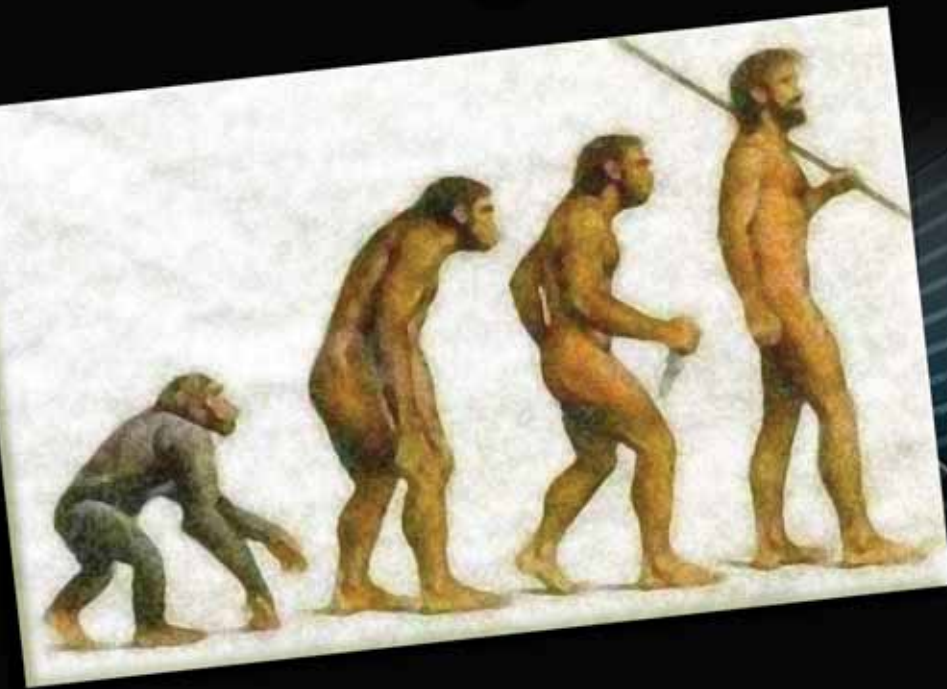


Academy of Science of South Africa Statement: Teaching Evolution in South African Schools

ACADEMY OF SCIENCE OF SOUTH AFRICA
ASSAf



The Academy of Science of South Africa (ASSAf) recognises and appreciates the fact that the teaching of evolution in schools is a sensitive matter in certain segments of society, especially in some religious communities of South Africa. At the same time, one of the beneficial outcomes of the democratic transformation of the country since 1994, and especially of the adoption of the Constitution and the Bill of Rights, is openness to knowledge that is widely accepted and usefully applied for society's benefit by the scientific community, and that is fundamentally important for meeting our developmental challenges.

The Academy takes the position that it is unwise and inappropriate for any group of citizens, religious or otherwise, to limit access of any young people to the means to understand the workings of the natural world, and especially to deprive them of the knowledge which would enable them to become properly equipped practitioners of professions and occupations dependent on such concepts and understanding. They also need to use this understanding for democratic participation in national policy debates, and to make their own judgements on substantive issues that impact upon their lives.

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Fully understanding the nature of evolutionary processes and mechanisms is fundamental to functioning in the modern world; without it, for example, the practical implications of the progression of HIV infections in affected persons cannot be understood, nor the incidence of, and variable susceptibility of people and populations to, many other diseases. Without an understanding of how and why otherwise closely related plants and animals are different

from each other, one simply cannot deal with hugely important matters such as our security with respect to staple foods, environmental sustainability for both animals and plants, emerging threats of pandemic infections caused by organisms normally resident in domestic or wild animals, and many other matters affecting life and society.

Not having a proper grasp of evolution is like trying to understand and use physics without Newton's laws of motion or the various laws of gases, or to practise chemistry without a full understanding of molecules and chemical bonding.

Evolution makes biology understandable. Next to the centrality of cells as basic structural units, evolution is the most important core concept of living things. It permits the placement of biology in the broader realms of knowledge about our world.

Our knowledge of evolution derives from a mode of enquiry into the nature of living things that has been enormously successful and of great significance to every citizen. This enquiry focuses on observing the natural world, and formulating testable and refutable hypotheses to derive deeper explanations for observable phenomena. When evidence is sufficiently compelling, conceptual syntheses can be developed that explain that evidence, and predict the likely structure or process of still unobserved phenomena. Much progress is made when unifying conceptual advances are made; evolution through natural selection is one of the most significant of such advances in the entire history of our search to understand the natural world. No learner should be deprived of its enormous explanatory potential, power and beauty.

Depriving learners of an educational grounding in evolutionary concepts is a serious limitation of their opportunities and rights. In turn, providing a conceptual grounding in evolution is not a limitation on religious freedom, as countless active biologists are deeply religious, in many faiths.

In making this public statement, the Academy is acutely aware of the importance that South Africa's diverse citizenry attaches to matters of religion, faith and belief. A number of elements – social, philosophical, religious, cultural and political – contribute to human consciousness, motivation and behaviour, in individuals and in groups. The fields and disciplines that study these elements in detail (most of them well-represented in our Academy) owe each other mutual respect and consideration, while maintaining their own integrity and modes of enquiry, including their ways of seeing the world and society.

