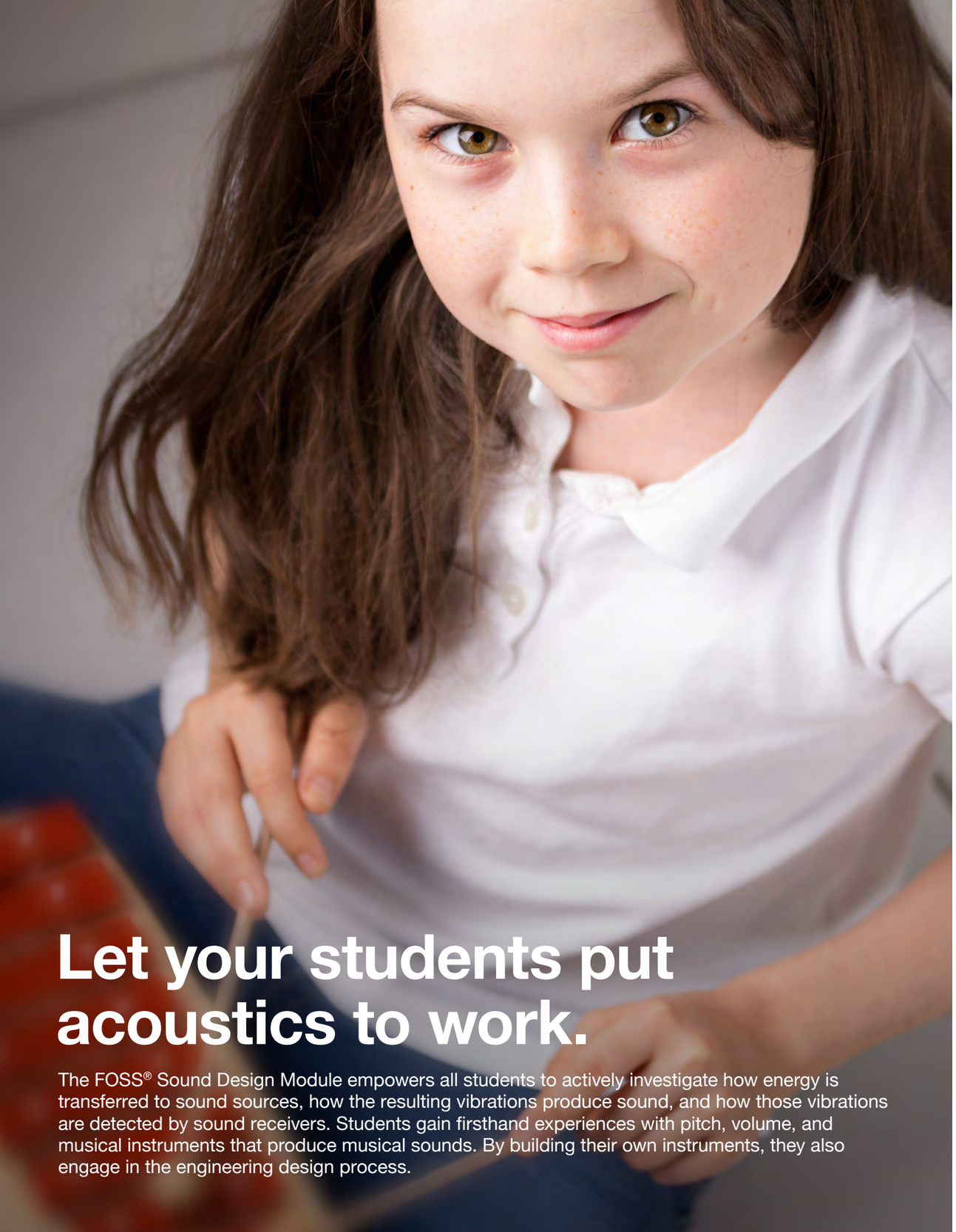
FOSS Sound Design Module, Grades 3–5

Immerse your students in the science of sound.

Sound is mechanical energy. It can be generated, it can move from one place to another, it can do work, and it dissipates over time and distance. In Sound Design, the new STEM Enrichment module, students in grades 3–5 learn about the phenomenon of sound the FOSS way: by investigating it for themselves.

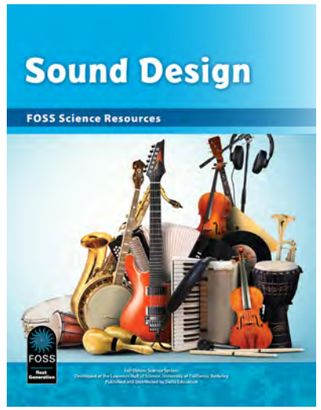


Let your students put acoustics to work.

The FOSS® Sound Design Module empowers all students to actively investigate how energy is transferred to sound sources, how the resulting vibrations produce sound, and how those vibrations are detected by sound receivers. Students gain firsthand experiences with pitch, volume, and musical instruments that produce musical sounds. By building their own instruments, they also engage in the engineering design process.

FOSS Sound Design Module:

Examining phenomena, observing variables, designing solutions.



Investigation 1:
Sound and Vibrations

Students engage sound as a phenomenon. They use sound generators and instruments to find out what causes sound and what changes pitch. They explore ways to visually represent sound waves, pitch, and volume, and vary the pitch of sounds made by vibrating strings.
6–7 sessions

Investigation 2:
Engineering Sound

Students investigate four musical instruments to find out how energy translates to vibrations, and how to vary pitch. Through media, students hear a band that makes instruments from recycled materials and then apply the engineering design process to build their own instruments from available materials.
6–7 sessions

Investigation 3:
Making and Moving Sound

Students collaborate in groups to introduce a sound source and a medium of sound travel. They compare how sound travels through solids, liquids (water), and gas (air). Students use media to explore the human sound receiver—the ear—and how other animals produce and sense frequencies of sound.
7–8 sessions

17 sessions. Countless uses.

The new FOSS® Sound Design STEM Enrichment module for grades 3–5 can be taught as a unit in a science class, a STEM class, an engineering class, as support for a summer learning program, or as a before/after-school enrichment activity. The Sound Design module comes with an *Investigations Guide*, Online *Teacher Resources*, *Science Resources* student book, equipment kit for students, and digital access through FOSSweb on ThinkLink™.

FOSS® Middle School Scope & Sequence

Grade	Integrated Middle Grades						STEM Enrichment
8	Heredity & Adaptation* ES, LS	Electromagnetic Force* PS, ES, E	Gravity & Kinetic Energy* PS, E	Waves* PS, E	Planetary Science PS, ES		Variables & Design† Grades 5-8 E
7	Chemical Interactions PS, ES, E		Earth History PS, ES, LS		Populations and Ecosystems ES, LS, E		
6	Weather and Water PS, ES, E		Diversity of Life LS		Human Systems Interactions* LS		

PS: Physical Science content, ES: Earth Science content, LS: Life Science content, E: Engineering content *Half-length courses
†STEM Enrichment courses and modules can supplement the FOSS core curriculum or be purchased separately for STEM electives or extracurricular activities.

FOSS® Pre-K–5 Scope & Sequence

Grade	Physical Science	Earth Science	Life Science	STEM Enrichment
5	Mixtures & Solutions	Earth & Sun	Living Systems	Sound Design†
4	Energy	Soils, Rocks & Landforms	Environments	
3	Motion & Matter	Water & Climate	Structures of Life	
2	Solids & Liquids	Pebbles, Sand & Silt	Insects & Plants	Forces in Action†
1	Sound & Light	Air & Weather	Plants & Animals	
K	Materials & Motion	Trees & Weather	Animals Two by Two	
Pre-K	Full-year Observing Nature			

†STEM Enrichment courses and modules can supplement the FOSS core curriculum or be purchased separately for STEM electives or extracurricular activities.

Learn more. Find your local FOSS/Delta Education representative at **FOSSNextGeneration.com/sales**

FOSS™

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