

## 6th Grade Scope and Sequence

### INTRODUCTION TO ELECTRICITY

Instructional Sequence	Activity Title	Benchmarks Addressed	Instructional Resources
1	Building a Circuit Lab	SC.6.P.13.1	Building a Simple Circuit PDF

### TRANSFER OF HEAT

Instructional Sequence	Activity Title	Benchmarks Addressed	Instructional Resources
2	Convection Connection	SC.6. E.7.1	Lesson Plan: Convection Connection Experiment
3	The Tea Kettle Test	SC.6. E.7.1	Lesson Plan: The Tea Kettle Test Demo
4	Convection, Conduction, & Radiation	LA.6.L.1.1	Convection, Conduction, & Radiation Informational Text
5	Math Mania	MAFS.6.NS.1.1	Lesson Plan Section: Math Mania
6	Related Web Resources:		<a href="https://www.youtube.com/watch?v=-0dHu8I3be4">https://www.youtube.com/watch?v=-0dHu8I3be4</a> <a href="https://www.youtube.com/watch?v=O3N9XyTkSBI">https://www.youtube.com/watch?v=O3N9XyTkSBI</a>

### ALTERNATIVE AND RENEWABLE ENERGY

Instructional Sequence	Activity Title	Benchmarks Addressed	Instructional Resources
1	Renew-a-bean	CTE-ENGY.68.GNRATIN.03.02	Lesson Plan: Renew a Bean lab
		CTE-ENGY.68.GNRATIN.03.04	Renew a Bean: Renewable Data Sheet
2	Bumper Sticker Challenge	LAFS.6.RL.1.2	Bumper Sticker Challenge-Alternative & Renewable Energy
3	Math Mania	MAFS.6.RP.1.2	Lesson Plan Section: Math Mania
4	Related Web Resources:		<a href="https://www.youtube.com/watch?v=dg_DOM1OQoo">https://www.youtube.com/watch?v=dg_DOM1OQoo</a> <a href="https://www.ovoenergy.com/blog/green/20-fascinating-renewable-energy-facts.html">https://www.ovoenergy.com/blog/green/20-fascinating-renewable-energy-facts.html</a>

### SUN'S ENERGY AND THE ATMOSPHERE

Instructional Sequence	Activity Title	Benchmarks Addressed	Instructional Resources
1	Greenhouse Effect in a Jar	SC.6.E.7.5	Lesson Plan: Greenhouse Effect in a Jar Experiment
		LAFS.6.RL.1.2	Greenhouse Effect in a Jar Data Sheet
2	Math Mania	MAFS.6.NBT.2.3	Lesson Plan Section: Math Mania
3	Related Web Resources:		<a href="https://www.youtube.com/watch?v=d7Ci_EooW-k">https://www.youtube.com/watch?v=d7Ci_EooW-k</a>

### POTENTIAL AND KINETIC ENERGY

Instructional Sequence	Activity Title	Benchmarks Addressed	Instructional Resources
1	Spheres in Hot Water	SC.6.P.11.1	Lesson Plan: Potential & Kinetic Energy: Spheres in Hot Water
2	A Lukewarm Experiment	SC.6.P.11.1	Lesson Plan: A Lukewarm Experiment
3	Math Mania	MAFS.4.NF.3.6	Lesson Plan Section: Math Mania
4	Related Web Resources:		<a href="https://www.youtube.com/watch?v=OpXGp2P48kI">https://www.youtube.com/watch?v=OpXGp2P48kI</a> <a href="https://www.youtube.com/watch?v=haJWh9Pa-io">https://www.youtube.com/watch?v=haJWh9Pa-io</a>

### ENERGY SOURCES: POWER PLANTS

Instructional Sequence	Activity Title	Benchmarks Addressed	Instructional Resources
1	Power Plant Research	CTE-ENGY.68.GENRL.03.01	Power Plants: Film a Documentary
		CTE-ENGY.68.GENRL.07.06	
		CTE-ENGY.68.GENRL.02.01	
		CTE-ENGY.68.GENRL.07.03	
2	Math Mania	LAFS.6.SL.2	Lesson Plan Section: Math Mania
		MAFS.6.RP.1.3	
3	Related Web Resources:		<a href="https://www.youtube.com/watch?v=ldPTuwKEfmA&amp;feature=emb_title">Thermal Power Plant - https://www.youtube.com/watch?v=ldPTuwKEfmA&amp;feature=emb_title</a> <a href="https://www.youtube.com/watch?v=qG7SIVfAuPA">Combined Cycle Design - https://www.youtube.com/watch?v=qG7SIVfAuPA</a> <a href="https://www.youtube.com/watch?v=Tua6_95Vdt8">HydroElectric Power Plant - https://www.youtube.com/watch?v=Tua6_95Vdt8</a> <a href="https://www.youtube.com/watch?v=Qthg5xE196w">Nuclear Power Plant - https://www.youtube.com/watch?v=Qthg5xE196w</a> <a href="https://www.youtube.com/watch?v=SeXG8K5_UvU">Steam Turbine Power Plant - https://www.youtube.com/watch?v=SeXG8K5_UvU</a> <a href="https://www.youtube.com/watch?v=ZLqOoMSIS3Y&amp;feature=emb_title">Solar Power Plant - https://www.youtube.com/watch?v=ZLqOoMSIS3Y&amp;feature=emb_title</a> <a href="https://www.youtube.com/watch?v=45Xh7FKS9nM">Wind Energy Career Video - https://www.youtube.com/watch?v=45Xh7FKS9nM</a> <a href="https://www.youtube.com/watch?v=DILJJwsFI3w">Wind Power Plant - https://www.youtube.com/watch?v=DILJJwsFI3w</a> <a href="https://www.need.org/curriculum">Energy at a Glance Posters - https://www.need.org/curriculum</a>