

Evolution, Values, and Belief

We recognise that evolution may be a sensitive topic for some students because of their religious and/or cultural beliefs. Some students may feel that they cannot accept the theory of evolution because it contradicts those beliefs. Every student is a respected, valued and visible member of the STEM SMART community: as a whole person with a unique set of beliefs, values, abilities and potential. This enriches the diversity of our learning community and makes you the wonderful person you are. The information and links on this page are **not** here to try to convince you of a particular viewpoint, but are here to help you think more about these things, and to help you consider whether or not the theory of evolution can be reconciled with your own beliefs.

The theory of evolution explains how populations/species change (evolve) over time, and explains how small gradual changes can, over long timescales, lead to large differences between species. Based on the fossil record, and based on the fact that all organisms share a universal genetic code, the theory predicts that all species (including humans) are descended from a common ancestor that lived billions of years ago. Like all other scientific theories, it can be modified or even rejected if new evidence is found that disproves the current theory. However, all of the available evidence (from various fields within biology) currently supports the theory. And most fields within biology rely on the theory of evolution to some degree.

The theory of evolution neither proves nor disproves the existence of God/gods/a god. There are many scientists who have deeply held religious beliefs and also accept the theory of evolution, as they believe that there is no contradiction between the two. Those who believe that God created all life on earth may view evolution as the means by which God did this. However, within each religion there is a range of opinions on the extent to which the theory of evolution can be accepted. The links below give an overview of how evolution is perceived within various major religions.

- Buddhism: <https://www.bbc.co.uk/bitesize/guides/zc9bh39/revision/2>
- Christianity: <https://www.bbc.co.uk/bitesize/guides/zqphw6f/revision/3>
- Hinduism: <https://www.bbc.co.uk/bitesize/guides/z99vxfr/revision/4>
- Islam: <https://www.nature.com/articles/520409a>
- Judaism: <https://www.bbc.co.uk/bitesize/guides/zw9ky4j/revision/3>
- Sikhism: <https://www.bbc.co.uk/bitesize/guides/zxc9fcw/revision/6>

It is important to recognise that the theory of evolution by natural selection has been used throughout history to justify harmful things including eugenics, racism, slavery, and genocide. This may be part of the reason why some people (including certain religious groups) have rejected the theory of evolution. However, the theory of evolution is simply a scientific theory that describes how populations/species change over time. It is not a moral framework, and cannot be used as a justification for harmful behaviour. Most scientists accept the theory of evolution but reject the beliefs of those who used it as an excuse to harm others.

If you have any scientific questions about evolution (e.g. you would like to know more about the evidence for the theory of evolution, or you have questions about how the process of evolution works) then feel free to email us at stemsmart@isaacphysics.org. If you have questions or concerns about how the theory of evolution can be reconciled with your own religious beliefs, we encourage you to talk to your own spiritual leader(s).

Regardless of what you believe or don't believe, we are delighted to have you with us on the STEM SMART programme! And we hope that learning and thinking about these topics is an enjoyable and thought-provoking experience for you.