Adult Guidance

Life Expectancy

In Lesson 5 children we were exploring the relationship between gestation periods and animal types.

In this lesson the children will explore if there is a relationship between gestation periods and life expectancy. They will be looking to compare the two variables and then discuss the kind of relationship they have with one another.

Life Expectancy Data

The data given is based on the average life expectancy of the different species of each animal. However, where there is just one species that is an outlier, this has not been included in the average life span for that animal as it would result in a distorted average.

If the children are researching their own data and come up against this issue – depending on their mathematical ability – you may wish to teach them how to find the average. An alternative would be to ask them to modify their worksheets or tables so that they include the name of the specific species that was the outlier in this instance.

While the data has been checked with several sources, there is no one database that includes average life expectancy. There is still much debate about the life expectancy of wild animals as many are difficult to track over the course of their lifetimes. In addition, the life expectancy of animals in the wild is different to that when they are raised in captivity. There is no overall pattern – some animals live longer in captivity while for others it shortens their lifespan. The data used in this lesson concentrates on wild animals alone as this would be their 'natural' life expectancy.

Relationship Between the Variables

The children should find that while there is an association between life expectancy and gestation period, it is not a correlation or a causal relationship. In many cases, such as humans and whales, the idea holds true that the longer the life expectancy the longer the gestation period. However, this is not the case for frogs which have a very short gestation period but can live for years.

Further Study

The data could be analysed further to see if the relationship between gestation period and life expectancy differs, for example, based on animal types or between land and water dwelling animals. If the children come up with further ideas then they may be encouraged to investigate further. If the data they collect does not lead to a firm conclusion then encourage them to generate further questions to investigate. The science curriculum is more focused on the process of investigations than always ensuring the outcomes of investigations replicate existing findings.