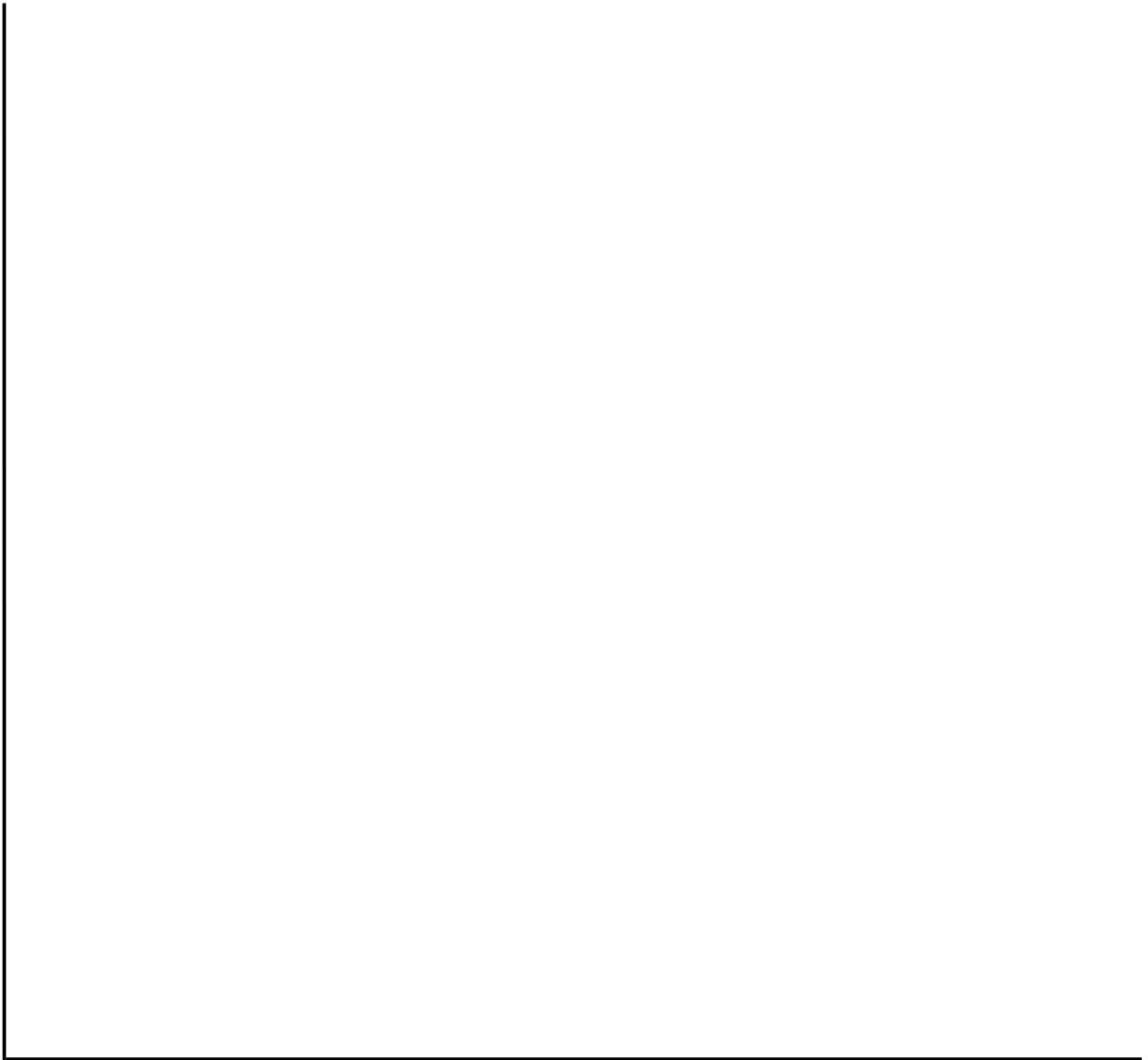
Which category is most common?

What was the mean population of the species in your area?

Find the 5-figure summary using the population data and create a box-plot.

Are there any possible outliers? Can you explain why/why not?

Now group your data using Plant and Not Plant categories and create a new column graph using these two categories.

Table 2: Plant and Non-Plant

	Total organisms in each category
Plant	
Non-Plant	

Which category is most common?

It is estimated that world wide there are thousands more species of plants than animals.

Do your statistics support this statement? Explain your answer by describing your area in comparison to the entire schoolyard.

We now want to further investigate the Biodiversity Index of you area.

A Biodiversity Index is a measure of the health of an ecosystem. Calculate the Biodiversity Index of your area using the formula:

$$\text{Biodiversity index} = \frac{\text{Total number of species}}{\text{Total number of organisms}}$$

The Biodiversity Index of my area is:

Note: This will be an estimate as to calculate the exact Biodiversity Index you need to count EVERY living thing!

Do you think this is an accurate representation of the biodiversity of the entire school? Why/Why not?