

nCASE proposes training the nation's Science, Technology, Engineering, and Mathematics (STEM) teacher workforce in an augmented Inquiry and Design (I&D) method of instruction. I&D, which is attracting interest among STEM educators nationwide, emulates the scientific method in the classroom. A student-centered approach, it emphasizes inquiry (science and mathematics) and design (engineering) elements. The teacher is cast in the role of a facilitator and co-researcher with scientists and engineers as mentors in a communal process of learning through inquiry and experimentation. The process shows considerable promise as a method for captivating and engaging students' inquiring minds.

STER

DESIGNED TO

Integrate STEM into curriculum

Promote discovery/inquiry and design in learning

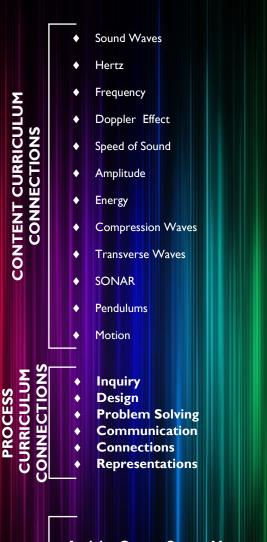
Encourage real-world experiences using scientists and engineers in the STEM classroom

Model a student-centered classroom using hands-on learning

Mapped to the Common Core State Standards

Promote assessment and evaluation

Middle School Acoustics The Science of Sound



AT A GLANCE

MODULE

Activity One — Secret Messages Activity Two — Sound Search Activity Three — Good Vibrations Activity Four — Analyzing Waves Activity Five — Making Waves Activity Six — Can You Hear Me Now Activity Seven — Sing to Your Own Tune Problem Solving — Design a Sound-Proof Box



nCASE 45 W. Kerr St, Uniontown, PA 15401 Phone: (724) 425-5993 • Fax: (724) 438-4568 www.nacase.org