

# Historical development of theories of evolution



**ASSIGN  
BUSTER**

Analyse information on the historical development of theories of evolution and use available evidence to assess social and political influences on these developments: –Influences Prior To Publishing of Evolutionary Theory: ? Christianity was a very dominant force during the time of Charles Darwin. ? Creationism was widely accepted, as a religious and a scientific concept ? Darwin knew what a huge impact his knowledge would make on the world when he released it, so he withheld his theory for 25 years. It was only when he felt the social and political climate was right, did he publish his information ? He chose to publish it during a time of great societal change; i. e.

the Industrial Revolution, and a time when the power of the Church was weaning. ? Also, Wallace's willingness to propose his own version of evolution prompted Darwin to finally publish his papers –Influences of Evolutionary Theory on Society: ? Darwin's theory caused great furore in the society at the time.

Great debates were fought out by evolutionists and creationists (a famous one being between Thomas Huxley and Bishop Samuel Wilberforce). ? Darwin was also blamed for many catastrophes in history, as people continued to wrongly apply the " Survival of the Fittest" to normal life. ? Darwin has been blamed for the destruction of religion and the rise of atheism, fascism, communism and even the Second World War, as people like Karl Marx base their philosophies on The Origin of Species. Use available evidence to analyse, using a named example, how advances in technology have changed scientific thinking about evolutionary relationships: –New

technologies, especially in the field of biochemistry, have increased knowledge about the relationships between species.

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Techniques such as DNA hybridisation, amino acid sequencing and analysis of the antibody-antigen reaction between different species have shown the degree of similarity and evolutionary pathways of organisms. DNA

Hybridisation: ? DNA hybridisation is a process by which the DNA of different species can be compared ? The process uses heat to separate the 2 strands of the double helix, from 2 different species ? The single strands of the different species are then mixed, and cooled ? On cooling, the hydrogen bonds re-form in varying degrees ? The greater the number of bonds between the strands, the greater the degree of genetic similarity between the two species