

# 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

