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The Nature of Science and Science Education: A Bibliography

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Abstract. Research on the nature of science and science education enjoys a long history, with its origins in Ernst Mach's work in the late nineteenth century and John Dewey's at the beginning of the twentieth century. As early as 1909 the Central Association for Science and Mathematics Teachers published an article – 'A Consideration of the Principles that Should Determine the Courses in Biology in Secondary Schools' – in *School Science and Mathematics* that reflected foundational concerns about science and how school curricula should be informed by them. Since then a large body of literature has developed related to the teaching and learning about nature of science – see, for example, the Lederman (1992) and Meichtry (1993) reviews cited below. As well there has been intense philosophical, historical and philosophical debate about the nature of science itself, culminating in the much-publicised 'Science Wars' of recent time. The references listed here primarily focus on the empirical research related to the nature of science as an educational goal; along with a few influential philosophical works by such authors as Kuhn, Popper, Laudan, Lakatos, and others. While not exhaustive, the list should prove useful to educators, and scholars in other fields, interested in the nature of science and how its understanding can be realised as a goal of science instruction. The authors welcome correspondence regarding omissions from the list, and on-going additions that can be made to it.

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