**Variation and classification**

**Variation**

A **species** is a group of organisms that can reproduce with one another to produce offspring that will also be able to reproduce. The differences between organisms are known as **variation**. There is variation between different species and between members of the same species.

Sometimes there is a **relationship** or **correlation** between two features. A relationship is normally best shown on a line graph. The line will go steadily up or steadily down.

Variation can have **environmental** or **inherited** causes.

**Environmental variation**

An organism’s surroundings are known as its **environment**. The conditions in an environment are called **environmental factors**. Plants are affected by environmental factors like the amount of light, the amount of water, the amount of warmth and the amount of mineral salts in the soil.

Animals are also affected by environmental factors. Humans who get sunburnt or have scars are examples.

**Inherited variation**

This is caused by features being passed from **parents** to their **offspring**.

In humans, natural eye colour and natural hair colour are both examples of inherited variation.
Classification

There are so many species that we need to put them into groups. This is called classification.

The first set of groups that organisms are divided into are called kingdoms. The two largest kingdoms are the plant kingdom and the animal kingdom. The main difference between these two kingdoms is that plants can make their own food and animals cannot.

The animal kingdom is divided into other groups. The vertebrates are animals that have a backbone. There are five sorts of vertebrate. There are another eight groups which are all invertebrates. The most important groups to know about are in bold type.

The plant kingdom is also divided into groups.