

2024 3/4 Winter ENERGY Calendar etc

Sound: [What is sound?](#) Light: [What is light?](#) Electricity Phenomenon: Mystery Science -What is Electricity? [electricity in our lives](#)

Field Trips: McNeil Generating Station Hydro on Winooski

[electricity terms](#) [Electricity Written assessment](#) [NGSS Energy Concepts](#) [Energy Wave models](#)

[Scales for electrical energy 21-22](#) [sound energy Echo kit](#) [sound energy](#) [Magnetic Scales](#)

[Potential and kinetic energy unit ECHO](#) [sound energy and music](#) article

3 types of energy **Kinetic, potential, and chemical energy.**

Extra Info:	Tuesday	Wednesday	Thursday	Friday
<p>Back story to idea</p> <p>Intro slide show</p> <p>Imagine throwing a rock into a pool</p> <p>Thinking Routine: See, Think, Wonder</p>	<p>1/2- Energy Word splash: ability to do work,</p> <p><i>They are the tidal energy conditioned by gravitational attraction of the Moon, the nuclear energy accumulated by the universe many billions years ago, and the geothermal energy of the Earth generated during formation of the planet. ... We can say that the Sun is the only main source of energy and life on the Earth</i></p> <p>Potential v Kinetic energy</p> <p>Visuals:</p> <p>Phenomena Light match Fireworks Giant snowball roll</p> <p>Intro https://youtu.be/Q4M-q8fi2I</p> <p>Abstract but content rich https://www.youtube.com/watch?v=CWO_S5YpYVo</p>	<p>1/3</p> <p>Developing Models for Flashlight Phenom</p> <p>Pre Assessment</p>	<p>1/4</p> <p>Developing Models for Flashlight Phenom</p>	<p>1/5</p> <p>chemical energy</p> <p>How do batteries work? Mystery Science</p> <p>Building a Battery</p> <p>Lemon clock explanation</p>

	Starry Night Light waves			
	1/9 Testing Battery Recipes	1/10	1/11 Testing Battery Recipes Chemical Energy- How car batteries work	Battery Reading from Flashlight phenom 1/12 FOSS 1 How light 2 bulbs? Series and Parallel Circuits What's inside a Lightbulb? - Incandescent bulb Different kinds of bulbs
	1/16 NO SCHOOL	1/17 How do switches work? Using Circuits to communicate Morse Code- How does it work? alphabet	1/18 FOSS #2 Conductors and Insulators Spinning heart Wire Atoms Conductors Insulators in Electricity What is an atom? Energy	1/19 Magnets intro- Mystery Science Sticks doesn't stick Magnetic N&S magnet Pre Assessment
1/23 FOSS #3 Current Attractions Electromagnets Electromagnets intro 3.5 min Magnetic Scales	1/24 Current Attractions Electromagnets How does electro work? 3min	1/25 How does electro work? 3min magnet Post Assessment Electromagnetism 3min Static Electricity 3min	1/26 Intro Sound Phenom- Why was the singer able to shatter the glass? Key Science Idea: Energy transferred through matter. a. Matter is made of particles. b. Particles can bump into each other to transfer energy. c. Sound energy decreases over distance as it is transferred through matter Singer shatters glass with his voice. adult breaking glass with voice Kid breaking glass NOOK "Breaking Glass with Sound – Trevor Cox" (1 min, 04 sec; no sound in video but the glass is next to an amplifier and the video captures the slow motion) Explained with sound waves pictured- copu in journal. OPTIONAL: Clio SP AudioBreak Glass (only play part with speakers vibrating car windshield)	

	1/30 Lesson 2- Human Voices and Vibrations Vocal cord visuals- 1:47 start	1/31 Lesson 3- Decibels at a distance Video 1 min distance loss	2/1 Sound-lesson 4- How does sound energy travel through air? What is sound? Animation 25 sec	2/2 Field Trip to McNeil and Winooski One
	2/6	2/7 ERD	2/8	2/9

***Electricity and Magnetism Foss Science Kit available at LCS**

Vibrations create waves:
String and cup communication
Pitch, volume, light

- Energy
1. Motion and Stability (forces and interactions)
 2. Transfers and Interactions

Resources including solar hot water heater : http://pbskids.org/designsquad/parentseducators/resources/feel_the_heat.html

1. INTRO GROUPS

Sound: [What is sound?](#)
Light: [What is light?](#)
Electricity: What is ElectricWhat is it?
Where does it come from?
How do we know it's there?
How do we measure it?
Why do we care?
ity?

2. EXPERT GROUPS

Hands on experience... Stations or Labs

3. DESIGN BUILD CHALLENGES- Assessment

[STEM build design projects](#)- Please see Teachers Pay Teachers Site to purchase this document

