

## 16-BY8 Lamarckism and mutations

*It's the way that animals or humans adapt to their surroundings. Like giraffes and that would have been the size of horses and then, to reach the high branches or something, they might have got longer necks, by like, a deformity. Because a deformed giraffe might reproduce and make more. They'd go higher because they can eat more and they can reproduce.*

**Claim(s)**                                      **Deformities occur in individual living things that give them a survival advantage.**

**Deformities may be passed on to offspring who then inherit the survival advantage.**

**Any challenges to the expressed claim?**

**Anything to disagree with?**

**Any clarification needed?**

**Question(s).**                                      **What is a 'mutation' in an organism?**

**What is the different consequences of a mutation in a somatic cell and one that happens in a germ cell?**

**Note:** This response reveals some misunderstandings about the possibility of changes in the body of a living thing being passed on to its offspring. The idea that changes during a living thing's lifetime experience can be passed on to its offspring has echoes of the Lamarckian notion of inheritance of acquired characteristics. Lamarck would explain the elongation of the giraffe's neck by the constant stretching exercise to reach higher branches being passed on to the young. This idea is now discredited, though it has been popular in various times and places.

In this response, there may be some confusion between 'deformities' and 'mutations'. Some mutations can be inherited by offspring while others cannot. Hereditary mutations are inherited from a parent and are present throughout a person's life in virtually every cell in the body. These mutations are also called 'germline mutations' because they are present in the parent's reproductive egg or sperm cells, also known as 'germ cells'.