



## ***IPRB Curriculum Workshops***

### **Elementary Petro Science with Common Core Math Component - Professional Development for Illinois Science Teachers**

Understand the process of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems as it relates to the Illinois Crude Oil and Natural Gas Industry. Topics include: Ordered pairs, rock ID, porosity, flow rate of oil, pulleys, oil / water cohesion, crude oil, plastics recycling codes, formation of oil & natural gas, and common core math problems.

### **Middle School Petro Science - Professional Development for Illinois Science Teachers**

Understand the process of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems as it relates to the Illinois Crude Oil and Natural Gas Industry. Topics include: oil & natural gas formation, microorganisms, sound waves, locating crude oil, reservoirs / production, separation process, safety, petroleum-based products, energy conservation.

### **High School Core Energy Science - Professional Development for Illinois Science Teachers**

Understand the process of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems as it relates to the Illinois Crude Oil and Natural Gas Industry. Topics include: The structure of hydrocarbons, effects of elevation on flow rate, flow rate of a fluid, fractional distillation and a study of bio-remediation. Labs reinforce the major concepts.

### **Core Energy Math Middle/High School - Professional Development for Illinois Math Teachers**

Understand and utilize Common Core Mathematic standards to define, evaluate and solve real world problems as they relate to the Illinois Crude Oil and Natural Gas Industry. Topics include: Well site clean-up and restoration, directional and horizontal drilling, finding lease locations, oil and natural gas revenue / expenses, and word problems directly tied to a common core standard.



# Illinois Petroleum Resources Board Elementary Petro Science



## with Math Component

### Grade School Activity Kit

Item	Quantity	Checked in Kit
Rocks - Container of 10 * Coal - 1 * Conglomerate - 2 * Gneiss - 3 * Granite - 4 * Marble - 5 * Obsidian - 6 * Pumice - 7 * Sandstone - 8 * Scoria - 9 * Shale - 10	5 containers	
Magnifying Lens	6	
Map Pencils	6	
DVD - 'Story of Petroleum'	1	
DVD - 'Exploring the IL Basin'	1	
DVD - 'Cooking Up Crude'	1	
DVD - 'Lucky'	1	
Sediment Tube	1	
250 mL Graduated Cylinder	6	
Solo Cups Clear - 9oz (1 cup is in plastic container set), pkg	1	
Large Rocks, bags	6	
Small Rocks, bags	6	
Ooze Tube	1	
Stopwatch	6	
Metric Ruler	6	
Viscosity Tubes, box	1	
Rope (3 Meters)	1	
3/4" Dowels, for fixed and movable pulleys	6	
Eye Bolt	6	
Pulley	6	
Bucket	6	
Pulley Cord (9 Meters)	1	
Spring Scale	6	
Oil/Water Mix (bottles)	2	
Pennies (rolls)	2	
Pipettes, micro tip	25	
Molecular Water Model	1	

Aluminum Foil, box	1	
Carpet, samples	6	
Protractors (pkg of 12)	1	
Calculators	6	
Plastic Objects, containers	6	
Vegetable Oil, bottle	1	
Gird 1, pad	1	
Grid 2, pad	1	
Grid 3, pad	1	
Let's Go Rock Collecting, book	1	
Where Does Garbage Go?, book	1	

**Contents As Of: 12-Dec-13**

**Something Missing?**

Contact IPRB

618.242.2861

iprb@yahoo.com

*Presented By*

***Illinois Petroleum Resources Board***

*Original Core Energy Curriculum*

*Courtesy of Oklahoma Energy Resources Board (OERB)*

*Aligned to Illinois and Illinois Learning Standards*



**Illinois Petroleum Resources Board**  
**Middle School Petro Science**  
**Middle School Activity Kit**



Item	Quantity	Checked in Kit
DVD - 'Story of Petroleum Video'	1	
DVD - 'Exploring the Illinois Basin'	1	
DVD - 'Lucky'	1	
DVD - 'Finding the Energy Behind the Energy'	1	
DVD - 'Cooking Up Crude'	1	
CD - 'Petro Science Master pages, Student pages, & 'Geopardy' pages	1	
Oil and Natural Gas book(Energy 4 me)please type the following in an internet web browser and fill out information for free book. <a href="http://www.energy4me.org/order/free-materials/">http://www.energy4me.org/order/free-materials/</a>	1	
Fossil Set (6 bags)	6	
Hand Lense	12	
Map Pencils, colored (boxes)	6	
Rock Samples, (bag - Shale, Limestone, Sandstone) (6 bags)	6	
Digital Scale	1	
Solo Cups, clear 9 oz.	50	
Styrofoam cups (16 oz)	25	
Stirring Straws	36	
Student Timer	6	
Sand, Lg Container	1	
Small Pebbles (1 bag)	1	
Large Pebbles (1bag)	1	
Graduated Cylinders 100ml	6	
Vegetable Oil (pt. bottles)	3	
Red Dye (soluble) (1 bottle)	1	
Sandwich Bags, box	1	
Tuning Forks	6	
Slinky	3	
Heavy Coil	3	
Erlenmeyer Flask (500ml)	6	
Beaker (250ml)	6	
Rubber Stopper, two hole	6	
Vinyl Tubing: 3/16" OD x 1/8" ID (12")pcs, (12 pieces)	12	
Vinyl Tubing: 3/8" OD x 1/4" ID (12")pcs, (6 pieces)	6	
Plastic Pipettes	12	
Straws - Clear Plastic, (1box)	1	
Modeling Clay (1 box)	1	
Plastic 60cc Syringe	6	
Funnel 'small'	6	
Meter Tape	1	
Calculator	6	

Ruler	6	
Petroleum Jelly, (1 jar or tube)	1	
Test Tubes (plastic)	6	
Cotton Balls, (1 pkg)	1	
Geological Faults & Folds Model	6	
Black Markers	6	

**Contents As Of: 17-Jul-15**

**Something Missing?**

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618.242.2861 or [iprb@yahoo.com](mailto:iprb@yahoo.com)

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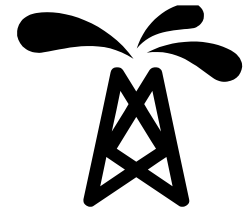
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**Illinois Petroleum Resources Board**  
**CORE Energy Science**  
**High School Science Activity Kit (1)**



Item	Quantity	Checked in Kit
100 ml Beaker - Glass	1	
25ml Graduated Cylinder	1	
4" x 4" Ceramic Tile for Pump Base	3	
500 ml Beaker - Plastic	3	
70 gal/hr Submersible Fountain Pump(14mm, 9mm, 6mm adaptors w/pump)	3	
Bushnell Haas Media, 1 bag	1	
CD - 'Core Energy Jeopardy'	1	
CD - 'Core Energy Science'	1	
Digital Thermometer	1	
Distillation Kit	1	
DVD - 'Cooking Up Crude'	1	
DVD - 'Exploring the Illinois Basin '	1	
DVD - 'Finding the Energy Behind the Energy'	1	
DVD - 'Story of Petroleum'	1	
DVD - 'Lucky'	1	
Glass Beads (Sand-like), 1 container	1	
Glass Boiling Beads (pkg. of 3)	1	
Hot Plate	1	
Measuring Tape	3	
Microbes Kit ( <i>not shipped with this Activity Kit</i> ) <i>Please notify IPRB when you plan to do "Hungry Microbes" lesson.</i>	iprb@yahoo.com or (618)242-2861	
Molecular Model Kit, (20 students kits)	20	
Observation Chamber	6	
Oil Solution (Vegetable Oil & Dye), (sm bottle)	1	
Periodic Table of Elements, (1 pad)	1	
Pipette	6	
Plastic Tubs	6	
Ring Stand, Support Stand, w/rod	3	
Small adaptor for pump(s)(6mm adapt. in separate pkg)* <b>see note on second page</b>	3	
Stopwatch	3	

Item	Quantity	Checked in Kit
Support Ring 4" w/clamp	3	
Switch, Grounded (to be used with pump)	1	
Universal Indicator, (1 bottle)	1	
Utility Clamp	3	
Vinyl Tubing (1m x 6 mm ID) <i>(39 3/8" x 1/4" id)</i>	3	
Vinyl Tubing (2m x 14 mm ID) <i>(78 3/4" x 1/2" id)</i>	3	
Vinyl Tubing (2m x 6 mm ID) <i>(78 3/4" x 1/4" id)</i>	3	
Vinyl Tubing (2m x 9 mm ID) <i>(78 3/4" x 3/8" id)</i>	3	
Vinyl Tubing (3m x 6 mm ID) <i>(118 1/8" x 1/4" id)</i>	3	
Wire Gauze	3	
Oil and Natural Gas (Energy 4 Me) please type the following in an internet web browser and fill out information for free book ('Energy 4 Me') <a href="http://www.energy4me.org/order/free-materials/">http://www.energy4me.org/order/free-materials/</a>	1	

**\*note: The 14mm and the 9mm adaptors come with each pump and the adaptors insert directly to the pump and the tubing can be connected directly to an adaptor. To adapt to the 6mm tubing, first insert the 14mm adaptor in the pump and then insert the larger end of the 6mm adaptor (separate pkg) into the 14mm adaptor. Connect the 6mm tubing to the 6mm adaptor.**

**Contents As Of: 24-Sep-14**

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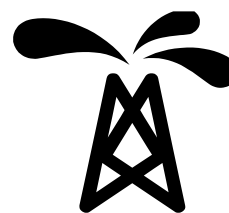
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## Illinois Petroleum Resources Board

# CORE Energy Science

## High School Science Activity Kit (2)



Item	Quantity	Checked in Kit
100 ml Beaker - Glass	5	
Soda Straws	5	
Vernier "Go Temp" w/Logger Lite Program	3	
Distillation Kit	2	
Glass Boiling Beads, (2 pkg. of 3)	2	
Hot Plate	2	
Ring Stand, Support Stand, w/rod	3	
Utility Clamp	3	
Support Ring 4" w/clamp	3	
Grape soda (can)	1	
Petroleum Jelly (jar)	1	
graph paper, 1 ream	1	

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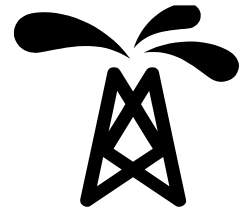
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**Illinois Petroleum Resources Board**  
**CORE Energy Mathematics**  
**Middle/High School Math Activity Kit**



Item	Quantity	Checked in Kit
Laminated U.S. Survey System Illustration A/B/C	10	
Laminated, Oil Production	10	
Laminated, Drill in the Right Direction	10	
Graph Paper, (1 pkg)	1	
Colored Pencils, (bxs)	6	
Protractors, (bxs of 12)	2	
DVD - 'Finding the Energy Behind the Energy'	1	
DVD - 'Lucky'	1	
DVD - 'The Story of Petroleum'	1	
DVD - 'Exploring the Illinois Basin'	1	
DVD - 'Cooking up Crude'	1	
CD - 'Core Energy Math'	1	
TI-30XS Calculators	25	
TI-84Plus Graphics Calculator	1	
IPRB 6" Rulers	30	
vis-à-vis, (set of four)blue,black,green,red	10	
IPRB Pencils	30	

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