




# Review B1.8 Evolution

<i>Can you...?</i>			
<b>B1.8.1 Evolution</b>			
Outline Darwin's theory of evolution by natural selection, which states that all species have evolved from life forms that first developed more than 3 billion years ago			
Outline the process of evolution by natural selection: differences between genes causes variation within a species; some individuals are best suited to survive and reproduce; the genes that enabled these individuals to survive are passed on to the next generation			
Appreciate the timescales involved in evolution			
Explain how mutations (resulting in new forms of a gene) can lead to relatively rapid changes in a species if the environment changes			
Interpret evidence relating to evolutionary theory, when given data to work from			
Suggest three reasons why Darwin's theory was only gradually accepted			
Outline the competing evolutionary theory of Lamarck, which is based on the idea that changes which occur in an organism during its lifetime can be inherited			
Identify the differences between Darwin's theory of evolution and conflicting theories, such as that of Lamarck			
State that we now know that this type of inheritance cannot occur in almost all cases			
Suggest reasons for the different theories, based on the idea that scientists may produce different hypotheses to explain the same observations			
State that hypotheses are supported or refuted by data from investigations			
Explain how we can classify living things into animals, plants and microorganisms by studying the similarities and differences between them			
Use evolutionary trees (models) to suggest evolutionary and ecological relationships between organisms			