



STEMworks – STEM Advisory Council’s Approved STEM Program October 2017

FOSS

PROGRAM OVERVIEW

FOSS (Full Option Science System) is a research-based science curriculum for grades K-8 developed at the Lawrence Hall of Science, University of California, Berkeley. FOSS has evolved from a philosophy of teaching and learning that has guided the development of successful active-learning science curricula for more than 40 years. The FOSS Program bridges research and practice by providing tools and strategies to engage students and teachers in enduring experiences that lead to deeper understanding of the natural and designed worlds.

TARGET GRADES

K-8

A UNIQUE OR SPECIAL FOCUS OF THE PROGRAM

Science is a creative and analytic enterprise, made active by our human capacity to think. Scientific knowledge advances when scientists observe objects and events, think about how they relate to what is known, test their ideas in logical ways, and generate explanations that integrate the new information into understanding of the natural and designed worlds. Engineers apply that understanding to solve real-world problems. Thus, the scientific enterprise is both what we know (content knowledge) and how we come to know it (science practices). Science is a discovery activity, a process for producing new knowledge.

THE PROGRAM’S IMPACT ON STUDENTS

FOSS prepares students by helping them acquire the knowledge and thinking capacity appropriate for world citizens. The best way for students to appreciate the scientific enterprise, learn important scientific and engineering concepts, and develop the ability to think well is to actively participate in scientific practices through their own investigations and analyses. The FOSS Program was created specifically to provide students and teachers with meaningful experiences through engaging with this active participation in scientific practices.

SPECIFIC SKILLS STUDENTS WILL LEARN

Scientific literacy: providing students with science experiences that offer a foundation for more advanced understanding of core science ideas. The program is organized in learning progressions and aims to prepare students for life in an increasingly complex scientific and technological world.

RESOURCES PROVIDED TO EDUCATORS

Systemic reform: offering schools and school systems a program that addresses the community's science achievement standards. Instructional efficiency: giving all teachers a complete, cohesive, flexible, easy-to-use science program that reflects current research on teaching and learning, including student discourse, argumentation, writing to learn, and reflective thinking.

WEBSITE

<https://www.fossweb.com/>

CONTACT INFORMATION

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