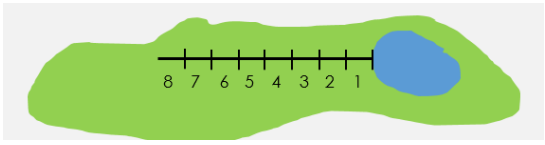
Ecosystems

1. An **ecosystem** is the interaction of a community of organisms with the non-living parts (abiotic factors) of their habitat. *E.g. a rainforest ecosystem contains: gorillas, ants, nut trees, lots of water and lots of sunlight*
2. A **population** is a group of the same organism. *E.g. a group of gorillas*
3. A **community** is made of several different populations living in the same area that depend on each other for survival. *E.g.* populations of: gorillas, ants and nut trees

Sampling

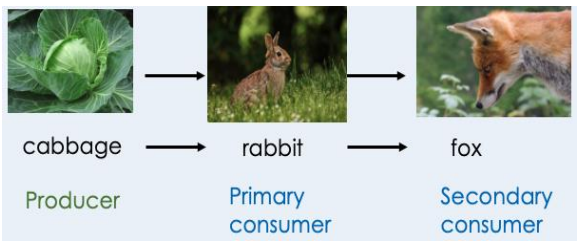
4. Random sampling is used to estimate the size of a population in a habitat
5. **Quadrats** are placed randomly and used to count the number of individuals in a specific area
   e.g. estimating the total number of daisies in a field

6. Systematic sampling is used to investigate the effect of a factor on the distribution of organisms
7. This involves using quadrats placed at regular intervals along a **transect** line
   e.g. counting the number of daisies as you move further away from a pond



Food Chains and Webs

8. Feeding relationships within a community can be represented by **food chains** and **food webs**
9. The direction of the arrow in a food chain and food web shows the direction of **energy transfer**
10. **Producers** are plants that can make their own food (glucose) using sunlight in the process of photosynthesis
11. **Primary consumers** eat producers, **secondary consumers** eat primary consumers and **tertiary consumers** eat secondary consumers



12. **Predators** are consumers that eat other animals, called **prey**
13. In a **stable community** the numbers or predators and prey increase and decrease in cycles
14. If there is a change in one population then this affects other populations in the community. You can use a food web to predict what changes could happen

Abiotic and Biotic factors

15. **Biotic factors** are **living** things that can affect a community
16. Examples of biotic factors are: food, disease and predators
17. **Abiotic** factors are **non-living** things that can affect a community
18. Examples of abiotic factors are: temperature, light, wind, amount of water

Competition

19. Animals often compete with each other for space, mates and food
20. Plants often compete with each other for space, water, minerals and light
21. The best competitors are most likely to survive