

Abstract Submitted
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The Quest for the Primary Substance of Matter DEMETRIS NICOLAIDES, Bloomfield College — What are things made of and what are the properties of matter? These are still the most fundamental and difficult questions of science. In an attempt to discover the roots of science and understand the quest for the primary substance of matter as a series of logical progressions, this presentation surveys the most important scientific theories of notable pre-Socratic natural philosophers from the sixth and fifth centuries BCE, including Pythagoras and Democritus. These pre-Socratics developed a robust program of natural inquiry that (1) will be reconstructed and (2) will be compared with modern frontiers of physical analysis. It is argued not only that their conceptual breakthroughs anticipated much of later science but that scientists of the twenty-first century are still grappling with the fundamental problems raised twenty-five hundred years ago.

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