

The Living Environment > Biological Evolution

Research on Student Learning

Some research suggests that students' understanding of evolution is related to their understanding of the nature of science and their general reasoning abilities. ^[1] Findings indicate that poor reasoners tend to retain nonscientific beliefs such as "evolutionary change occurs as a result of need" because they fail to examine alternative hypotheses and their predicted consequences, and they fail to comprehend conflicting evidence. Thus, they are left with no alternative but to believe their initial intuitions or the misstatements they hear. ^[2]

References

[1] Lawson, A., Thomson, L. (1988). Formal reasoning ability and misconceptions concerning genetics and natural selection. *Journal of Research in Science Teaching*, 25, 733-746.

Lawson, A., Worsnop, W. (1992). Learning about evolution and rejecting a belief about natural creation: Effects of reasoning skill, prior knowledge, prior beliefs and religious commitment. *Journal of Research in Science Teaching*, 29, 143-166.

Scharmann, L., Harris, W. (1992). Teaching evolution: Understanding and applying the nature of science. *Journal of Research in Science Teaching*, 29, 375-388.

[2] American Association for the Advancement of Science, Project 2061 (2001). *Atlas for Science Literacy*, 80.