

Science 1.9 AS 90948 Genetic Variation

How does variation help a species survive?

Success Criteria: complete each level before moving onto the next

- o Basic: defines the term 'genetic variation' and gives example of why variation is good
- o **Proficient:** explains why differences in phenotypes may be of benefit if the environment changes
- Advanced: Links the explanation of why genetic variation within a population is important for the survival of the species in a changing environment (with examples) with the explanation of how inherited variation is constantly being generated by the process of meiosis, through the reshuffling of alleles.

The length of a giraffe's neck, a **phenotype**, is controlled by genes. There is **continuous variation** of the neck length within the species of giraffe. A longer neck will help giraffes reach leaves higher in the tree but makes it more difficult for the animal to bend its neck to drink and for blood to circulate to the head compared to a shorter neck giraffe.

length is passed onto each generation o	f giraffe.
	- Allen Company