

Planner

Activity	Description	<u>Materials and Technology</u>	<u>Additional Materials</u>	<u>Approximate Timing</u>	<u>Page Number</u>
Task 1: What is a sustainable energy future?					
Discover	Develop a personal <u>Identity Map</u> showing the different parts of who you are. Create a <u>Futures Mood Board</u> with your team's hopes and concerns for a sustainable energy future.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Objects that represent you (optional) • Class board or poster paper • Photos or magazines (optional) • Art or craft materials (optional) 		40 minutes	7
Understand	Conduct a survey of your community about their hopes and concerns about energy and the future.	<ul style="list-style-type: none"> • Paper • Pens or pencils 		25 minutes + survey time	11
Act	Update your <u>Futures Mood Board</u> with information from your community survey.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>Futures Mood Board</u>	15 minutes	16



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Task 2: How does my community use energy now?					
Discover	Conduct a Community Energy Observation to figure out your community's sources of energy and how energy is used.	<ul style="list-style-type: none"> • Paper • Pens or pencils 		20 minutes + investigation time	18
Understand	Use your Community Energy Observation to evaluate the positive and negative effects of energy on your community.	<ul style="list-style-type: none"> • Large piece of paper • Pens or pencils 		20 minutes + investigation time	21
Act	Continue building your vision for a sustainable energy future and decide which parts of the guide you will use.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>Effects on Our Community</u> chart <u>Futures Mood Board</u>	20 minutes	23



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Task 1: What do I know about energy sources on Earth?					
Discover	Make <u>Energy Source Cards</u> with information, thoughts and feelings about sources of energy on Earth.	<ul style="list-style-type: none"> • Paper, cardstock, or another durable material • Pens or pencils • Art or craft materials (optional) 		15 minutes	35
Understand	Create a <u>Perspectives Chart</u> to organize important characteristics of energy sources on Earth.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>Energy Source Cards</u>	25 minutes	38
Act	Decide what is most important about energy sources for your community, and create a <u>Sustainable Energy Statement</u> .	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>Futures Mood Board</u> <u>Effects on Our Community</u> chart <u>Perspectives Chart</u>	20 minutes	40



Activity	Description	Materials and Technology	Additional Materials	Approximate Timing	Page Number
Task 2: Which energy sources could help my community create a sustainable energy future?					
Discover	Add social, environmental, economic, and ethical perspective characteristics to your <u>Energy Source Cards</u> .	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>Sustainable Energy Statement</u> <u>Energy Source Cards</u>	25 minutes	42
Understand	Research the benefits and concerns of each source of energy on Earth.	<ul style="list-style-type: none"> • Pens or pencils • Computer or other research tools (optional) • Art or craft materials (optional) 	Community Energy Observation Community Effects Investigations Part 1 Survey results <u>Energy Source Cards</u>	20 minutes	47
Act	Arrange your <u>Energy Source Cards</u> to show which would be best at meeting the needs of your community.	<ul style="list-style-type: none"> • Pens or pencils • Art or craft materials (optional) 	<u>Futures Mood Board</u> <u>Energy Source Cards</u>	10 minutes	50



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Activity	Description	Materials and Technology	Additional Materials	Approximate Timing	Page Number
Task 1: How do we use energy to cook food in our community?					
Discover	Describe a meal that is important to you, who cooks it, and what energy source is used to cook it.	<ul style="list-style-type: none"> • Large piece of paper • Pens or pencils • Art or craft materials (optional) 		25 minutes	64
Understand	Carry out an investigation into the effects of cooking.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Watch or clock <p><u>Optional</u></p> <ul style="list-style-type: none"> • Humidity monitor • Thermometer • Smoke detector • Particle monitor • Card with petroleum jelly 		15 minutes + investigation time	66
Act	Examine different perspectives and identify what concerns your team the most about cooking in your community.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>How We Cook</u> <u>Cooking in my Community</u> chart <u>Energy Source Cards</u>	20 minutes	74



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Task 2: How can we use sustainable energy to cook in the future?					
Discover	Explore your team’s priorities for cooking. Carry out a survey to assess your community’s priorities for cooking.	<ul style="list-style-type: none"> • Paper • Pens or pencils 		25 minutes + survey time	77
Understand	Investigate two sustainable sources of energy for cooking by building a model of biofuel pellets and a solar stove.	<ul style="list-style-type: none"> • Paper • Cardboard or other sturdy material • Reflective surface • Small container <p><u>Optional:</u></p> <ul style="list-style-type: none"> • Ruler • Scale • Thermometer • Butter, ghee, coconut oil 		40 minutes for the biofuel pellets model 60 minutes for the solar stove model	82
Act	Add information to your <u>Futures Mood Board</u> and continue ranking your <u>Energy Source Cards</u> .	<ul style="list-style-type: none"> • Pens or pencils 	<u>How We Cook</u> <u>Concerns List</u> <u>Futures Mood Board</u> <u>Community Priorities</u> <u>Energy Source Cards</u>	15 minutes	89



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Task 1: How is energy used in the spaces in our community?					
Discover	Identify the spaces in the community that are important to you and explore how they use energy to help you meet your needs.	<ul style="list-style-type: none"> • Paper • Pens or pencils 		10 minutes + extended observation time	102
Understand	As a team, select from three energy investigations that will help you learn about energy use in your community.	<ul style="list-style-type: none"> • Paper • Pens or pencils 		10 minutes + community investigation time	105
Act	Use your <i>How I Meet My Needs</i> document and the results of your investigations to create a community energy use map.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Art or craft materials (optional) 	<i>How I Meet My Needs</i>	25 minutes	111



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Task 2: How can we use sustainable energy in our community?					
Discover	Examine data about energy use around the world and relate it to your local community.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>Futures Mood Board</u>	15 minutes	115
Understand	Carry out investigations into how you can incorporate sustainable energy (such as micro-hydropower, micro-solar, and micro-wind power) into your community.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Flexible hose • Funnel (or 2-liter bottle) • Measuring tape • Rocks, sticks, boards • 20-liter (5-gallon) bucket • Watch or timer 	<u>Community Energy Use Map</u>	15 minutes + investigation time	117
Act	Use the <u>Community Energy Use Map</u> and your investigations from Understand to come up with sustainable energy solutions for your community, and brainstorm small actions you can take to reduce energy use.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>Community Energy Use Map</u> <u>Futures Mood Board</u>	30 minutes	126



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Activity	Description	<u>Materials and Technology</u>	<u>Additional Materials</u>	<u>Approximate Timing</u>	<u>Page Number</u>
Task 1: How is energy used for transportation in our community?					
<i>Discover</i>	Ask yourself and others in your household about your transportation use.	<ul style="list-style-type: none"> • Paper • Pens or pencils 		10 minutes for reflection + interview time	141
<i>Understand</i>	As a team, select from three investigations that will help you learn about transportation in your community.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Internet (optional) • Paper or online map (optional) 	<u>Energy Source Cards</u>	10 minutes + community investigation time	142
<i>Act</i>	Use your <u>How We Use Transportation</u> document and the results of your investigations to create a list of what you want to keep the same and what you want to change about transportation in your community.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>How We Use Transportation</u>	40 minutes	151



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Task 2: How can we make transportation more sustainable?					
Discover	Explore the Avoid, Shift, and Improve strategy and think about how it could be used in your own community.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>Futures Mood Board</u>	25 minutes	154
Understand	As a team, select from three investigations that will help you learn about transportation in your community.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Paper or online map (optional) 		5 minutes + investigation time	156
Act	Use the information from Task 1, Act, and Task 2, Discover and Understand, to redesign the transportation in your community.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Video or audio recording equipment (optional) • Camera (optional) 	<u>Futures Mood Board</u>	60 minutes	159



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Activity	Description	<u>Materials and Technology</u>	<u>Additional Materials</u>	<u>Approximate Timing</u>	<u>Page Number</u>
Task 1: How do we use energy to power things in our daily life?					
<i>Discover</i>	Reflect on how you use energy in your daily life.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Watch, clock, or other way to know the time 		30 minutes + interview time	172
<i>Understand</i>	Investigate energy efficiency and energy conservation using items from your daily life.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Internet (optional) • Calculator (optional) 		35 minutes	175
<i>Act</i>	Calculate the cost of using items in your daily life and how energy efficiency or energy conservation could help you reduce costs.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Calculator (optional) 		30 minutes	179



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Task 2: How can we make industry more sustainable?					
Discover	Examine data about greenhouse gas emissions in several kinds of industries.	<ul style="list-style-type: none"> • Calculator (optional) 		15 minutes	183
Understand	Read about how industry uses energy to do work. Then investigate the industries in your community and collect information about the people who are the most affected by these industries.	<ul style="list-style-type: none"> • Paper • Pens or pencils • Internet (optional) • Online or paper map (optional) 		15 minutes + investigation time	185
Act	Analyze the data from your investigation and identify the kinds of actions you want to take.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<u>Energy Source Cards</u> <u>Futures Mood Board</u>	25 minutes	191



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Task 1: How will I help create a sustainable energy future?					
<i>Discover</i>	Use your <i>Futures Mood Board</i> to decide what future you want to take action to support.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<i>Futures Mood Board</i>	20 minutes	203
<i>Understand</i>	Come to consensus and plan your action.	<ul style="list-style-type: none"> • Paper • Pens or pencils 	<i>Identity Map</i>	45 minutes	206
<i>Act</i>	Implement your action plan and reflect on your action.		<i>Action Plan</i> <i>Futures Mood Board</i>	15 minutes + action time	208

