

Connecting to Your Curriculum

The Smart Sensors module can enhance your curriculum and increase your students' understanding of science and technology. The charts below list subjects that dovetail well with the Activities and Design Projects in this module. Connections (specific teaching tips) for each subject are listed and page references are given. The Minipedia in the Appendix gives extra information relating smart sensors to different disciplines.

Chemistry
Physical and Chemical Changes
Chemical Reactions
Energy Absorbed or Released
Changing Properties
Structure of Atoms and Molecules
Ball-and-Stick Models
Electrons
Polarity and Dipoles
Molecular Weight
Electronegativity
Intermolecular Forces
Covalent Bonds
Conductivity
Carbon Compounds
Polymerization
Organic Polymers

Connections to Chemistry
p. 17
Minipedia pp. A11–A15

Physics
Forces
Electromagnetic Forces
Mechanical Forces
Relationship Between Electricity and Magnetism
Interactions of Energy and Matter
Sound Waves
Light Waves
Wave Frequency
Crystallinity
Charge Separation
Electric Potential (Voltage)
Electric Circuits
Induction
Displacement
Speed

Connections to Physics
pp. 10, 16, 26, 27
Minipedia pp. A2, A6–A10

Biology and Life Science
The Nervous System
Stimulus Response
Sense Organs
Piezoelectric Properties of Bones and Other Tissues

Connections to Biology
pp. 3, 11, 13
Minipedia pp. A19–A20

Earth/Space Sciences
Piezoelectric Crystal Such as Quartz
Seismology
Heat Absorption
Infrared Radiation

Minipedia pp. A16–A18

Mathematics
Algebraic Equations
Inverse Square Law
Graphing

Connections to Mathematics p. 24
Minipedia pp. A7–A10

Technical Education
Plastics
Motors
Generators

Minipedia pp. A3–A5

