Project Learning Tree's Energy and Society Activity Guide
Supporting Next Generation Science Standards

PLT's six Energy & Society activities have been correlated to the Next Generation Science Standards (NGSS) for grades K-8.We hope this crosswalk helps you and your students begin to make connections between and within the NGSS Framework.

*Partially supports the NGSS Performance Expectation
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Energy & Society

Project Learning Tree®

Activity Name	Activity Overview	Grade Level	K-2 NGSS	3-5 NGSS	6-8 NGSS
Activity 1: Energy Detectives	Students explore the *Where is the Energy* poster and then search their classroom for energy connections. They record the ways they use energy throughout a typical day in an energy detective journal	PreK-8	*K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.	*4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. *4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. *5-ESS3-1. Obtain and combine information about ways individual	

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				communities use science ideas to protect the Earth's resources and environment.	
Activity 2: May the Source Be With You	Using the *Where is the Energy?* Poster, students identify various renewable and non-renewable energy resources. They research one energy resource, and create a poster that describes that resource in detail	PreK-8	*K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.	*4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. **4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. *5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	
Activity 3: Energy Chains	Student will identify the different forms of energy and construct an "energy chain" showing how different energy changes forms.	5-8		4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents.	*MS-LS2-3. Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.
Activity 4: What Powers the Move?	Students will examine transportation systems vital to their	PreK-8	**K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or	*4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric	*MS-LS2-3. Develop a model to describe the cycling of matter and flow of energy among living and

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	community. They will use the *What Powers the Move?* Poster to identify transportation methods and design a future transportation system for their community.		other living things in the local environment.	currents. *4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. *5-PS3-1. Use models to describe that that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.	nonliving parts of an ecosystem. *MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.*
Activity 5: In the Driver's Seat	Students learn about gasoline, then explore fuel conservation and energy efficiency by simulating the distance they can travel on a set amount of gasoline using different vehicles	5-8		*4-PS3-1. Use evidence to construct an explanation relating the speed of an object to the energy of that object. *4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment. *5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment. * 3-5-ETS1-1. Define a simple	*MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.*

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				design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. * 3-5-ETS1-2. Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	
Activity 6: Energy Challenge Game	Students will review energy concepts and information through the use of a game similar to "Jeopardy."	4-8		*4-PS3-2. Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. *4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	

Disciplinary Core Ideas Supported by Energy and Society:

PS3.A: Definitions of Energy

PS3.B: Conservation of Energy and Energy Transfer

ESS3.A: Natural Resources

ESS3.C: Human Impacts on Earth Systems