**3rd Grade Overview**

Sources of Energy, States of Matter, Light & Heat



**Intro to Energy & 10 Sources of Energy**

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| Topic | Kit Materials | Lessons & Activities\* | Additional NEED Curriculum *www.need.org* |
| Intro to Energy |  | What is Energy? Teacher Directions & Student Handout |  |
| 10 Sources of Energy | Energy Relay, Energy Sources Pictures & Definitions | Energy Chants, Energy Source Matching, Energy Source Detective | *Energy Infobooks* (primary& elementary); *Energy Carnival* (primary & elementary); *Energy Stories & More, Energy Games & Icebreakers* |
| Solar | Solar Toys, Ultraviolet Detecting Beads | UV Bead Activity Sheet | *The Sun & Its Energy* (primary); *Wonders of the Sun Teacher & Student Guides* (elementary) |
| Wind |  | Pinwheel | *Wind is Energy* (primary); *Wonders of Wind Teacher & Student Guide* (elementary) |
| Hydropower |  |  | *Water & Energy Teacher & Student Guide* (primary) *Wonders of Water Teacher & Student Guide* (elementary) |
| Biomass |  |  | *Biodiesel* (elementary); *Ethanol* (elementary) |
| Geothermal |  |  |  |
| Coal | Coal Sample |  | *This Mine of Mine* (elementary) |
| Natural Gas | Natural Gas Scratch & Sniff |  | *Oil, Gas and Their Energy* (primary), *The Wonders of Oil and Gas* (elementary)*, Liquefied Natural Gas* (elementary) |
| Nuclear | Sample Nuclear Fuel Pellet |  |  |
| Petroleum |  | Petroleum By-Products and M&M Activity, Barrel of Petroleum Graphic | *Oil, Gas and Their Energy* (primary), *The Wonders of Oil and Gas* (elementary)*, Transportation Fuels Infobook* (elementary)  Ohio Oil and Gas Energy Education Program (OOGEEP) |
| Propane |  |  |  |

\*NEED Energy Stories & More contain additional activities for each of the 10 Sources of Energy.

**States of Matter**

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| Topic | Kit Materials | Lessons & Activities | Additional NEED Curriculum |
| States of Matter | Shaker Bottles, Solid/Liquid/Gas Signs (SLG), Phases of Matter arrows, heat in/out arrows, Alka- Seltzer tablets & film canisters | Investigating States of Matter Student Worksheet, SLG Handout, Bottles Demo, Mystery Tablet |  |

**Light, Heat, & Electricity**

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| Topic | Kit Materials | Lessons & Activities | Additional NEED Curriculum |
| Lighting Lesson | Lamp bases, boxes, digital thermometers, light bulbs, watt meter | Lighting Activity Lessons 1, 2 & 3 | *Energy Works Teacher & Student Guide* (elementary) |

**Energy Efficiency & Conservation**

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| Topic | Kit Materials | Lessons & Activities | Additional NEED Curriculum |
| Efficiency & Conservation | CFL’s for students | How I Used Energy Today, School Energy Patrol, Most Wanted Energy Waster Posters, |  |

Student Worksheets and Teacher Lesson Plans are available at:

[www.ohioenergy.org/educators/teachers](http://www.ohioenergy.org/educators/teachers)

NEED Curriculum is available at:

www.need.org