

Regional Curriculum Project

SUBJECT: Physical Science /Earth Science
BOCES Science Kit: Exploring Changes in Our World Kit
GRADE LEVEL(S): 3

Priority:	Approx. % of Curriculum
E = Essential	50%-60%
I = Important	30%
C = Compacted	10%-20%

Major Understandings (i.e. Essential Questions)	Content Knowledge	Content Skills	Literacy Skills	Priority	Assessment of Learning
What are different forms of energy and how are they transferred from one object to another?	Forms of energy: Heat, Sound, Electrical, Mechanical, Light, Chemical etc.	Classifying, Generalizing,	1, 3	E	Local teacher made/kit test Performance assessments Teacher checklist/charts Teacher observation/narrative comments Student oral/written responses Labeled student pictures
What are the differences between an open and a closed electrical circuit?	Electrical circuits, Switch, Energy transfer	Manipulation, Comparing, Contrasting, Creating models, Interpreting diagrams	1, 3	E	Student demonstration (role playing) Teacher/student rubrics Student models/labeled diagrams Journal entries Lab reports/summaries Research papers
What are some examples of conductors and nonconductors of electricity? Of sound?	Conductors, Nonconductors, Insulators	Manipulating materials, observing	1, 3	E	Restated/modified questions from the <i>New York State Grade 4 Science Assessment/Sampler</i>
What are simple machines and how do they help people?	Simple machines, Forces, Friction	Manipulating, Classifying, Organizing, Observing	1, 3	I	

<p>How to be safe using electricity?</p>	<p>Electrical shock, Electrical fire, Circuit overload, Outlets, Plugs, Danger, High voltage signs</p>	<p>Observing, Generalizing, Decision making</p>	<p>1, 3, 4</p>	<p>C</p>	
<p>How does heat energy move through the states of matter?</p>	<p>States of matter, Conduction, Convection, Radiation</p>	<p>Observing</p>	<p>1, 3</p>	<p>E</p>	
<p>What is the water cycle and how do air, water and land affect each other?</p>	<p>Precipitation, Evaporation, Runoff, Frost, Condensation, Water vapor, Humidity, Water cycle</p>	<p>Models, Inferring, Observing, Predicting Rain gauge</p>	<p>1, 3</p>	<p>E</p>	
<p>What are the three states of matter and how does heat energy change it?</p>	<p>States and properties of matter, Solid, Liquid, Gas, Melting, Freezing point, Boiling point, Expansion, Water vapor</p>	<p>Organizing, Predicting, Inferring</p>	<p>1, 3</p>	<p>E</p>	

What is weathering and erosion and what are their effects?	Weathering, Erosion	Compare/contrast, Communicating, Generalizing, Inferring, Predicting, Observing	1, 3	I	
What are the phases of the moon and how do they affect us?	Rotation, Revolution, Moon phases, Half, Quarter, New, Full	Observing, Communicating, Predicting, Discussing	1, 3	I	