ENERGY!

Part 1: Introduction to Energy

SUSTAINABLE DEVELOPMENT GOALS

Image Credits
Cover - GetYourPic/iStock/Getty Images Plus
Figure 1.1 - Katherine Blanchard, Smithsonian Science Education Center
Figure 1.2 - Katherine Blanchard, Smithsonian Science Education Center
Figure 1.3 - FG Trade/E+/Getty Images Plus
Figure 1.4 - United Nations
Figure 1.5 - NicolasMcComber/E+/Getty Images Plus
Figure 1.6 - Logan Schmidt, Smithsonian Science Education Center
Figure 1.7 - JarnoVerdonk/iStock/GettyImagesPlus

PART 1: INTRODUCTION TO ENERGY

Find out More!

For additional resources and activities, please visit the *Energy!* StoryMap at http://bit.ly/3Kx41Jy.

Planner

Activity	Description	Materials and Technology	Additional Materials	Approximate Timing	Page Number
Task 1: What is a sustainable energy future?					
Discover	Develop a personal *Identity Map* showing the different parts of who you are. Create a *Futures Mood Board* with your team's hopes and concerns for a sustainable energy future.	• 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.	• Paper • Pens or pencils		25 minutes + survey time	11
Act	Update your *Futures Mood Board* with information from your community survey.	• Paper • Pens or pencils	*Futures Mood Board*	15 minutes	16

Activity	Description	Materials and Technology	Additional Materials	Approximate Timing	Page Number
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.	• 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.	• 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.	• Paper • Pens or pencils	_Effects on Our Community_ chart _Futures Mood Board_	20 minutes	23

Part 1 Planner

Energy: How can we ensure sustainable energy for all?

People use **energy** every day to meet their needs. In this guide you will explore where your **community** gets energy, how it uses energy, and how you can ensure everyone in the community has access to the energy they need. You will investigate the effect energy use can have on the environment and how choices you and your community make can help or harm the environment.

While using the guide you will become an **action researcher** to identify and help solve problems in your community. Action researchers first *discover* their own existing knowledge, then they investigate to *understand* problems, and finally they *act* on what they have learned to make local and global communities better.

You will create and keep several sheets of paper or digital documents to help you record and remember information. You may want to use a notebook or folder to help organize the sheets you will use in the guide.

Remember: In this guide you and your team are in charge. You can always change the instructions in the steps to make them work better for you and your team.

Task 1: What is a sustainable energy future?

Who we are affects the way we think about and view the world around us. In this task you will first *discover* more about your own identity and perspectives about the future. Then you will *understand* more about energy and related knowledge and perspectives of your community. Finally, you will *act* to decide what you want to investigate and think about further.

Discover: Who am I and what are my feelings about the future?

Our different experiences, backgrounds, and ideas give each of us a unique identity. Your **identity** is what makes you you. Our different identities often lead to different **perspectives.** Perspectives are the different ways we think about the world around us. Understanding your own identity and perspectives can help you understand other people's perspectives.

1. Take out a piece of paper and title it "Identity Map." If you prefer, you can make an identity map using objects or digital tools. There are more details about how to do that in step 7.
2. Write your name in the center of the page or draw a small picture of yourself.
3. Draw a circle around your name or picture.
4. Think about your answer to the question, "Who am I?" The list below can give you some ideas to consider, but you choose what you want to include. You can also include things that are not on the list.
   - Age
   - School or class
   - Race and/or ethnicity
   - Gender
   - Country or place where you live
   - Country or place that is important to you or your family
   - Values or beliefs that are important to you
   - Goals that are important to you
   - Topics or subjects that interest you
   - Hobbies or things you like to do for fun

- Physical traits (such as tall, black hair, blue eyes, wears glasses)
- Personality traits (such as loud, funny, sad, kind)
- Roles you have in your household (such as big sister, helper, cousin)
- Groups you belong to

5. Write each answer on the page around your name.

6. Draw a line between your name and each answer. Figure 1.1 is an example of a written identity map. You can put your answers at the end of each line.

Figure 1.1: Example of a written identity map.

7. If you prefer, you can use objects around your home or classroom to create your map. To keep your map, you can take a picture of it or just remember it. Figure 1.2 is an example of an identity map using objects. You could also make a digital map using recordings or photos.

Figure 1.2: Example of an identity map using objects.

8. Form a team. Your team may be your whole class, or it may be a smaller group. Either is fine. As action researchers you will work together with your team, made up of your classmates, for the rest of this guide. You will work together to understand your local area and make it better.

9. Share your *Identity Map* with the members of your team.

> ⚠️ **Emotional Safety Tip**
>
> Sharing your identity with someone else can help build trust between you and that person. But it can be hard to share your personal identity with someone else. Only share parts of your *Identity Map* that you feel comfortable talking about.

10. Find any similarities to your *Identity Map*. For example, if you like to read for fun, see if you can find someone else in your team who likes to read for fun.

11. Find any differences from your *Identity Map*.

12. Think quietly to yourself about the similar and different identities you found in your team.

13. Consider those similarities and differences as you read *Our Identities, Our Perspectives, Our Future*.

> ### *Our Identities, Our Perspectives, Our Future*
>
> Different people may have different perspectives on what they want the future to be like. Sometimes these perspectives are related to identities or personal experiences. Our identities can affect what we know about or what we think is important. If there is something that is important to you now, you may want it to be part of your future. For example, maybe on your *Identity Map* you said you liked being outside. Then you might want easy access to the outdoors as part of your future.
>
> In this guide you will be thinking about how to ensure a **sustainable** energy future for all. But first you must think about what a sustainable future is.
>
> An approach that balances different perspectives and can keep working for a long time is called sustainable. A sustainable future balances **social, economic, environmental,** and **ethical** concerns in a way that works well for people and the planet.

- **Social** is about the interaction of people in a community. The health, education, cultural and community ties, and well-being of people are the most important things from this perspective.
- **Economic** is about money, income, and use of wealth. Economic growth, including making sure people have jobs and enough money, is the most important thing from this perspective.
- **Environmental** is about the natural world. Protecting living things, natural systems, and the Earth itself are the most important things from this perspective.
- **Ethical** means that something is fair. Doing what is right and having a just community where everyone and everything is treated fairly are the most important things from this perspective.

Your perspective about what a sustainable future should include is valuable. Other people may have different perspectives. Their perspectives are also valuable. Thinking about all these different perspectives together can help you envision a sustainable future that works for everyone, not just you.

14. Think quietly to yourself about how you would want the future to be different than life is now. Don't worry about thinking about energy yet. Just focus on what you want the future to be like in general. You can use your own original ideas or ideas from other places. Use ideas from your experiences, books, movies, or other media, or conversations you have had to help you think about these questions.

15. Label a large piece of paper or a shared digital document "Futures Mood Board." A **mood board** is a tool to help gather ideas, concepts, and styles to design something. In this case, you and your team are designing the future.

16. Divide the paper into two sections. Label one section **"Hopes"** and the other **"Concerns."**

17. In the *Hopes* section record your team's ideas by writing, drawing, or using digital images to represent your hopes for the future for you, your area, the people around you, and the whole world. A hope is something that is desired, wished for, or wanted. Do not feel like your ideas have to be possible today—dream big!

18. As you think about your team's hopes for a sustainable future, you may also start to think about things that concern you about the future. A concern is something that causes anxiousness, worry, or fear. Record these ideas in the *Concerns* section.

> ⚠️ **Emotional Safety Tip**
>
> When thinking about the future you might have many different feelings. It is okay to be worried or anxious. These feelings are natural, especially when the future feels uncertain. By thinking about your fears, you can prepare yourself and make choices to try to ensure a more hopeful future.

19. Examine your *Futures Mood Board* and discuss the following:

  a. Do you notice things that surprise you about the hopes and concerns of your other team members?

  b. Do you notice any hopes and concerns that you have in common?

> ⚠️ **Emotional Safety Tip**
>
> Sometimes you may want to keep hopes and concerns for the future private. Only share what you feel comfortable sharing.

Understand: *What does my community know and think about energy?*

You've just thought about your own perspective on a sustainable future. As an action researcher, one of your jobs is to find out more about what other people in your community know and think about energy now and in the future. A community is a group of people who share something—for example, your family, your classmates, your teachers, or your neighbors. A community can share space, like a local, national, or global community. Or a community can share an identity, like a religion, ethnicity, or common interest. If you think back to your identity map, you will probably realize you are part of many communities.

Understanding perspectives in your community is an important part of considering what is sustainable and what actions you want to take. Helping your community starts by considering who is in the community and how they feel. You can investigate this using a **survey**.

1. Read *What Is Energy?* and think quietly to yourself about the ways you interact with energy in your life right now.

What Is Energy?

What do you think of when you hear the word "energy"? You may think of the food you eat because it gives you energy to move, grow, and keep your body's systems running. Or you may think of your physical science classes and things like potential and kinetic energy. You may also think of turning the lights on in your classroom or home.

Energy is anything that gives the ability to do work. In this guide, you will specifically be exploring the ways people use energy to power the things and spaces we use in our daily lives, such as cooking, heating and cooling indoor spaces, transportation, and making and using products.

In this guide you will be thinking about how you can ensure a sustainable energy future in your community. You may want to start by asking people in your community general questions about energy now and in the future, to help you understand their perspectives, hopes, and concerns.

Figure 1.3: These people are using natural gas as a source of energy for cooking.

2. Consider which community's perspective on energy you would like to understand. Do you want to understand your school community? Your neighborhood? Your whole town? Discuss with your team.

3. Read the *Survey Instructions* for more information about how to give a survey and pick your questions.

Survey Instructions

You can use a survey to understand the people in your community better. A survey is a list of simple questions you can ask a group of people.

Choosing People to Survey

a. Think about the categories in your *Identity Map*. Use those categories to try to pick a diverse group of people to survey, to get a more accurate idea of what your community thinks and feels. For example, you may want to survey people of many different ages or of more than one gender.

Ways You Could Give a Survey

a. Talk to people in person, on the phone, or using a virtual meeting.
b. Have people answer questions using paper, email, or an online survey.
c. Collect responses using a social media post.

Picking Questions

a. Consider open-ended or close-ended questions. An example of an open-ended question is, "What would be part of a sustainable energy future?" An example of a close-ended question is, "Is using more solar energy a part of a sustainable energy future?" You usually can get more information from an open-ended question, but if you have a lot of answers, it can be difficult to keep track of all the different ideas. Using a close-ended question is quicker, but you may miss some ideas from your community.

b. Try to make your questions neutral. That means you are not trying to put your opinion in the question. For example, imagine you were thinking about **power plants**, or places where electricity is generated for many people. "Do you agree that coal power plants are harmful to the planet?"

would not be a neutral question. The person answering the question might assume you want them to answer "yes." A more neutral question might be, "What do you think about using energy from coal power plants in our community?"

c. Write down any questions you might want to ask your community about their hopes and concerns for the future. For example:

- How would you want the future to be different than life now?
- Are there things you would like to remain the same?

d. You may also want to ask questions related specifically to energy. Write down any questions you might want to ask. For example:

- Do you know where we get energy from in our community now?
- What concerns you or frustrates you about the way we get and use energy in our community now?
- Is there anything you wish we could do differently about getting and using energy in the future?
- Is there anything that scares you about making changes to energy in our community?
- Is there anything that makes you happy or excited about making changes to energy in our community?

Tips for giving a survey

a. Make sure your questions are easy to understand and specific, such as, "What worries you about the future?" instead of, "What worries you?"

b. Think about the best method for the survey. Is there a safe and easy way to gather the opinions of a wide variety of people in your community?

c. Think about the best way to survey your community. For example, does everyone have access to the Internet if you want to do an online survey?

d. Some people you survey may not be familiar with the meaning of energy. You may want to start off by sharing the definition of energy with them before you start asking questions. For example, you might say, "Energy is anything that makes it possible to do work. I'm trying to find out more about how our community uses energy to power the things and places we use in our daily lives."

e. Listen carefully when people are speaking.

Planning an Inclusive Investigation

a. Remember, including everyone is important. If you are working with a team, you may need to adjust the way you do your survey so that everyone feels safe, comfortable, and able to help. Those changes are okay! They are part of including everyone. Make sure to consider:

- Time: If the survey happens after school, does everyone in the team have time to do it?
- Comfort: If you decide to move around the community to do your survey, make sure everyone on your team feels safe and able to do this. If not, what is another way team members could help with the survey?
- Location: If the survey is going to happen in a specific place, how easy is it for team members to get to that place?

Safety Tips for Giving a Survey

Talk to your teacher or a trusted adult for guidelines. They will know what is safest in your community.

⚠️ **Physical Safety Tip**

Never go out alone and always be aware of your surroundings. Pay attention to local guidance on whether it is safe to interact with people outside of your home.

⚠️ **Emotional Safety Tip**

It can be hard to talk to other people in the community. You may feel shy or nervous. Someone may tell you they don't want to talk. That's okay! It doesn't have anything to do with you. It just means they don't want to share. You can show them respect by thanking them and moving on to another community member.

4. Examine the questions you listed and choose the questions you want to ask your community. You probably want to ask between five and ten questions in your survey. You may want a mix of close-ended and open-ended questions.

5. Decide on your survey methods and choose where, who, and how you will conduct your survey.

6. Assign different jobs to people. For example, if you decide to do an online survey, decide who will type the survey, who will share it, and who will collect the results.

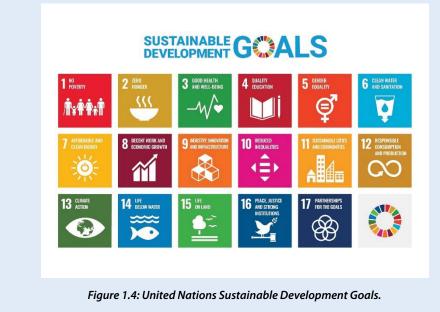7. Conduct your survey by yourself or with your team and record the results.

Act: *How can I help make a sustainable future for my local and global community?*

In the previous activities you examined your own and your community's hopes and concerns about energy now and in the future. Now you can apply what you have learned to think about the future your community wants and how that relates to a global future.

1. Take out your *Futures Mood Board* and compare it to the results of your survey. Are there hopes and concerns others in your community shared that are not yet part of your mood board? If so, add those ideas now.

2. With your team, use your *Futures Mood Board* to discuss important goals for a sustainable future. These goals might be based on your hopes, like "add more solar and wind power to our community," or they might be based on your concerns, like "make sure we don't have blackouts."

3. Read *The United Nations and the Sustainable Development Goals*.

The United Nations and the Sustainable Development Goals

Achieving a sustainable future like the one you just thought about is complex. It takes many people working together in many places to create a sustainable future. When many people are working together, it helps to have someone organizing. The **United Nations**, also called the UN, is a global organization designed to help governments and people around the world **collaborate**.

As the year 2015 approached, the UN asked countries and people around the world to imagine a better world and a better future. They worked together to determine a list of goals. Then the countries of the UN came to **consensus** on the most important goals needed to get to a better world. These goals for the global community are called the UN **Sustainable Development Goals**, or SDGs. The SDGs are the global goals designed by people across the world to work on from 2015 and 2030.

Figure 1.4: United Nations Sustainable Development Goals.

4. Examine the different SDGs. Are there SDGs you think are important for a sustainable energy future that your team didn't discuss? Do you think those goals are also important? If so, add those ideas to your *Futures Mood Board*.

Task 2: How does my community use energy now?

In the previous task, you began exploring what your community's sustainable energy future could be. Before you can take action on that vision, you need to know more about how your community uses energy now. In this task, you will ***discover*** the ways you and your community use energy. You will ***understand*** how using energy affects your community. Then you will ***act*** by using this information to continue developing your vision for a sustainable energy future.

Discover: How can I find out more about energy use in my community?

You and your community interact with energy every day. In this activity, you will use your senses to gather information about the sources of energy in your community, as well as how energy is used.

1. Read *Community Energy Observation* and carry out an observation of energy in your community.

Community Energy Observation

In this observation, you will observe energy in your community. This observation should include the sources of energy, how energy moves from place to place, and how it is used in your community. For example, you may observe how electricity is generated in power plants or through solar panels. You might also observe how energy is moved from one place to another through power lines or pipes. And you will likely have many opportunities to observe how people are using energy in activities such as driving vehicles, lighting homes or shops, cooking food, or using machinery. Or saving energy by doing things like turning off the lights.

Your observation will have four steps: observing with your senses, noticing what concerns you, noticing what makes you happy, and asking questions.

Directions

a. Decide if you will do this observation with a partner or with a group.

b. Choose an area to observe. It can be small, such as your classroom. Or you could observe a larger area such as your entire school, a street in your community, or your entire neighborhood.

c. Collect materials to help you record your observations, such as paper and a pencil.

d. Observe energy in your community with your senses and record what you observe. You can move around your community or find another way to explore it. You could explore your community through videos, photos, audio recordings, social media posts, or other records of your community spaces.

- What evidence of energy can you see?
  - For example, solar panels, power lines, lights, a person using a mobile phone
- What evidence of energy can you hear? If it helps, you can close your eyes during this observation.
  - For example, a power plant or a car engine
- What evidence of energy can you smell?
  - For example, the smoke from a cooking fire or exhaust from a car
- What evidence of energy can you feel or touch?
  - For example, the warmth of a heated room or the coolness of air condition

⚠ Physical Safety Tip

Do not use your sense of taste to try to observe energy. Do not touch forms of energy that you are unsure are safe to touch. For example, heat energy from the stove can burn and electrical energy from outlets can cause harm.

Figure 1.5: Power lines supply electricity to buildings in Hanoi, Vietnam.

e. Record your observations.

f. Add what concerns or worries you about what you have observed in your community. You might observe things such as noisy car engines, a strong smell from a power plant, or lights that are too bright or too dim at night.

g. Record what makes you happy about what you've observed in your community. For example, you might appreciate that energy makes it possible to take the bus, or that energy powers the mobile device you use to communicate with your friends.

h. Finally, record any questions you have about energy in your community. For example, you might be wondering, "Can businesses turn off their lights at night if no one is using the building?" or, "How can we make sure everyone who lives in my neighborhood has enough heat when it's cold?"

⚠️ Emotional Safety Tip

Remember to be an inclusive team member. Every person on your team brings different skills and perspectives. Some members of your team may not want to or be able to use all of their senses. That is fine. Communicate with your teammates and find a way for everyone to participate and feel comfortable.

⚠️ Physical Safety Tip

Never go out alone and always be aware of your surroundings. Pay attention to local guidance on whether it is safe to interact with people outside of your home.

2. Keep the record of your observations in a safe place. You will need it in the next activity.
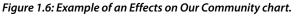
Understand: *How does energy affect my community?*

In the previous activity, you observed a variety of things about energy in your community: what it looks, sounds, smells, and feels like, what worries you, what makes you happy, and what questions you have. Now you will combine your observations with others in your class. You will identify the ways that energy affects your community.

1. Gather with your class.

2. Label a class board, a large piece of poster paper, or a shared digital document, "Effects on Our Community."

3. Draw an arrow at the top of the document. Label one end "Negative," the middle section "Not Sure," and the other end "Positive." Leave enough space below each label to record observations from you and your classmates.

Effects on Our Community

| Negative | Not Sure | Positive |

Figure 1.6: Example of an Effects on Our Community chart.

4. Take out your observations from the Community Energy Observation in the Discover activity.

5. Add the information from your Community Energy Observation to the appropriate section of the *Effects on Our Community* chart. Some things you observed might have been negative, meaning they were harmful, unpleasant, or made things more difficult. Some things you observed might have been positive, meaning they were helpful, improved the community, or made things easier. If you weren't sure, record your information in the "Not Sure" section.

6. Give enough time for each person in the class to add to the *Effects on Our Community* chart.

7. As a class, consider the chart you have just created. Discuss the following:

    a. What effects do we want to know more about?

    b. How could we collect more information about these effects?

8. If time allows, use your answers to those questions to guide additional investigations into your community. Read the *Community Effects Investigations* for suggestions. If you do not have enough time for additional investigations, you can move on to the Act activity.

Community Effects Investigations

Generating energy, transmitting energy, and using energy can create effects such as noise pollution and air pollution. Collecting **data** about the effects of energy on your community can help you create a sustainable energy future for your community. Data helps identify problems, provide proof of those problems to the people in charge, and measure how things change over time.

The investigations described here are just two examples of data you can collect about the effects of energy on your community. You can also use online databases found in the *Energy!* StoryMap to investigate further. You will have the chance to do more investigations in later parts of this guide.

Noise Pollution

You may have noticed some noise in the Discover activity that affected your community in a negative way. If you have access to the Internet or a mobile device, there are websites and applications that can help you measure the precise loudness of the noise, usually in units called **decibels**. If you do not have access to the Internet, you can still collect data. Note what time the noise occurs, how often it occurs, how long it occurs, how loud it is compared to other sounds in the area, and how close the noise is to people.

Air Pollution

One of the major sources of air pollution is energy generation and use, such as coal power plants, burning biomass (such as wood), exhaust from vehicles, and heating devices. If you have access to the Internet or a mobile device, search for local air quality measurements. These measurements can tell you what types of particles are in the air and how concentrated they are. If you do not have access to the Internet, you can do a simple air quality investigation.

Cover both sides of a light-colored piece of paper with a clear, sticky substance, such as petroleum jelly. Hang or place the paper where you would like to investigate air quality. Leave it there for 24 hours or more. Then take down the paper and use a hand lens or microscope to examine it. You can observe how many particles were trapped by the sticky paper, and you may even be able to see what kind. Consider investigating several places in your community, both indoors and outdoors, such as kitchens, garages, parking lots, busy roads, or near factories and power plants. You can compare several locations to each other. Keep in mind that some of the particles on the paper may be from plants, such as pollen.

Figure 1.7: You might observe that some kinds of vehicles cause both noise and air pollution, like the exhaust from this gasoline-powered bus.

9. If you did any additional investigations, add the results of those investigations to your *Effects on Our Community* chart.

10. Keep the chart to use in the next activity.

Act: *What is my community's vision for a sustainable energy future?*

Remember that in Task 1 you created a *Futures Mood Board*. You recorded the hopes and concerns you and your community have about a sustainable energy future.

The data you just collected in the Task 2 Discover and Understand activities contain valuable information to add to your _Futures Mood Board_. In this task you will analyze the information from the Discover and Understand activities and continue developing your _Futures Mood Board_. This information helps illustrate what is happening now in your community so you can identify what you want to continue and what you want to change. The _Futures Mood Board_ will help guide the rest of the work you do in this guide.

1. Consider the _Effects on Our Community_ chart you made as a class.

2. Take out your _Futures Mood Board_.

3. Add information from the _Effects on Our Community_ chart to your _Futures Mood Board_. Use the questions below to help guide you:

    a. What positive effects on your community might you want to continue? Consider adding those to _Hopes._

    b. What negative effects on your community are you worried about? Consider adding those to _Concerns_.

    c. What about the effects you marked as _Not Sure_? Is there anything you want to make sure you learn more about as you complete this guide?

4. To help you select the parts of the guide that could most help you ensure a sustainable energy future for your community, reflect on the following questions by yourself:

    a. What part of the _Futures Mood Board_ matters the most to me?

    b. What part of the _Futures Mood Board_ do I think matters the most to my community?

    c. What part of the _Futures Mood Board_ do I think matters the most to the world?

5. Compare your answers with those of the other members of your team.

6. Read _Picking a Path_.

Picking a Path

You and your team must complete Part 2 before moving on to the other parts in this guide. Part 2 is about sources of energy. In this part you will explore the many sources of energy on Earth.

After your finish Part 2, you can choose which parts to complete based on what works best for you and your team. For example, if you are interested in energy and cooking, you might choose to complete Part 3. Or you may have enough time to do Parts 3 through 6. Everyone should also complete Part 7 which helps you choose and implement your action.

Parts 3 through 6 are about:

Part 3: Energy and Cooking: Examining the sources of energy people use for cooking food and how it affects health and safety

Part 4: Energy in the Community: Exploring the ways people use energy to heat, cool, and light their homes and places they use in the community

Part 5: Using Energy to Get Around: The kinds of energy used to move people and things both short and long distances

Part 6: Energy to Use and Make Things: Exploring the products that use energy and how people use energy to make things, grow things, and break things down

7. Figure out how much time you have to complete the parts of this guide. For example, your teacher may say you only have time to do one part, just a few parts, or maybe all of them.

8. If you do not have time for all the parts, discuss with your team and pick the parts that are most closely related to the hopes or concerns from your _Futures Mood Board_.

Congratulations!

You have finished Part 1.

Find out More!

For additional resources and activities, please visit the *Energy!* StoryMap at http://bit.ly/3Kx41Jy.

Glossary

This glossary can help you understand words you may not know. You can add drawings, your own definitions, or anything else that will help. Add other words to the glossary if you would like.

Action researcher: A person who works with their community to discover, understand, and act on local and global problems they learn about

Collaborate: To work together on an activity or toward a goal

Community: A group of people who share something in common, such as a space or an identity

Concern: Something that causes anxiousness, worry, or fear

Consensus: A balanced decision that works for everyone in the group

Data: Facts and statistics that have been collected about a topic

Decibel: A measurement of how loud a sound is

Economic: About money, income, and the use of wealth

Energy: Anything that gives the ability to do work

Environmental: About the natural world

Ethical: Something that is fair

Hope: Something that is desired, wished for, or wanted

Identity: The characteristics that make you you

Mood board: A tool to help gather ideas, concepts, and styles to design something

Perspectives: The different ways we think about the world around us

Power plant: A place where electricity is generated for many people

Social: Relating to the interaction of people in a community

Survey: A list of simple questions you can ask a group of people

Sustainable: An approach that balances different perspectives and can keep working for a long time

Sustainable Development Goals (SDGs): Seventeen goals for a better world created by the countries of the United Nations

United Nations: A global organization designed to help governments and people around the world collaborate