Welcome to School Uplift!

TVA EnergyRight® and your local power company are excited to spend the next year working together to improve your school's energy efficiency and save you money on energy expenses. Thank you for your time, effort and commitment!

While School Uplift primarily engages administrators, operations and maintenance staff, the program is a schoolwide effort. The *School Uplift Engagement Binder* includes helpful materials for your Energy Team, teachers and staff to create and sustain program momentum and increase overall energy education in your school. Even the broader community will have a chance to play a role in your energy savings!

Let's dive in!

Table of contents

Introduction to School Uplift

Why School Uplift engagement matters

Did you know that as much as 30% of a school district's total energy is used inefficiently or unnecessarily? Raising awareness of energy waste and energy conservation is a big part of School Uplift. By having everyone in your school begin to learn and practice new energy-saving behaviors, your school can reduce energy waste and save energy and money. Plus, everyone can begin to build smart energy habits that last a lifetime.

And it's not just everyone in the school who gets to be involved in School Uplift. It's also your broader school community — parents, caregivers, board members, elected officials, volunteer groups and more. This program gives you an opportunity to strengthen relationships while increasing awareness of your school programs and activities. School Uplift provides a way for the whole community to get involved in creating a brighter future for the next generation!

Notes

Get to know your *School Uplift Engagement Binder*

Your binder is your go-to resource for K-12 activities and tools designed to get your school community excited about saving energy and money! Within each section, you'll find:

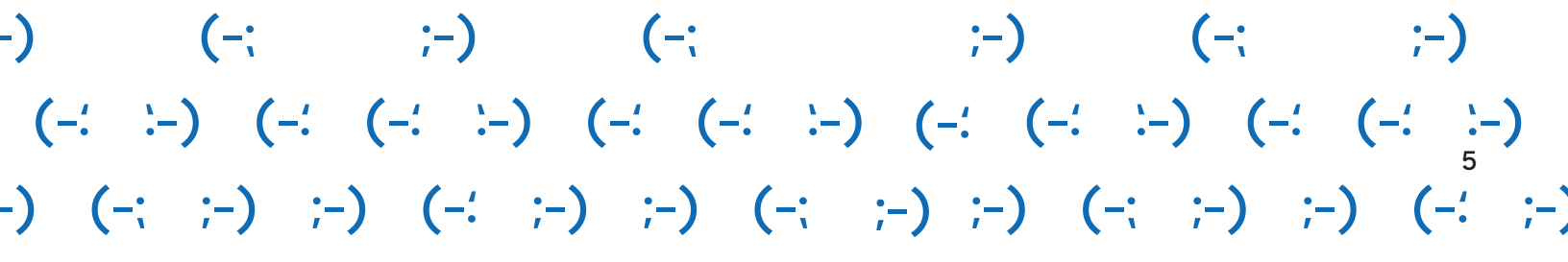
- An explainer of what each activity is, directions for how to get students involved and suggestions for how to increase awareness of each activity throughout the entire school.
- Themed activities for August through April that you can use in your classrooms, after-school clubs, extracurricular groups or wherever students gather in school for adult-led instruction.
- Outreach materials to keep caregivers, volunteers and other community members informed about your school's participation and progress, including access to the "Introduction to School Uplift" video and sample communications.

With a focus on student and community engagement, the *School Uplift Engagement Binder* is your companion to the *School Uplift SEM Manual***.** The *School Uplift SEM Manual* covers operations and maintenance activities. If your school did not receive this manual, please contact your Energy Coach immediately.

Use the materials that work best for your school

Everything in this binder is here to help your school reach its energy-reduction goal. The activities provided support the larger efforts your operations and maintenance team is undertaking. Your school isn't required to use these activities, but we do recommend trying at least a few out! You know your school best, so we encourage you to use the resources that fit your school community.

Each school receives one copy of the *School Uplift Engagement Binder*. Please make sure the binders are given to your school's designated Energy Champion. Your Energy Champion is encouraged to share the binder materials with appropriate staff and students, especially the Engagement Champion on the Energy Team.



How to introduce School Uplift to staff

We've created some sample language for you to use when you introduce School Uplift to faculty and staff. You can use the script below in an email, in a staff meeting or as a handout in faculty mailboxes. For additional support, please reference the Energy Team roles and descriptions found in the "Effective Energy Teams" webinar. Reach out to your Energy Coach if you need access to the webinar.

Script: We're excited to share that our school is participating in School Uplift, a program from TVA EnergyRight® and [LPC_NAME]. This yearlong program is designed to help the school save energy, make our space more comfortable and reduce energy costs.

Our operations and maintenance staff will be taking the lead on a lot of this work, but everyone will have a role in helping us meet our energy-reduction goals by learning about and practicing energy-saving behaviors. We have an Energy Team led by our very own Energy Champion, [INSERT ENERGY_CHAMPION_NAME], who will be our on-site point of contact for all things School Uplift.

This is an incredible opportunity for us. Our energy choices make a huge impact on our total school expenses each year. Past School Uplift participants have saved up to $40,000 in energy costs! Our goal this year is to reduce our energy use by [INSERT GOAL_PERCENTAGE (between 5-10%)].

What can we do?

It turns out that small changes to our daily habits can make a significant difference over time. For example, here are a few tips we'll work on as a school to save energy:

- Turn off the lights if you're the last one to leave the room.
- Turn off power strips at the end of the day.
- Turn off electronics at the end of the day, including computers, monitors and document cameras.
- Close doors, windows and blinds/shades.

Energy activities for students

School Uplift has provided us with different energy awareness activities for students. You can use these in your classrooms to introduce, reinforce and encourage students to work on different kinds of energy-saving behaviors. [INSERT Share details of any planned energy awareness activities, including any of the ones listed in this binder.]

Tracking our progress

We'll also have an Energy Dashboard that will show how our school is progressing toward our energy-reduction goal. [INSERT Share the location of your Energy Dashboard.]

Access to grants

As a School Uplift participant, our school will be eligible to apply for some really exciting grants, including a Learning Environment Grant and a Building Energy Upgrade Grant to improve our school's overall energy efficiency.

How to get involved

Be on the lookout for information from [INSERT ENERGY_CHAMPION_NAME] about energy-related activities you can do with your students. If you're interested in learning more or want to get involved with the monthly activities, please connect with [INSERT ENERGY_CHAMPION_NAME].

School Uplift contact information

TVA EnergyRight® Program Manager

Lori Brown | llbrown6@tva.gov

My Energy Coach

_____

TRC Contact

TVA School Uplift Resources | tvaschooluplift@trccompanies.com

Local Power Company (LPC) Representative

List your school's LPC representative and contact information in the space below.

_____

_____

Your School's Energy Team

List your school's Energy Team names and contact information in the spaces below.

Energy Champion

_____

_____

Energy Team Members

_____

_____

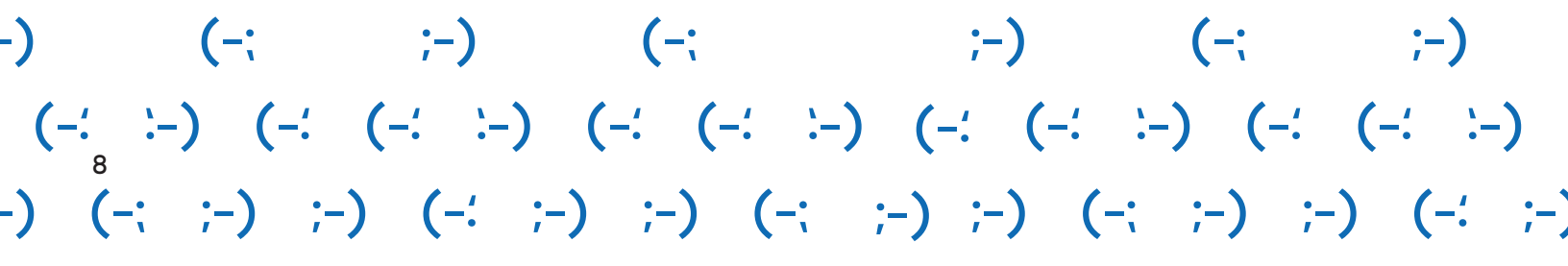
_____

_____

_____

_____

_____



How to access and order School Uplift materials

Online access to binder materials

To download and print copies of the binder materials, visit EnergyRight.com/school-uplift-resources.

How to order posters and clings

To order additional School Uplift posters and clings, contact your Energy Coach or your LPC representative.

TVA STEM Resources

These links contain teacher resources and lesson plans, as well as student friendly learning opportunitiesor your LPC representative.

- tva.com/stem
- tva.com/kids

Notes

Posters and clings

Help spread the word about your school's participation in School Uplift. Use the provided Tips & Tricks posters and clings around your school to remind students of easy energy-saving behaviors that they can practice each day!

Posters

The posters are modular, so use them individually, in pairs or grouped all together. Place them in high-traffic areas like hallways or the cafeteria. Or hang them up on classroom walls and bulletin boards. If you spread them around the school, challenge students to find them all!

Clings

Use the clings (they won't damage paint!) on hard, flat surfaces like walls, cubbies, desks, doors and bathroom mirrors, or near light switches, water fountains and sinks — anywhere students can see them!

How to access your posters and clings

Need more posters and clings? You can order additional copies through your Energy Coach or local power company.

Notes

Monthly Education Resource Guide

Schoolwide engagement in School Uplift is essential to reaching your energy-reduction goal. The more everyone gets involved, the faster you'll get there and the more money your school can save on energy-related costs!

What is the Monthly Education Resource Guide?

This guide is designed to help your school's Energy Team and teachers keep students engaged all school year with activities and resources focused on energy awareness and energy-conscious behaviors. Each month presents a different theme, along with fun and easy activities for students.

Who should use this guide?

This guide is for your Energy Team, teachers and school staff to use in the classroom and beyond. The resources and activities included are easy to implement and can be used in a variety of settings.

We recommend that your school's Energy Champion be responsible for keeping the *Engagement Binder*. This person will also be the primary point of contact for any questions! The Energy Champion can inform all relevant teachers and staff each month of the new activities, how to adopt them in the classroom and where to access additional support materials.

How does the guide work?

Your guide has sections for elementary school, middle school and high school. Each section is broken down by month. Once you've flipped to your grade level and month, check out the month's theme, suggested activities and resources! All activities are optional. At the end of each month's section, you'll find supplemental materials for any activities that require them. You can make copies of those materials, or go to EnergyRight.com/school-uplift-resources to download and print them.

Notes

Introducing School Uplift to elementary students

Now it's time for the really fun stuff — getting the word out! This section is all about how to introduce School Uplift to your students. You'll find talking points, sample scripts and details for your first month of energy-saving activities.

Notes

How to introduce School Uplift to students

You know your school best, so you may already have an idea of when, where and how to introduce School Uplift and the Energy Dashboard to students. Just in case you need some thought starters, we've outlined some ideas on the next few pages.

School assembly segment or class introduction

- Present the Energy Dashboard and discuss your school's energy-reduction goal.
- Preview themes and activities for the school year.
- Provide a brief overview of the monthly themes and what activities will be happening.
- Provide instructions for getting involved with the school's Energy Team.

Find sample language in the What to say section on page 19.

As part of daily or weekly announcements

You can use the sample script below to explain School Uplift to students.

Script: Hello, students! We're excited to share that we're taking part in an energy program called School Uplift, offered by TVA EnergyRight® and [INSERT LPC_NAME].

What does it mean when we say energy? Good question! Think about it like this: It takes energy to light up your classroom. It takes energy to keep our school warm in the winter and cool in the spring. It even takes energy to charge computers and tablets. Energy does so much for us! And that's exactly why we want to work together as a school to save energy and use it wisely!

We have a special Energy Team here as part of School Uplift. They'll be working hard all year to save energy in ways that you might not notice but that will make a big impact on all of us. And we're going to need your help too! Everyone will have a chance to pitch in and help out this year.

Every month, we'll have schoolwide activities that will help us all remember to save energy.

So how about it? Will you help us out this year?

[INSERT ENERGY_CHAMPION_NAME] will share more ways for you to get involved!

Find additional scripting in the What to say section.

Open house or parent-teacher conferences

Use this opportunity to share more about School Uplift with family and community members. Have Energy Team members stand by the Energy Dashboard to introduce School Uplift, your school's goal and how students and staff are participating in energy-themed activities throughout the year.

What to say

Use the sample announcements below or create your own to introduce School Uplift to your students.

School Uplift

This year, we're focused on saving energy and using energy more wisely. And you play a big, important role in that!

Did you know that you can save energy just by turning the lights off when you leave the room? Or by making sure you close the door to the outside all the way? There are so many easy ways we can all save energy and protect the environment!

TVA EnergyRight® and [INSERT LPC_NAME] want to help our school use energy more wisely through a new program called School Uplift.

We need your help! Think you can pitch in? You'll notice posters and stickers around the school to remind us all to make smart energy choices. And we'll be doing activities all year to learn about energy, how it's used and how we can all make a difference.

We've got a special Energy Team working hard to make our school more comfortable, reduce energy waste and help protect the environment. Let's all work together this year to save more energy!

Energy Dashboard

We've got a great tool this year that's going to help us all see how we're progressing toward our energy-reduction goal. It's called an Energy Dashboard! It's like a report card for our school, and you'll get to see it every month!

Monthly energy themes and activities

Every month, the whole school will get to take part in fun energy-related activities. Why? So we can all learn more energy-saving behaviors together!

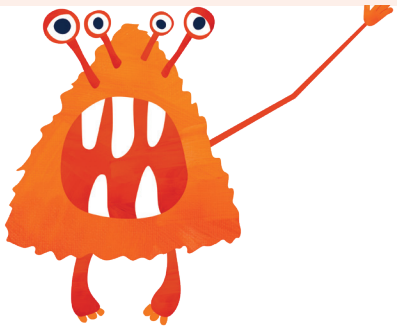
Here are some of the themes we'll highlight throughout the school year:

- Energy Awareness
- Energy Pledge
- School Power Down
- Careers in Energy
- Power of Community
- Solar Energy
- Earth Month
- What is TVA?

How to get involved

Our school's Energy Team will let us all know how to get involved with each month's new theme. To get started, look for posters and stickers around the school to learn fun energy facts and energy-saving tips!

Do you want to be on the Energy Team? Talk to [INSERT ENERGY_CHAMPION_NAME].



August activities

Introducing TVA

What Is Tennessee Valley Authority (TVA)?

The Tennessee Valley Authority, or TVA, is the largest public power company in the United States. TVA also carefully manages the nation's fifth-largest river to reduce flood damage, make rivers easier to travel, provide recreation, protect aquatic life and keep the water clean. TVA helps make the Tennessee River Valley a good place for families to live and work.

What TVA Does

Have you ever wondered what TVA does? The answer is: many different things.

TVA is the largest public power company in the United States. It's called "public" because it's owned by the U.S. government, unlike most companies that are owned by individual people or investors. Through its electricity plants, TVA supplies power to 10 million people in the Southeastern United States.

In addition to producing power for many Americans, TVA also manages the nation's fifth-largest river system. The Tennessee River flows 652 miles from East Tennessee down into Alabama and back up into Kentucky, where it joins the Ohio River. All along the Tennessee River, TVA employees work to reduce the dangers of flooding, make it possible for boats to travel safely, and keep the water clean.

In the 41,000-square-mile area drained by the Tennessee River, TVA also operates some of the country's best outdoor recreation areas. Although TVA was first set up in 1933 as an agency supported by Americans' tax dollars, today, it runs all of its programs and pays its employees with the money it earns by making and selling electricity.

So, the next time you turn on a computer, drink from the school water fountain or go fishing on a TVA reservoir, you will know what part TVA plays in helping everybody in the Valley lead a better life.

Energy Generation Videos TVA

Fossil plants:	https://www.tva.com/kids/electricity/fossil-power
Hydroelectric plants:	https://www.tva.com/kids/electricity/hydroelectric-power
Solar power:	https://www.tva.com/kids/electricity/tva-green-switch/solar-power
Nuclear plants:	https://www.tva.com/kids/electricity/nuclear-power
Natural gas plants:	https://www.tva.com/kids/electricity/natural-gas-plants
Pumped storage:	https://www.tva.com/kids/electricity/hydroelectric-power

The History of TVA

https://www.tva.com/kids/tva-history

If you were carried back in time to 1933, you might not recognize most areas in the Tennessee Valley, the region that runs through seven Southeastern states and surrounds the Tennessee River.

At that time, the region was in bad shape compared with the rest of the United States. It was dangerous to travel on major stretches of the Tennessee River. Many people who lived in the Valley had no electricity and were barely getting by. Farmers were suffering because the soil where they grew their crops was poor and worn out.

To make matters worse, the entire country was in the middle of a huge economic slump known today as the Great Depression, which meant many people had no jobs. Many families in the Tennessee Valley region were unable to buy or grow enough food to stay healthy.

When our 32nd president, Franklin Delano Roosevelt, entered office in 1933, he wanted to help the people of the Tennessee Valley become more prosperous, healthy and productive. To do this, President Roosevelt signed the Tennessee Valley Authority Act on May 18, 1933.

This act of Congress created the Tennessee Valley Authority (TVA), a federal corporation. The new agency was asked to tackle important problems facing the Valley, such as flooding, providing electricity to homes and businesses, and replanting forests. Other TVA responsibilities written in the act included improving travel on the Tennessee River and helping develop the region's business and farming.

Today, TVA has certainly lived up to President Roosevelt's hopes. TVA is the largest public power company in the United States. The agency also carefully runs the nation's fifth-largest river system to reduce flood damage, make rivers easier to travel, provide recreation and protect water quality. The Tennessee Valley is now a great place for families to live and work.

- **Printable history booklet:** https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/kids/tva-history-for-kids.pdf?sfvrsn=b66347e_2
- **Downloadable TVA Historical Photos to use in the classroom:** https://www.tva.com/kids/resources/tva-historical-photos

September activities

Classroom Power Down

In this activity, students prepare their classroom for break. You'll want to discuss the best way for each classroom to initiate power-down behaviors each day, weekend and long break.

Some schools may have teachers focus on this task, while others may ask students to be self-motivated to complete this task on the teacher's behalf.

Instructions

1. Review the attached checklist, identify the highest priority items for all classrooms in your school and find ways to roll out all checklist items school-wide by the end of the year.
2. Have students determine the things on their checklist that must happen each day and what will happen before long breaks.
3. Have students practice their daily power-down skills.
4. Print copies of the checklist for each classroom and determine who will be responsible for using the checklist.
5. On the last day of school before a long break, go through the classroom together to turn off, unplug and adjust all the items from your checklist.

Here are some things to look out for:

- Close doors, windows, blinds and shades. This helps the building's heating, ventilation and air conditioning work as it should.
- Turn off lights and ceiling fans. This eliminates the energy use that comes from powering them.
- Unplug electronics. Even when a device is turned off, it still uses electricity. Avoid unnecessary power waste by unplugging! Not sure if something should be turned off or unplugged? Check with your school's Energy Champion!

Find the classroom Power Down checklist at the end of this section.

Or to download and print it, visit EnergyRight.com/school-uplift-resources

Quick tip! When students remember every item on the checklist, don't forget to celebrate their teamwork in saving energy!

Classroom Power Down Checklist

Daily

- ☐ Close doors, windows and blinds/shades.
- ☐ Turn off lights, ceiling fans and decorations.
- ☐ Turn off TVs, radios, DVD players, etc.
- ☐ Turn off computers, monitors, speakers and printers.
- ☐ Turn off document cameras (Elmo), overheads and projectors.
- ☐ Turn off interactive whiteboards (SMART Board, Promethean ActivBoard, etc.).
- ☐ Turn off lamps and personal appliances (coffee makers, fans, space heaters, etc.).
- ☐ Turn off bathroom exhaust fan.

Short breaks

- ☐ Unplug TVs, radios, DVD players, etc.
- ☐ Unplug computers, monitors, speakers and printers.
- ☐ Unplug document cameras, projectors and interactive whiteboards.
- ☐ Unplug personal appliances (coffee makers, fans, space heaters, etc.).
- ☐ Unplug lamps (floor, desk, etc.), air fresheners and decorations (such as string lights).
- ☐ Unplug chargers (cellphones, laptops, etc.).
- ☐ Unplug electric pencil sharpeners and staplers.

Extended breaks

- ☐ Unplug clocks.
- ☐ Empty, defrost and unplug personal refrigerators.
- ☐ Remove perishable items from the classroom.

Common Areas Power Down Checklist

Daily

- ☐ Close doors, windows and blinds/shades.
- ☐ Turn off lights, ceiling fans, air fresheners and decorations.
- ☐ Turn off computers, printers, copiers and laminators.
- ☐ Turn off media equipment and audio systems (excluding PA system needed for emergencies).
- ☐ Turn off small appliances (microwaves, coffee makers, toasters, etc.).
- ☐ Turn off exhaust fans (excluding high humidity spaces and electrical rooms).

Short breaks

- ☐ Unplug computers, printers, copiers and laminators.
- ☐ Unplug small appliances (microwaves, coffee makers, toasters, etc.).
- ☐ Unplug lamps, air fresheners and decorations.

Extended breaks

- ☐ Unplug clocks.
- ☐ Unplug vending machines that do not require refrigeration.
- ☐ Empty, defrost and unplug nonessential refrigerators.

Measuring Energy Usage with a Digital Watt Meter

Students can use the digital watt meter from your School Uplift Welcome Kit to measure and analyze a classroom appliance's energy consumption (in kWh) to understand the impacts of Energy Vampires. Energy Vampires can draw power from the outlet even when the appliance is powered off.

What Is a Digital Watt Meter?

A digital watt meter is a small device that helps measure how much electricity an appliance uses. It works by checking the voltage (electric power) and current (electric flow) and then multiplying them to find the power in watts (W).

How Does It Work?

- Measures the electricity flowing through a device.
- Calculates power using a simple formula:
- Power (W) = Voltage (V) × Current (A)
- Displays the results on a digital screen.
- Plugs into a wall outlet, and the appliance plugs into the meter.

What Can It Measure?

- Power (W) – How much electricity a device is using right now.
- Energy (kWh) – The total electricity used over time.
- Voltage (V) – The strength of the electricity.
- Current (A) – How fast the electricity is flowing.

Materials:

- Digital watt meter
- Classroom appliance (Chromebook charge cart, mini fridge or similar)
- Data recording sheet
- Calculator (optional)

1. **Introduction**
    - Discuss the concept of energy consumption and why it is measured in kilowatt-hours (kWh).
    - Introduce the digital watt meter and explain its function.
    - Explain the experiment: measuring energy use of an appliance in different states.

2. **Experiment Setup**
    - Identify electricity-consuming school appliances that may be known as "Energy Vampires."
    - Determine the amount of time that data will be collected in each operational state.
    - Distribute data recording sheets.

3. **Data Collection**
    - **First Observation:** Plug the appliance into the digital watt meter and record the power usage when the appliance is powered on.
    - **Second Observation:** Turn the appliance off but keep it plugged in, then record the power usage.
    - **Third Observation:** Unplug the appliance completely and check for residual power consumption.
    - Students should note the readings and discuss any unexpected findings.

4. **Analysis & Discussion**
    - Compare data across groups and identify trends.
    - Discuss the concept of Energy Vampires and draw a conclusion.
    - Brainstorm ways to reduce unnecessary energy consumption.

5. **Conclusion & Reflection**
    - Have students summarize their findings.
    - Discuss real-world applications and personal energy-saving habits.

Extension Activity:
Research the energy consumption of household appliances and create an energy-saving plan for home use.

MEASURING ENERGY USAGE WITH A DIGITAL WATT METER

Appliance	**Powered On** (kWh)	**Powered Off, Plugged In** (kWh)	**Unplugged** (kWh)

Observations:

MEASURING ENERGY USAGE WITH A DIGITAL WATT METER

Appliance	**Powered On** (kWh)	**Powered Off, Plugged In** (kWh)	**Unplugged** (kWh)

Observations:

October activities

National Energy Awareness Month

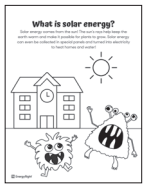
Your School Uplift kickoff is a great time to tie in October's National Energy Awareness Month. Below are some suggested activities that focus on raising awareness of energy. (Don't forget, all activities are optional!)

Energy in action

Keep it fun! Help students find and identify all the ways energy is used every day in their lives at school, at home and everywhere they go!

EnergyRight® Monsters coloring sheets

Use the included *EnergyRight® Monsters Coloring Sheets* with your class. These resources help students learn about energy sources like nuclear, solar, natural gas, hydro, wind and coal.



Find your coloring sheets at the end of this section. Or to download and print them, visit EnergyRight.com/school-uplift-resources.

Class Lightkeeper

This activity gives each student an opportunity to lead the class in turning off the lights when the classroom is empty. Depending on the size of your class, you can introduce a new Lightkeeper every week, every other week or once a month. Highlight the Lightkeeper with a poster showing their name and photo!

Find the *Official Class Lightkeeper Certificate* at the end of this section. Or visit EnergyRight.com/school-uplift-resources to download and print it.

Outdoor scavenger hunt

This activity is designed to help students make the connection that energy is all around them. In this activity, challenge students to identify the different types of energy they see, feel or hear during a walk through and around the school.

Teacher key

1. Give each student an *Outdoor Scavenger Hunt Sheet*.
2. Help students identify types of energy as they walk through and around the school. Have students circle each type of energy they find.

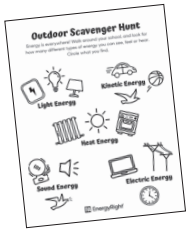
   a. Kinetic (motion) energy: Kinetic energy includes any object (even inanimate) that is in motion. As you walk, highlight objects in motion, like birds flying, cars moving or even students walking!

   b. Light energy: Light energy is everywhere! Help students to notice the lighting systems inside the school. And don't forget about the sun outside!

   c. Heat energy: Heat energy includes the sun, cars and even the human body — anything that can transfer heat from one object to another is fair game!

   d. Electric energy: The best example of electric energy outside the school building is power lines. Inside the school, look for electronic devices, mechanical equipment and lights.

   e. Sound energy: Ask students to point out the things they hear, and help them make the connection that it's sound energy at work. Highlight cars driving past the school, birds chirping or people talking.
3. At the end of the scavenger hunt, ask students to share what types of energy they observed and circled on their *Outdoor Scavenger Hunt Sheet*.
4. You can also use the handout as a coloring page.



Find your *Outdoor Scavenger Hunt Sheet* at the end of this section. Or visit EnergyRight.com/school-uplift-resources to download and print it.

Local power company engagement

Your local power company (LPC) is a great resource for energy education and awareness materials. School Uplift is an opportunity for your LPC to connect with and educate its future customers. LPCs may provide their own ideas, show a video or give a presentation on the basics of how electricity is distributed and delivered within your service area. LPC-led education can be coordinated through your Energy Coach. They'll connect you with the right people for the activities listed below.

Ideas for LPC activities

- Invite TVA or LPC employees to visit the school and share more about their jobs.
- Ask your LPC if it has an electric vehicle students could explore.
- See if your LPC can conduct an electricity safety demonstration.
- Invite your LPC to host a booth at an open house or parent-teacher conference.
- Take a field trip! Your school might be able to take advantage of proximity to energy-generation resources to help students become better acquainted with energy production. Field trip sites could include hydroelectric dams or solar farms. If you can't visit a hydroelectric dam in person, consider taking a virtual field trip using videos found on TVA's website at TVA.com/kids/electricity/virtual-field-trips.

Celebrate Public Power Week

Held the first full week of October

Public Power Week is celebrated by the approximately 1,400 American Public Power Association member utilities in the U.S. to help customers better understand community-owned power and its benefits.

Public power is how your school, and most of the Valley, receives electricity. A focus on public power can help educate the school community on what public power is, its benefits and how it affects the school.

Celebrate Public Power Week by sharing resources from the American Public Power Association:

- Show this 90-second video during an assembly, a class or extracurricular discussion on energy. Find it at youtu.be/Bz55GDlWL5U.
- Print out these public power coloring sheets for students to use: publicpower.org/event/public-power-week#event-1.
- Learn more here: publicpower.org/event/public-power-week.

Additional resources

TVA has a ton of great resources available to K-12 schools. Don't miss our workshop for elementary-age students where we go over the basics of how energy is produced, how it's used and how it can be used wisely. This facilitated workshop is interactive and comes with take-home materials, including activity sheets, a memory game, sticker clings and more. Learn more about the workshop at EnergyRight.com/residential/energy-monsters.

Check out all the available resources at TVASTEM.com.

TVA Kids offers online resources for schools, families and children to explore TVA's history, see how electricity is produced, take virtual field trips, learn about energy and the environment and much more. Learn more at TVA.com/kids.

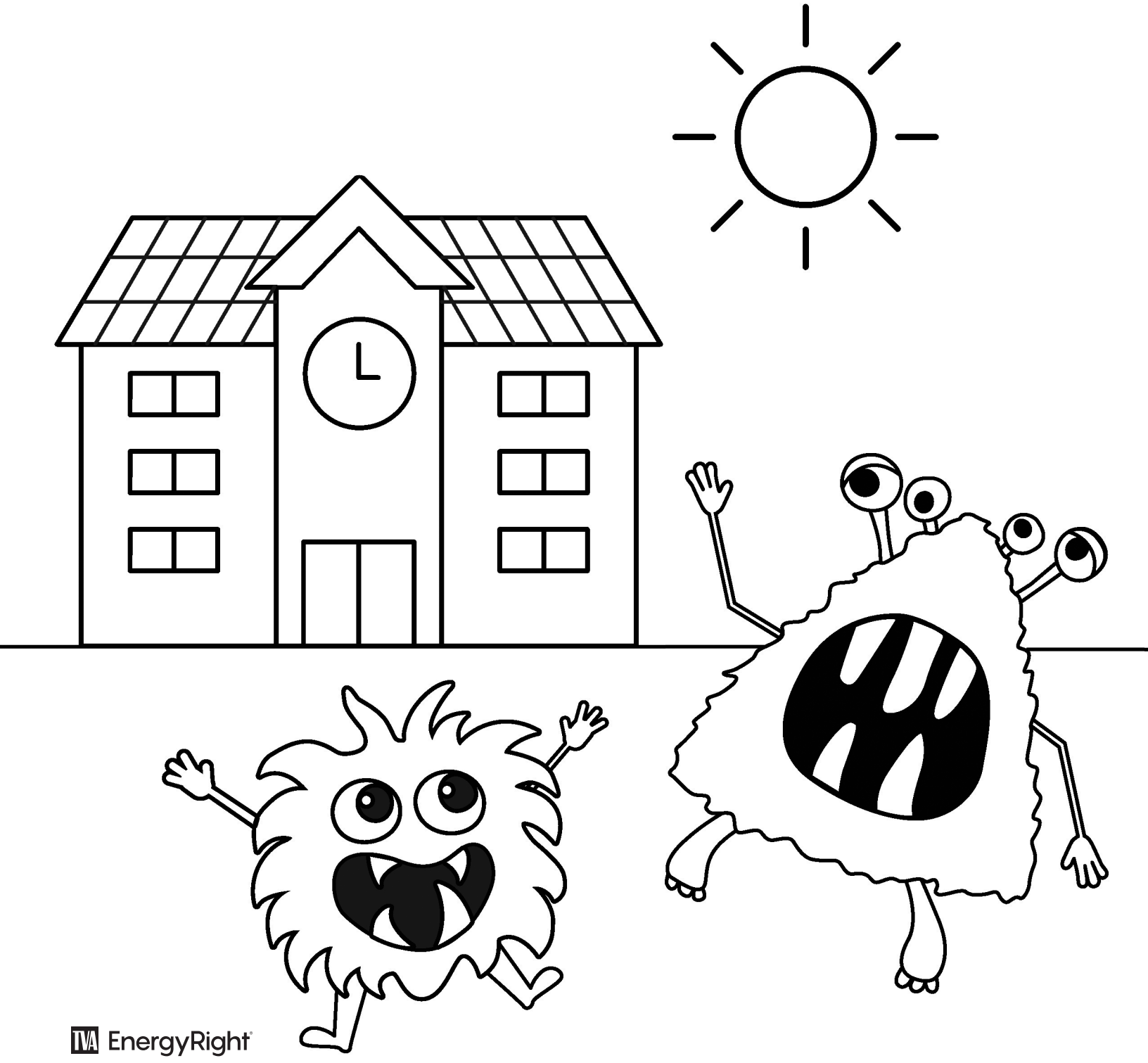
The U.S. Energy Information Administration offers a teacher guide with age-appropriate resources and activities. Learn more at eia.gov/kids/for-teachers/teacher-guide.

The National Energy Education Development Project provides grade-appropriate activity books and games:

- K-2: issuu.com/theneedproject/docs/primaryinfobookactivities_7ec92aae6fd069.
- 3-5: issuu.com/theneedproject/docs/elementary_energy_infobook_activities.
- Energy Bingo: need.org/resources/energy-bingo-games.

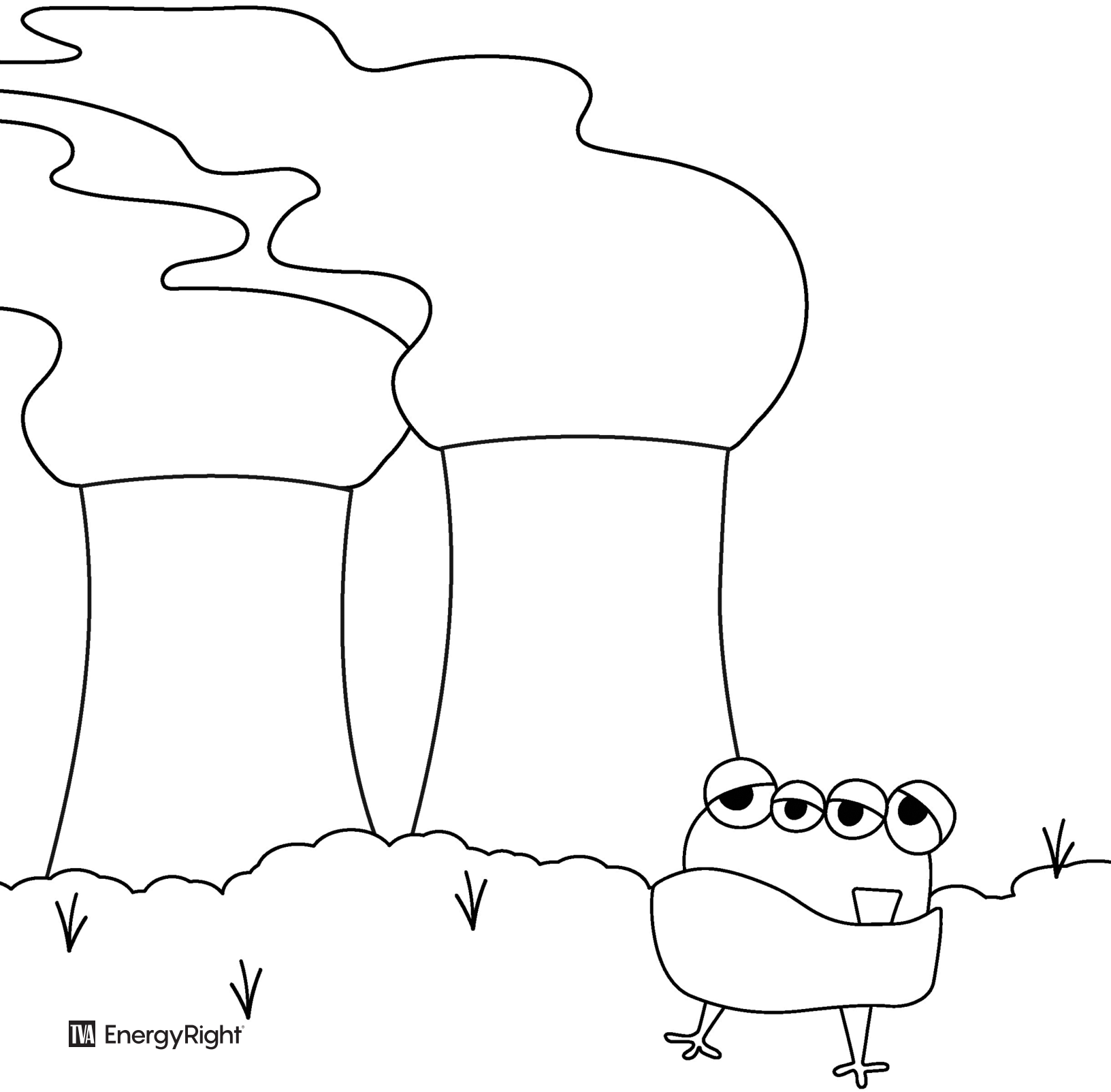
What is solar energy?

Solar energy comes from the sun! The sun's rays help keep the Earth warm and make it possible for plants to grow. Solar energy can even be collected in special panels and turned into electricity to heat homes and water!



What is nuclear power?

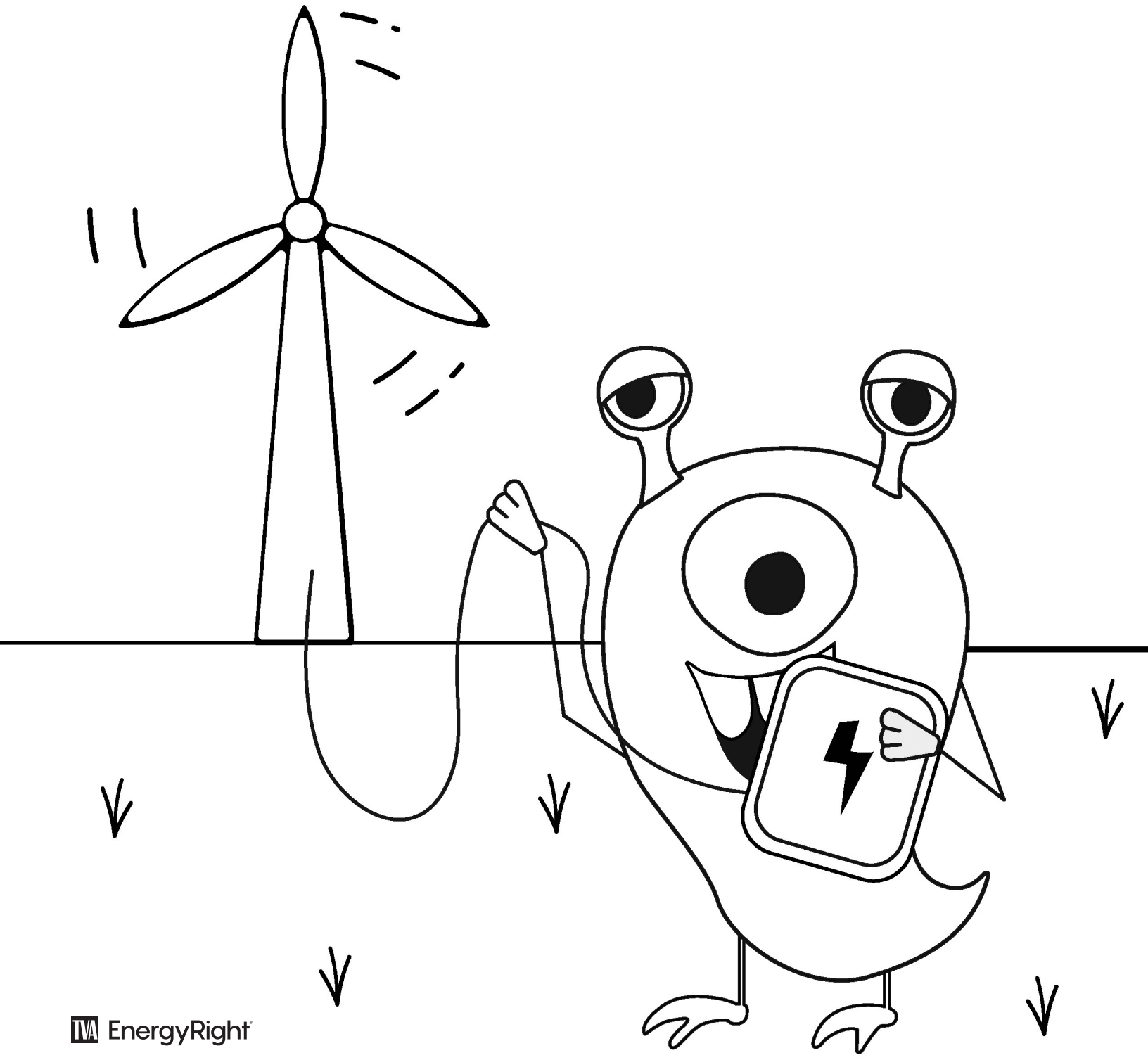
Nuclear power is made when an atom is broken up into smaller atoms. This energy can be turned into electricity! Nuclear power is very powerful, so it has to be used carefully.



TVA EnergyRight®

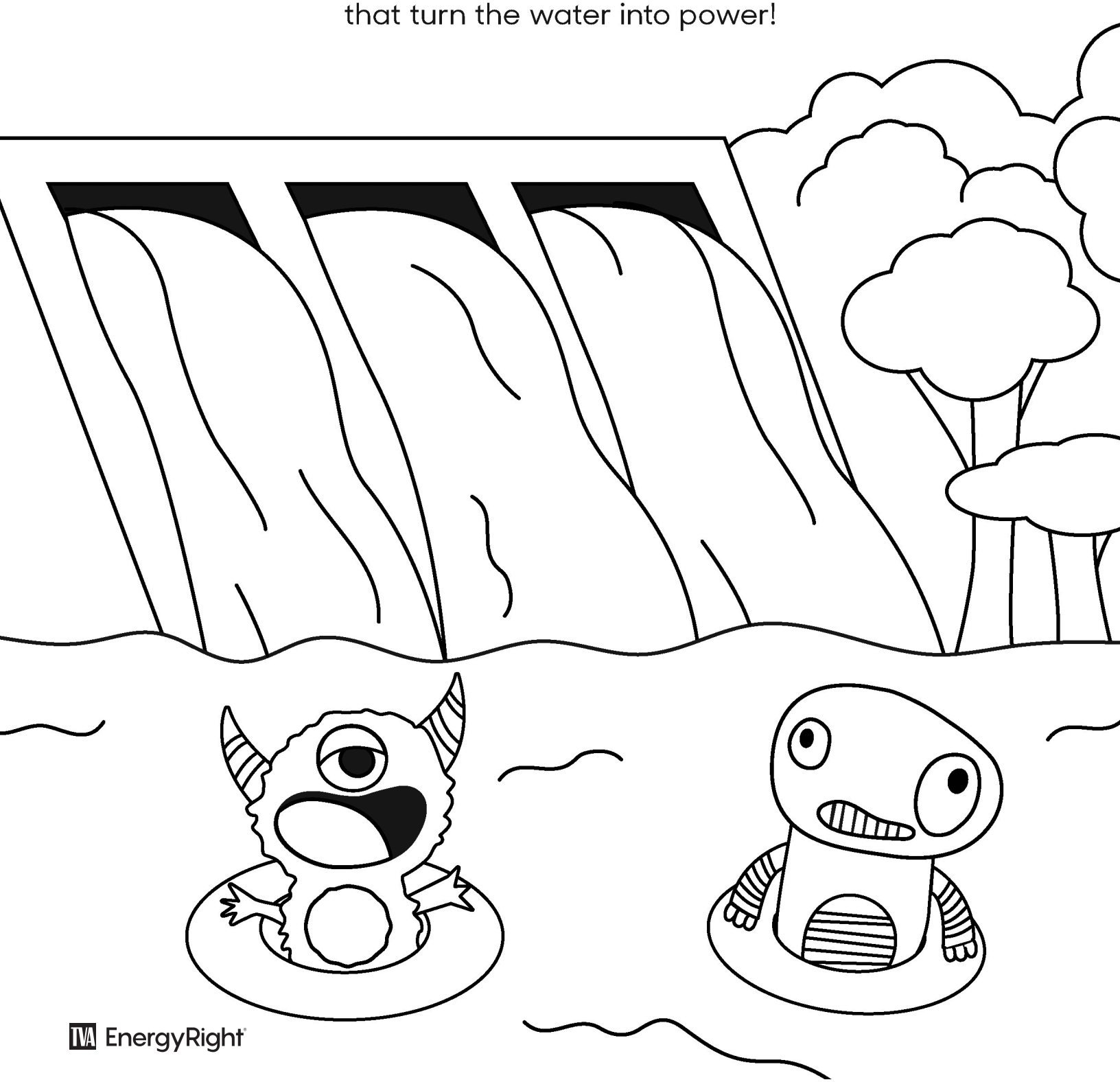
What is wind energy?

Wind can blow leaves around your yard or cool your face on a hot day. It can also make electricity! When giant wind turbines spin in the wind, they make energy that can be used to pump water and even run machines!



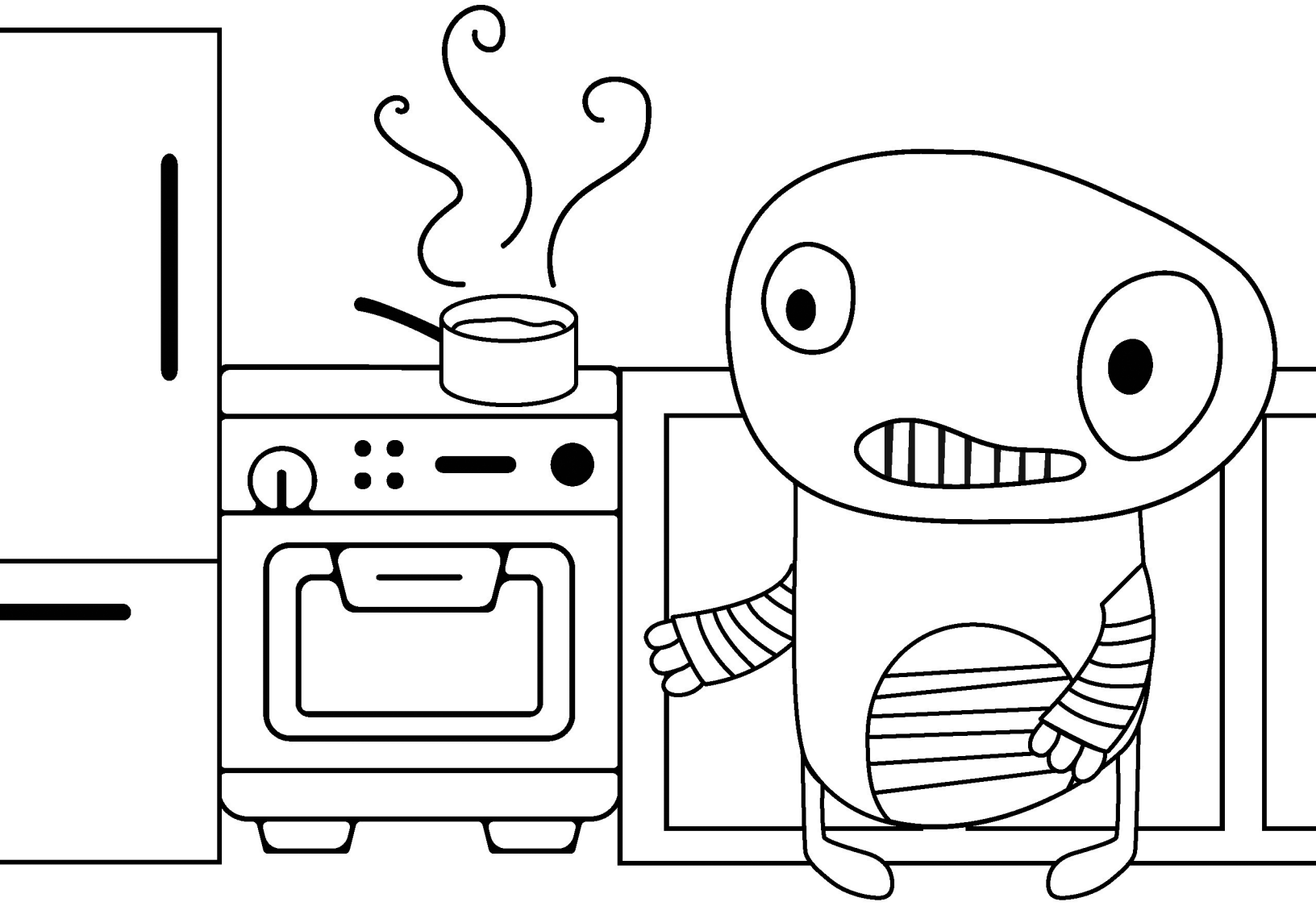
What is hydroelectricity?

Hydroelectricity is a fancy way of saying energy made by moving water! A dam blocks the flow of moving river water so that it can be collected in a giant reservoir. Then, when energy is needed to make electricity, the water is let go. The water pushes turbines that turn the water into power!



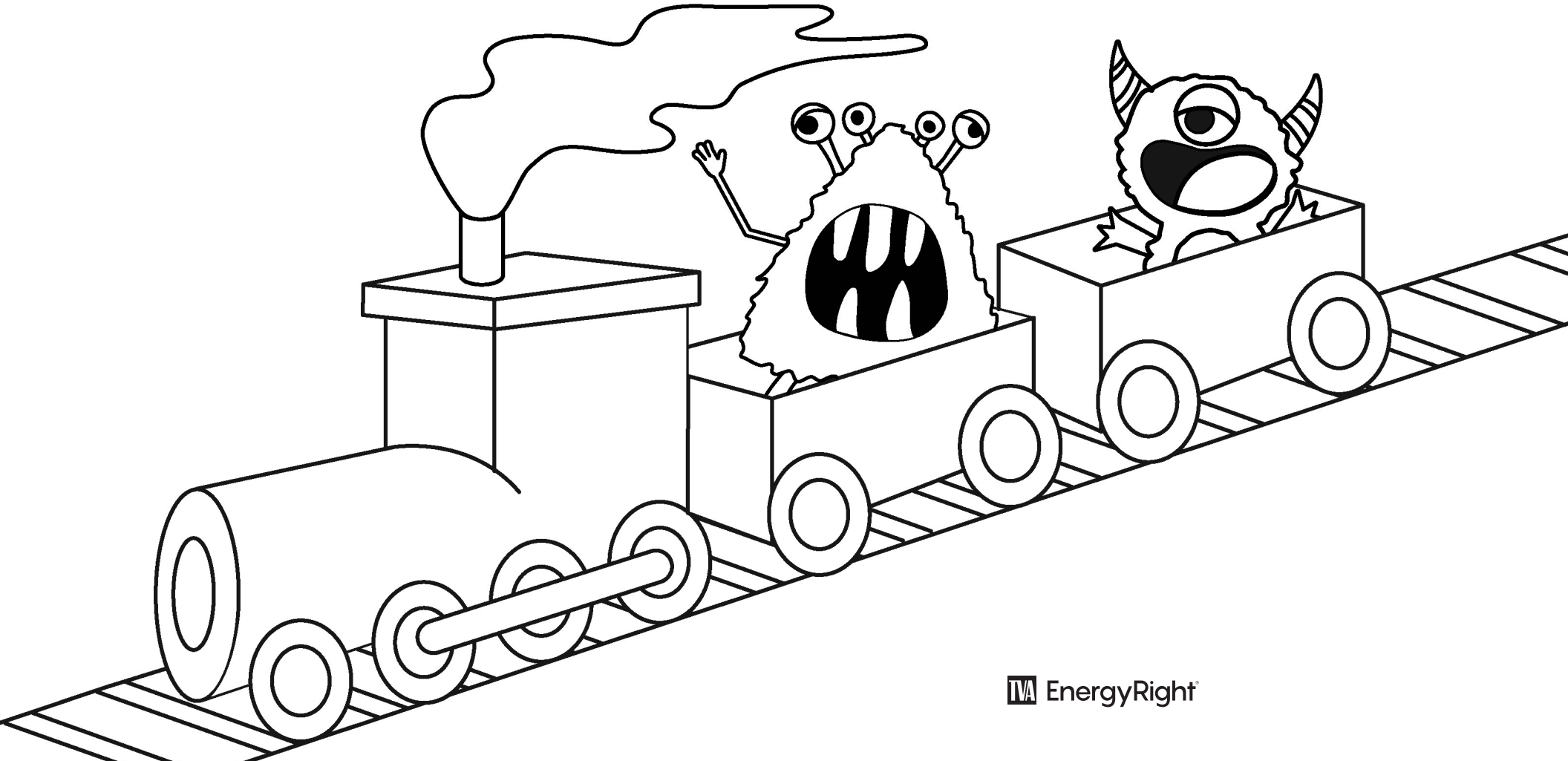
What is natural gas?

Natural gas takes millions of years to make! It's found deep in the ground. When natural gas burns, it can turn a generator that makes electricity. Some people have gas stoves and use natural gas to cook. Since natural gas is a nonrenewable resource and can run out, we have to be careful not to use too much.

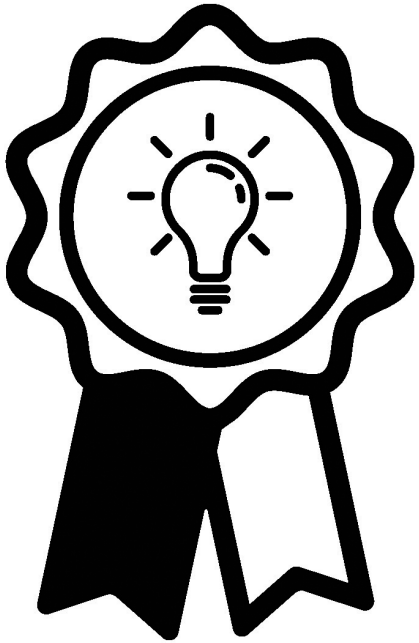


What is coal?

Coal is a type of black rock that can be burned to heat water and make steam. The steam moves turbines that connect to a generator. The generator makes electricity! Coal is a nonrenewable resource. That means it can run out, so we have to be careful not to use too much.



TVA EnergyRight®



This certificate shows that

_____

is the

Official Class Lightkeeper

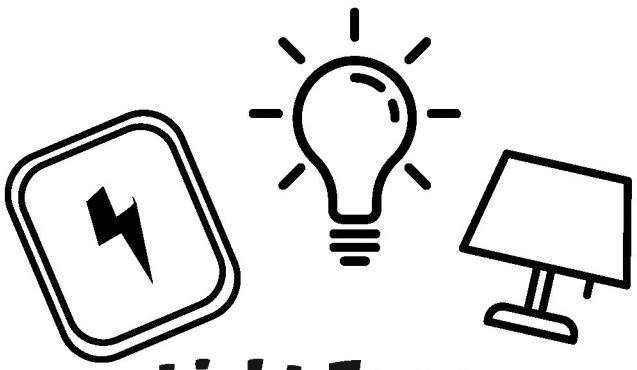
for

_____ 's class

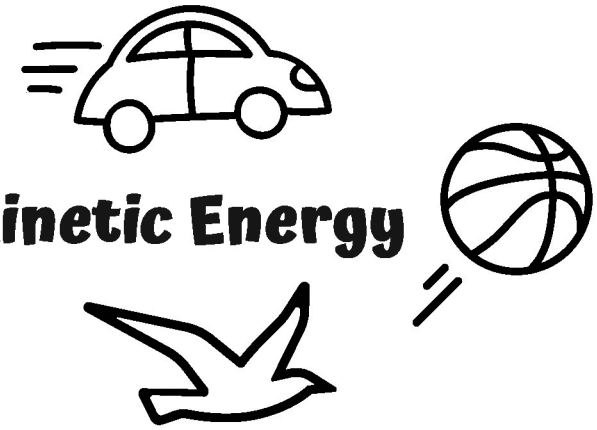
TVA EnergyRight®

Outdoor Scavenger Hunt

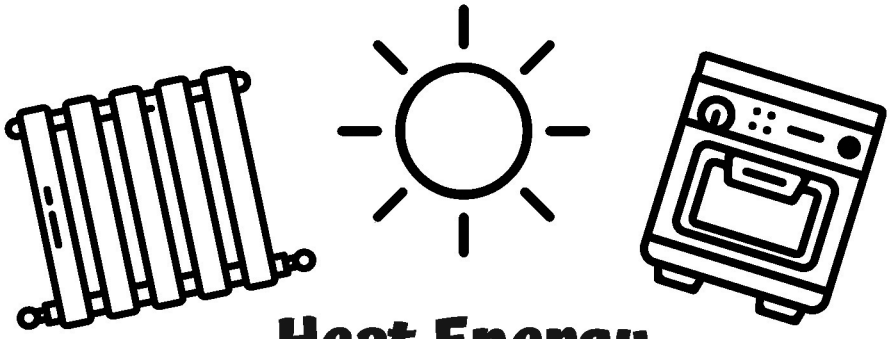
Energy is everywhere! Walk around your school, and look for how many different types of energy you can see, feel or hear. Circle what you find.



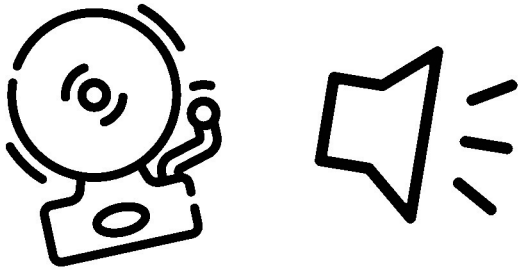
Light Energy



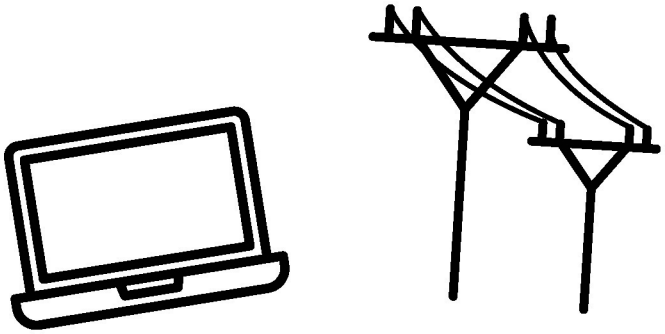
Kinetic Energy



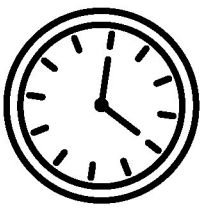
Heat Energy



Sound Energy



Electric Energy



November activities

Energy Pledge Month

Energy Pledge Month builds on all the energy awareness your students gained in October and encourages everyone in the school to pledge their commitment to making more energy efficient choices. Why? Because more energy efficient choices mean a more comfortable learning environment, a decrease in impact on the environment and a reduction in building utility costs, which leaves more money for school programming. Win-win-win!

As always, all the activities are optional. But we encourage schools to give them a try! It reinforces the "all hands on deck" approach to School Uplift and fosters energy-saving behaviors among students.

The process below is designed for classrooms, but the Energy Pledge theme and supporting activities can be adapted for extracurricular use.

To make this month's theme easy to roll out, we'll walk you through five key stages for creating and implementing your Energy Pledge:

1. Identify the pledge
2. Adopt the pledge
3. Track your progress
4. Reinforce the pledge
5. Celebrate the pledge

Let's dive in!

1. Identify the pledge

The goal here is to connect the key concepts and behaviors students learned during October's Energy Awareness Month with energy-saving commitments students can make to start seeing a difference in energy reduction at school and at home. Here are some activities and resources to help you get started.

Teacher key

- Use class time to have students discuss different energy-saving behaviors they could practice and what impact they think the practices might have. Try these prompts, or come up with your own:
  - What are some ways we can save energy in our classroom? What about the hallway? The cafeteria? The gym?
  - How do you think practicing these energy-saving behaviors will help our school community?
  - How will our actions help the environment?
  - How could you practice some of these things at home?
- Have students brainstorm types of pledges they can make together as a classroom. Write down on the whiteboard or a piece of paper all the behaviors students brainstorm. Here are some examples:
  - Turn off the lights when we leave the classroom.
  - Make sure all electronic devices in the classroom are unplugged. If they can't be unplugged, make sure electronic devices are plugged into a smart strip when they're not being used or at the end of the day.
  - Shut off water when it's not being used, like while you're soaping your hands in the restroom.
- Have students vote for the top energy-saving pledge they want to make together, using your list of brainstormed ideas.

You can also have students come up with their own personal energy-saving behavior pledge to practice for the month at school and at home. Encourage your students to share with the class why they chose their unique pledge.

2. Adopt the pledge

After students select an energy-saving behavior, the next step is to adopt the pledge! For the next month, students will put their pledge into action. You'll also want to share your classroom's pledge. Sharing the pledge publicly not only will provide students with greater support and accountability but can also inspire other students or classrooms to make their own pledges.

Teacher key

We've provided *Energy Pledge Card Templates* at the end of this section, but you can also have students create their own! Here are a few suggestions for creating your own pledge cards and how to display them publicly:

- **Pledge hands:** Have students trace their hands on scrap paper, cut them out and then write their names and pledges on the hands. **Bonus:** Using scrap paper provides an opportunity to talk about the importance of reusing materials!
- **Pledge tree:** Using butcher paper, draw the outline of a tree and branches. Have students trace their hands on scrap paper to make "leaves." Have students write their names and pledges on the leaves. Hang the leaves from the tree.
- **Create your own:** Lead students in creating their own unique way of highlighting their pledges!

Don't forget to show off your pledges! Post the pledges around the *Our Energy Pledge Sheet* found at the end of this section.

At the end of November, give the students their pledge cards to take home and share with their caregivers.

Find the *Our Energy Pledge Sheet* and *Energy Pledge Card Templates* at the end of this section. Or to download and print them, visit EnergyRight.com/school-uplift-resources.

3. Track your progress

To keep your students engaged throughout the month, use your tracking chart so students can see the progress they're making as a class or individually.

Teacher key

- Use the provided *Energy Pledge Tracker*. Write your students' names in, and offer them a chance each day to color or place a sticker in their squares when they've followed through with their pledges. This tracker can be used for individual or classroom-wide pledges.
- Place your *Energy Pledge Tracker* near your students' pledge cards.
- At the end of each school week, review the tracker with your class. Create a reward for 100% completion.

Find the *Energy Pledge Tracker* at the end of this section. Or visit EnergyRight.com/school-uplift-resources to download and print it.

4. Reinforce the pledge

Spread the enthusiasm outside your school! Reinforce the pledges by sharing them with families and caregivers, school board members and other community stakeholders.

- Share information like the number of students making pledges, the number and types of pledges made, and photo or video content of students following through with their pledges (if this is in line with school policy).
- Share the results to:
  - Your school's newsletter.
  - Your school's social media accounts.
  - Take-home handouts.

Remember, the end of the month doesn't have to be the end of the pledge! Continue encouraging students to stick with their pledges or to try a new one. **While the monthlong commitment is important, the ultimate goal is to create lasting energy-conscious choices and behaviors.**

5. Celebrate the pledge

Don't forget to celebrate your students' hard work! Here are some simple ways to do that.

- **Share the results:** Talk about the results of Energy Pledge Month in schoolwide or classroom discussions, staff meetings, social media updates and updates to caregivers. Recap things like the number of students making pledges, the number and types of pledges, the most creative pledges, etc. Work with your Energy Team to view specific energy-reduction metrics.
- **Offer rewards:** To the extent that they're allowed and financially possible, reward students for sticking to their pledges all month. Try one of these ideas, or come up with your own:
  - A class or schoolwide pizza party.
  - Free Day Friday where students get to pick a fun activity to do for the day.
  - A principal shout-out at an assembly, over the PA, in a classroom drop-in or during video announcements.
  - A movie or documentary to watch, for upper elementary students. (Flip back to October activities for a list of fun and engaging energy-related films.)

- **Get feedback:** Have teachers, Energy Team members or other school staff regroup with students at the end of the month to learn about their experiences with Energy Pledge Month. Use their feedback and insights in future School Uplift activities. Ask questions like:
  - What did you like about Energy Pledge Month?
  - What kinds of things did you learn throughout the month?
  - What did you find hard about keeping your pledge?
  - How do you think our actions have helped our school community?
  - How do you think our actions have helped the environment?

Our Energy Pledge

We pledge to

_____

_____

for the month of November to
help our school save money,
be more comfortable
and protect the environment.

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

Energy Pledge Tracker

Fill in the dates across the top row and students' names down the leftmost column.

Name	Date																											

December activities

Power Down Month

Welcome to Power Down Month! The holiday break is in sight, and we want to help you prepare your classroom and school to save as much energy as possible while the school is empty.

This month, we've put together some fun activities for your students so they can play an active role in the power down prep. Plus, you'll find helpful checklists for how to power down your classroom and/or school each day, over the weekend and during longer breaks.

Don't forget, all activities are optional! But for December, we recommend starting with Power Down Trivia before jumping into the rest of the activities.

Power Down Trivia

Power Down Trivia is a fun and interactive way for students to gain an understanding of what needs to be powered down or unplugged in their classrooms! This game takes about 25-30 minutes to play.

Instructions for facilitators

1. Introduce yourself as the trivia host. (See the Script for trivia host section for a detailed script.)
2. Break up the class into small teams of four to five students each. Have them sit together, and give them a few minutes to come up with a fun energy-themed team name.
3. Have students on each team select the order they want to go in. You might need to assign younger students a number.
4. Have all the "ones" line up together.
5. Tell students not to shout out answers until the question and all the answers have been read. Instead, they should raise their hands when they think they have the answer. Teams will lose a point if an answer is given too early.
6. Start the game by reading out the first question and the multiple-choice answers.
7. Call on the first student you see with a raised hand.
8. Give the team one point if the student answers correctly. Keep score on the whiteboard or scrap paper.
9. Call on the next student with a hand up if the first team answered incorrectly. Repeat until someone gets the correct answer.

10. Use each correct answer given as an opportunity to talk about that question's topic. Answers and explanations are on the following pages.
11. Tally the points and announce the winner once you've gone through all the questions! If there's a tie, then both teams are declared winners!

Reward the winning team with a cost-conscious prize or a bonus, like five extra points on their next test, a feature on the classroom bulletin board, etc.

You also have the option to copy the questions into a PowerPoint that you can project onto a wall or screen.

Script for trivia host

- Hello, and welcome to Power Down Trivia — the electrifying game all about energy!
- First, you'll split into teams of four to five students.
- Next, each team member will choose the order they want to go in — first, second, third and so on.
- We'll start by having all the "ones" line up together.
- Then, I'll read a question and four possible answers.
- When you think you know the answer, raise your hand. But please don't shout out the answer! Your team will lose a point if you do.
- I'll call on the first hand I see, and you'll get to give your answer then.
- Make sense? OK, good!
- Then we'll move on to the "twos."
- After all the questions have been answered, I'll tally up the final scores. The team with the most points wins! (If there's a prize, you can announce it here.)
- Who's ready to play Power Down Trivia?!

Grades K–3 trivia questions and answers

1. What technology needs to be powered down when you're done using it for the day?

A. Pencil

B. Notebook

C. **Computer/laptop**

D. Backpack

The correct answer is C! Computers, laptops and tablets use electricity even when they're in sleep or standby mode.

2. When should you turn off the lights in the classroom?

A. In the middle of the day

B. **When no one is in the room**

C. Never

D. Whenever you feel like it

The correct answer is B! Turning the lights off when everyone has left the room is a great way to save energy.

3. Which of these things does NOT use electricity?

A. Ceiling fan

B. Clock

C. Television

D. **Desk**

The correct answer is D! There are many things that use electricity, even if they seem like they don't, like a ceiling fan or clock.

4. When is the best time to shut the windows?

A. **When it's very hot or very cold.**

B. In the morning

C. At the end of the day

D. There's no best time

The correct answer is A! We keep windows shut when it's very hot or very cold, and even when it's raining. That helps us keep the temperature in the classroom comfortable. We should also keep the windows shut anytime the heat or air conditioning is on.

5. What superpower do power strips have?

A. They're strong and can wrestle really well

B. **They have a switch that turns off everything that's plugged into them**

C. They can sing so well they win contests

D. They can make cupcakes appear out of thin air

The correct answer is B! Power strips control the electricity of everything plugged into them. When you're done with those things for the day, they can all be turned off at the same time just by flipping the power strip switch. Then there's no wasted power!

6. Which of these can make electricity?

A. Sun
B. Wind
C. Rivers and dams
D. **All of the above**

The correct answer is D! The sun, wind, and rivers and dams can all be used to make electricity.

7. Why do we want to keep the doors shut when it's very hot or very cold?

A. Because we can
B. To keep the hallways quiet
C. **To help the heating and cooling system save energy**
D. To keep the hot or cold air out of our room

The correct answer is C! The school's heating and cooling system works better when we keep the doors shut during very hot or very cold weather. That means our school stays cooler in hot weather and warmer in cold weather.

8. Not only does turning the faucet off while you soap your hands save water, it also helps save what?

A. Time
B. **Electricity**
C. Animals
D. Air

The correct answer is B! It takes electricity to move water from the tank to the faucet. Plus, if the water is hot, it takes even more electricity to heat the water.

9. Which of these things uses electricity?

A. Printer
B. Copier
C. Monitor
D. **All of the above**

The correct answer is D! All of these devices use electricity. Powering them down when we're not using them saves energy.

10. What are phantom/vampire loads?

A. Warnings on electronic devices that tell you they need to be charged
B. Leftover energy in a device that doesn't get used
C. **The drain of energy from electronic devices and appliances that are turned off but are still plugged in**
D. The energy stored in a device after it's unplugged

The correct answer is C! Electronics continue to use energy any time they're plugged in — even when they're off or in standby mode.

Grades 4-6 trivia questions and answers

1. What needs to be turned off when we leave the room and at the end of the day?

A. **The lights**
B. The thermostat
C. The microwave
D. Water supply

The correct answer is A! Lights help us see, but we don't need them on when no one is around! So always remember to flip the light switch if you're the last one to leave.

2. Which one of these helps keep the temperature of the classroom comfortable and should be closed at the end of the day?

A. Laptops
B. Vents
C. **Blinds/shades**
D. Closet doors

The correct answer is C! Blinds and shades help keep the sun from warming the room through the windows. That matters even more when it's hot outside!

3. Which device controls the temperature of our school and should be adjusted before short and long breaks?

A. The oven
B. **The thermostat**
C. Ceiling fan
D. Electrical outlet

The correct answer is B! Thermostats sense the temperature of a space, like your home or our school, and control the heating and cooling systems. So when we leave for breaks and no one is here, we should adjust the thermostat to a lower temperature in the winter and a higher temperature in the summer.

4. Which appliance in the kitchen uses the most energy?

A. The oven
B. The dishwasher
C. The microwave
D. **The refrigerator**

The correct answer is D! A refrigerator uses almost four times more energy than an oven, the second-largest energy user in the kitchen. So next time you're trying to decide on a midnight snack, make sure to do it with the refrigerator door closed!

5. What should you turn off when you're done using it at the end of the day?

A. **Computer monitor**
B. Cellphone
C. Projector or interactive whiteboard
D. Air conditioner

The correct answer is A! Anytime you're done using a computer, turn the monitor off. It's the part of a computer that uses the most energy. Turning it off will reduce energy waste!

6. Even when it's turned off, which device still uses energy if it's plugged in?

A. TV
B. Charger (cellphone, laptop, etc.)
C. Video game console
D. **All of the above**

The correct answer is D! Any electronic or appliance plugged into an electrical outlet uses power, even if it's turned off.

7. Which of these is not an example of a renewable energy source?

A. **Coal**
B. Solar energy
C. Wind energy
D. Hydropower

The correct answer is A! The coal we use today got its start 300 million years ago when dinosaurs still walked the Earth. Back then, as plant matter on Earth died and decayed, pressure and time formed it into coal. But there is only so much coal on the planet, and it takes a very long time to make. That's what makes it a nonrenewable source of energy.

8. What is not an example of efficient energy use?

A. Turning the lights off when you leave a room

B. Turning off the water while you brush your teeth

C. **Leaving your laptop plugged in overnight.**

D. Closing the windows when the heat or air conditioning is on

The correct answer is C! If it's plugged in, it's using power! This is sometimes called "vampire power" because the device sucks energy even when it's not being used.

9. Which of these things uses electricity?

A. Printers

B. Copiers

C. Monitors

D. **All of the above**

The correct answer is D! All of these devices use electricity. We can reduce energy waste by powering them down when we're not using them.

10. How does saving water save energy?

A. Saving water doesn't save energy.

B. **Energy is used to treat, pump and heat water before and after it comes out of your faucet.**

C. Energy is only used to make water hot.

D. Energy is only used to move the water.

The correct answer is B! It takes energy to treat, pump and heat water before it comes out of your faucet.

Power Down poster

In this activity, you'll have your classroom or smaller groups of students create a poster showing all the ways they can help power down their classroom over winter break. They can draw, write, paint or cut images out of magazines — encourage their creativity! As a bonus option, hold a classroom or schoolwide competition for the most creative poster.

Instructions

1. Create teams of three to five students.
2. Give students a poster, a piece of butcher paper or even an 8.5-by-11 sheet of paper if your class is using scrap paper or printer paper to conserve resources.
3. Explain that their goal is to find in-classroom equipment or appliances — anything that can be powered down over the break. Use the *Classroom Power Down Checklist* found in the September section for helpful ideas to share with your students.
4. Have teams write their items/ideas on their posters with creative illustrations, images, etc., to go with them. You might need to help younger elementary students with the writing.
5. Hang the posters in the classroom or another common area in the school.
6. Have everyone vote for their favorite if you choose to do a competition, and then announce a winner!

Festive Winter Break Shutdown

This long break is full of potential! There are many ways to save money on your power bills with little to no cost to your school. However, behavioral energy savings happen when everyone on campus is aware of the energy efficient behaviors that are most helpful.

Brainstorm with a group of students or your Energy Team to create a festive and engaging way to shut down the whole school before everyone leaves for Winter Break.

"Cool Down for the Holidays" Countdown

Create a school-wide countdown where each day leading up to winter break features an energy-saving tip (e.g., turning off lights, powering down computers). Teachers and students can track progress on a large festive display, such as a snowflake chart where each tip earns a new snowflake.

“Silent Night, Power Down Right” Event

On the last day before break, hold a brief, school-wide moment when all unnecessary lights and electronics are turned off at the same time. Pair it with a winter sing-along or candlelight (battery-operated) celebration to reinforce the importance of conserving energy.

The “Frozen” Classroom Challenge

Challenge classrooms to see who can best "freeze" their energy use before break. Students and teachers ensure all lights, electronics and heating are set to energy efficient settings. The class with the most thorough shutdown earns a “Coolest Energy Savers” award.

Snowman Shutdown Patrol

Assign student “Snowman Shutdown Teams” to check classrooms and common areas for unnecessary energy use before break. These teams can use a checklist to ensure projectors, computers, and lights are off. Recognize the best shutdown efforts with a fun, winter-themed reward.

“Hibernate Your Tech” Day

Dedicate a day before break to educating students and staff about putting computers and devices into low-power modes. Students can create festive reminder signs (e.g., polar bears “hibernating” laptops) to post near classroom electronics, reinforcing energy-saving habits.

Energy Efficient Gingerbread House

Celebrate the end of Power Down Month by making an energy efficient gingerbread house! Find instructions for creating a gingerbread house on the National Energy Education Development Project website here: https://www.need.org/wp-content/uploads/2024/11/GingerbreadHouseActivity.pdf

January activities

Careers in STEM Month

"What do you want to be when you grow up?" Elementary school students hear this question a lot! That's why it's never too soon to start thinking about the possibilities. This month's Careers in STEM activities take students on an exciting career exploration journey where they'll learn about career opportunities in the science, technology, engineering and mathematics fields. We'll find out what leads people to jobs in STEM and discuss the education that's required for these positions. Students will even start imagining themselves in STEM roles!

STEM heroes

There are heroes among us! Encourage students to begin exploring their interests and future goals by engaging with the stories of a few STEM Heroes.

Using the instructions below, share the stories of three STEM Heroes with your students. The suggested questions will help shape the conversation and encourage students to share what they know (and don't know) about these Heroes' chosen careers. After the conversation, students will compare their own interests and goals with what they learned about the Heroes.

Instructions:

1. Before sharing the stories with your students, be sure to get to know your STEM Heroes! You can find their stories on the TVA STEM Careers webpage at TVASTEM.com/stem-careers. The three suggested hero stories are:
    a. **Botanist Adam Dattilo:** TVA.com/powered-by-people-you-know/Adam-Dattilo
    b. **Reactor Engineer David Yancey:** TVA.com/powered-by-people-you-know/David-Yancey
    c. **Zoologist Liz Hamrick:** TVA.com/powered-by-people-you-know/Liz-Hamrick

2. Before watching the videos with your students, ask them questions to get them thinking about the different careers. Start drawing out what they know about each STEM Hero's job. For each Hero, capture the responses on a whiteboard or flip chart.

Sample questions may include:

- Does anyone know what a zoologist does?
- First graders, your job is coming to school every day. What does your job look like? Now, what do you think a normal day looks like for a botanist?
- A reactor engineer works at a nuclear reactor, which is a power plant that uses steam from hot water to make giant turbines spin. Does anyone know what a turbine is? Turbines are like giant fans! So imagine using your breath to blow bubbles. That's what steam does to spin the turbines and make carbon-free electricity. What kind of things would a person who works at a power plant be good at or interested in?

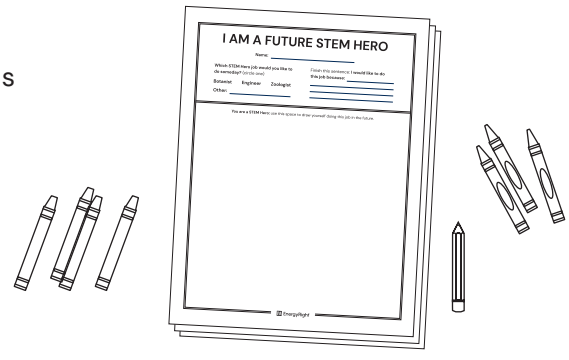
3. After your students share their answers, play the selected STEM Heroes videos.

4. After your students watch the videos, revisit your pre-video questions and your students' initial responses to see if the videos provided them with any clarity, changes or additions. Be prepared with some additional questions that might further students' knowledge of the STEM job. An example question:
    - First graders, we said before the video that a zoologist is probably interested in zoos. However, our STEM Hero Liz seemed to work mostly with bats in caves, not in zoos. Did that surprise you?

5. After hearing the stories, prompt students to think through which job sounds most interesting to them. Encourage your students to imagine themselves in that role. Conclude the activity by having your students draw a picture of themselves in their chosen role. Print out and distribute the *I Am a Future STEM Hero Worksheet*. You can find the worksheet at the end of this section or download it at EnergyRight.com/school-uplift-resources.

Supplies

- Crayons, markers and coloring pencils
- Printed worksheets

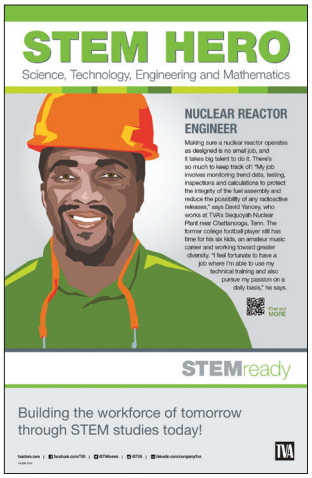


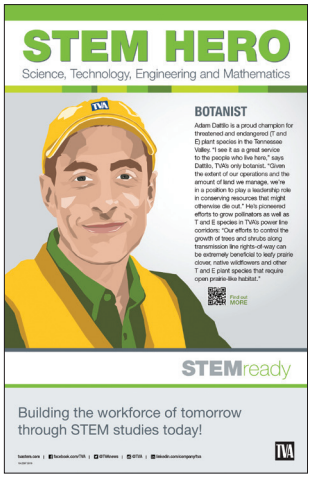
Passive teaching option: STEM Hero posters

Reinforce the STEM Hero activities by printing and hanging eye-catching posters from the TVA STEM Careers webpage: TVASTEM.com/stem-careers. These colorful posters encourage ongoing thought and conversation around potential STEM jobs.

NOTE: The posters can be used to support the active teaching option, or used on their own.

Sample posters:





Additional resources and ideas

Local STEM Hero show-and-tell

Build off the STEM Heroes activity by exploring additional STEM jobs. Contact your Energy Coach to find a STEM industry expert or Hero in your community! For example, invite a lineworker or electrical engineer to visit your class and talk about their work. Prepare students with questions like those used in the STEM Heroes activity.

Use class reading time to highlight books with main characters with STEM interests or in STEM careers.

If you regularly read out loud to your class, consider reading fiction/chapter books with characters that have STEM jobs or who are interested in STEM jobs. Or create a reading nook stocked with STEM-focused books.

STEM book examples:

- "The Questioneers" book series highlights kids interested in STEM work.
- "How to Code a Sandcastle" by Josh Funk.
- "Olga and the Smelly Thing from Nowhere" by Elise Gravel.
- "Emmy in the Key of Code" by Aimee Lucido.
- "Spin the Golden Light Bulb" by Jackie Yeager.
- "Click'd" by Tamera Ireland Snow.

For more examples, visit the National Teaching Science Association (NTSA) website at nsta.org/beststem22.

I AM A FUTURE STEM HERO

Name: _____

Which STEM Hero job would you like to do someday? (circle one)

Botanist **Engineer** **Zoologist**

Other: _____

Finish this sentence: **I would like to do this job because:** _____

_____

_____

You are a STEM Hero: use this space to draw yourself doing this job in the future.

February activities

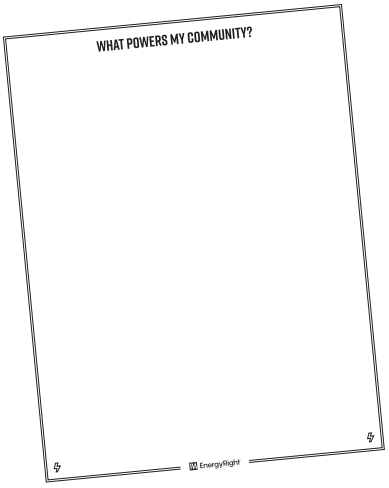
The Power of Community Month

Valentine's Day makes February the perfect time for your students to show their community some love. By conserving energy and saving money through School Uplift, your school is already strengthening the community, but why not get everyone involved? These fun activities bring it all together by getting your friends, families and community members in on the energy-saving action.

What Powers My Community?

Using the *What Powers My Community Activity Page*, encourage your elementary school students to use the white space to illustrate — in pictures or words — what they love about their community.

When the artwork is complete, share the activity pages throughout the community. Libraries, recreation centers, businesses and other community gathering spaces are all great options for your students' art! It's a great way to foster community pride while drawing attention to your school's participation in energy-saving initiatives. We suggest utilizing poster putty or another comparable removable adhesive to hang signage.



The activity page can be found at the end of this section. You can also download it at EnergyRight.com/school-uplift-resources.

Additional resources

Interested in more hands-on opportunities for your community? Check out these resources for additional project ideas and ways to save energy in your community.

Green Apple Day of Service

With a focus on healthy students and a healthy planet, Green Apple Day of Service provides tips and suggestions on organizing fundraisers and projects. Learn how to plan a community-driven project for your school. Visit greenapple.org for more information.

Energy-saving tips for kids

By reminding students why they love where they live, you can also encourage them to take easy steps to help their community save energy. To find some easy ways for students to chip in, check out TVA's energy-saving tips for kids. To learn more, visit TVA.com/kids/electricity/saving-energy.

Check with your local municipality

Your municipality may offer great programs and events that students can get involved in. To find opportunities for your students and their families, check with nonprofits and community organizations such as libraries and community centers. To pull from a larger database, try volunteermatch.org.

WHAT POWERS MY COMMUNITY?

March activities

Solar Spring Month

The sun's awesome power helps fuel and sustain life. It also powers experiments, sparks inventions and lights up our communities! Even though we're already putting solar power to good use, scientists and engineers are always working to discover new and better ways to harness the sun's energy. This month, we're going to put on our lab coats and have some fun finding out how solar energy works. Then, we'll start thinking about ways we can put solar power to work in our school and community.

Solar Balloons

During this simple but powerful experiment, students will discover how color affects solar absorption. The guided questions below are based on the scientific method — question, hypothesize, experiment, observe and draw conclusions — and will help your students have a conversation about the sun's power. The instructions below are written for a full class; if conducting in a small group setting, please modify quantity of materials and instructions as needed.

Materials needed:

- Two (2) – 2-liter soda bottles.
- Two (2) – 9" latex balloons of the same color.
- Black spray paint or black duct tape.
- White spray paint or white duct tape.

Pre-experiment setup:

- Check the weather and select a warm and sunny day for the experiment.
- Make sure both bottles are completely dry before conducting the experiment.
- Spray paint (or duct tape) one of the bottles **black**.
- Spray paint (or duct tape) the other bottle **white**.

Experiment instructions:

1. Take your students and the prepared materials (white bottle, black bottle and two balloons) outside on a warm, sunny day.

2. Share an overview of the experiment. (Question):

> ***Instructor:*** *How powerful do you think the sun is? Today we're going to find out!! We're also going to find out how color affects how the sun's rays are absorbed or reflected. Can anyone give me an example of something that absorbs or is absorbed?* (Examples could include sponge, paper towel, cotton ball.)
>
> ***Instructor:*** *Can anyone give an example of reflection?*
> (Examples could include a mirror, radar or an echo.)
>
> ***Instructor:*** *In this experiment, we have one empty white soda bottle and one empty black soda bottle. We're going to put a balloon over the top of each bottle. Then, we're going to observe what happens.*

3. Ask your students to share what they think will happen to the balloon on the white bottle. (Hypothesize)
4. Ask them what they think will happen to the balloon on the black bottle. (Hypothesize)
5. Then, in a shaded area, put one balloon over the top of the white bottle. (Experiment)
6. Put the other balloon over the top of the black bottle. (Experiment)
7. Place the bottles in direct sunlight. (Experiment)
8. After a few minutes, observe how solar energy is affecting each of the balloons. (Observe)

> *NOTE:* As the bottles heat up, the balloons should begin to expand. The balloon on the black bottle should expand more quickly than the balloon on the white bottle.
>
> **It is important to put the balloons on the bottles while outdoors! DO NOT put the balloons on the bottles indoors.**

Post-experiment conversation guide:

Visit kids.britannica.com/kids/article/alternative-energy/476218 for a few talking points about alternative and renewable energy.

Start drawing conclusions by discussing the experiment and the effects of sun and solar energy. Be prepared to discuss other renewable energy sources such as wind and water as well. Depending on the grade level and the participation, students may need some direction. Point out the benefits of using the sun to create energy. (*Hint:* It's safe and renewable!)

- What do you observe happening to the balloons?
- How are they reacting similarly?
- What's different about the balloons?
- Why do you think this reaction is occurring?
- What effect does the bottle color have on the balloons?
- Where else — outside of this experiment — do we observe the power of the sun?
    - (Examples may include the warm interior of a car on a sunny day, playground equipment on sunny days or pool/lake temperatures in the summer versus winter.)

Use the questions below to continue drawing conclusions about solar energy! Below is a sample script, including answers, to help guide your dialogue.

Q: *Based on our experiment today, would you say that the sun produces energy?*

A: *Yes! The sun does have power.*

Q: *How can you tell?*

A: *We can see that it has the power to blow up balloons, can't we? Did you know that scientists and engineers are always looking for better ways to capture the sun's heat and light to use it as a power source for generating electricity?*

Q: *If we wanted to catch some of the energy from the sun to power our school, how would we do this? Do you know what catches it?*

A: *Solar panels catch the energy and convert it into electricity. Like our black bottle, solar panels are good at collecting sunlight.*

Q: *Has anyone seen a solar panel?*

A: *[If there's no response, be prepared with examples of solar energy you have noticed in your area. Consider examples you could show, such as a solar power calculator.]*

Q: *Do you think catching sunlight and using it for electricity is a good idea?*

A: *Yes! The main reason people are excited about sun energy — or solar energy — is because no matter how much we collect, the sun keeps creating sunshine! Because we won't run out of it, we call it a renewable energy source.*

Q: *Can you think of other sources of renewable energy?*

A: *Wind and water!*

Spring break Power Down

For many schools, March's arrival means that spring break is just around the corner! Before you leave for your much-deserved break, don't forget to power down your school. You'll be surprised by how much energy you can conserve and money you can save during that week!

Check out the December section of your *Engagement Binder* for Power Down tips and suggestions or visit EnergyRight.com/school-uplift-resources.

April activities

Earth Month

Earth Day is celebrated worldwide on **April 22**. But why limit the celebration to one day? Earth Month is a great way to wrap up the school year and your school's participation in School Uplift! Here are some fun, optional activities to help your students celebrate Earth Month and learn more about sustainability.

EnergyRight® Monsters coloring pages

Get your early elementary students fired up about Earth Month with the help of EnergyRight Monsters Watt, Zap, Breaker, Newton, Spark and Bolt. The adorable EnergyRight Monsters featured on the coloring pages help teach students the "three Rs": reduce, reuse and recycle.

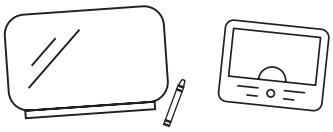
Coloring sheets can be found at the end of this section. You can also download them at EnergyRight.com/school-uplift-resources.

Collect junk mail

Invite your upper elementary classroom or club to learn about paper waste by collecting junk mail for one week.

Supplies

- Whiteboard or recycled paper
- Digital scale



Did you know that:

The United States Postal Service delivered **64.1 billion pieces of marketing mail** in 2020.[1]

The average American adult receives **41 pounds of junk mail** (unsolicited mail such as credit card offers, coupons, flyers or catalogs) each year.[2]

To produce 41 pounds of junk mail for every adult in the U.S., approximately **80–100 million trees** must be cut down each year.[3]

[1] https://facts.usps.com/table-facts
[2] https://www.sierraclub.org/sierra/let-s-ban-junk-mail-already
[3] https://green.harvard.edu/tools-resources/how/4-tips-reducing-your-junk-mail

Teacher key

1. Send your students home with a parent/guardian **permission form** (see below for a sample form) to collect junk mail for one week.

2. Remind students to **bring in their junk mail each day**.

3. Using a whiteboard or recycled paper, **make a chart to track the quantity and total weight** of the daily mail for each student. (see callout example below)

4. Ask each student who participates to **count the number of pieces** they bring in each day and write the total on the chart.

5. Ask each student who participates to **weigh the pieces of junk mail** they bring in each day and write the total weight on the chart.

6. At the end of the week, **add up the total quantity and weight** by each student and classroom/group.

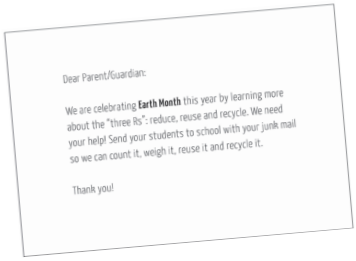
7. Lead a discussion about reducing paper use by asking students questions such as:
   a. How can we **use less paper** in our classroom or club?
   b. How can we **remember to use recycled paper?**
   c. Could this chart paper (if chart is on paper) or junk mail be **reused** in some way?

      Hint: Consider creating artwork or hosting a schoolwide recycling drive.

   d. How can we creatively **share what we've learned** with the school?

Sample permission letter (see page 71)

Dear Parent/Guardian:
We are celebrating Earth Month this year by learning more about the "three Rs": reduce, reuse and recycle. We need your help! Send your student to school with your junk mail so we can count it, weigh it, reuse it and recycle it.
Thank you!


Dear Parent/Guardian:

We are celebrating **Earth Month** this year by learning more about the "three Rs": reduce, reuse and recycle. We need your help! Send your students to school with your junk mail so we can count it, weigh it, reuse it and recycle it.

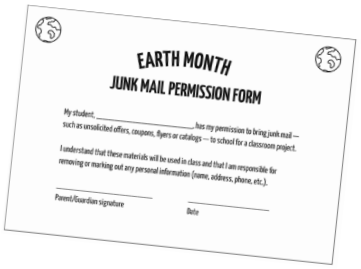
Thank you!

Sample permission form (see page 71)

EARTH MONTH JUNK MAIL PERMISSION FORM
My student, _____, has my permission to bring junk mail — such as unsolicited offers, coupons, flyers or catalogs — to school for a classroom project.

I understand that these materials will be used in class and that I am responsible for removing or marking out any personal information (name, address, phone, etc.).

_____
Parent/Guardian signature


EARTH MONTH
JUNK MAIL PERMISSION FORM
My student, _____, has my permission to bring junk mail — such as unsolicited offers, coupons, flyers or catalogs — to school for a classroom project.
I understand that these materials will be used in class and that I am responsible for removing or marking out any personal information (name, address, phone, etc.).
Parent/Guardian signature
Date

Sample chart (see page 72)

Student Name	Monday	Tuesday	Wednesday	Thursday	Friday	Total
Alisha	2 pieces	3 pieces				
	1.5 oz.	3 oz.				
Keshaun	7 pieces	2 pieces				
	10 oz.	2 oz.				
Alisha	2 pieces	3 pieces				
	1.5 oz.	3 oz.				

Additional activity ideas

- Have students create a schoolwide campaign on reducing paper use.
- Ask students to calculate how much junk mail students' families receive. (Base calculations on your classroom or group metrics.)
- Help your students find out how to unsubscribe from junk mail.
- Conduct a schoolwide "Paperless Day," and encourage classrooms to use recycled paper for any in-class assignments or activities.
- Find out how much paper is used by teachers and staff during a day, week or month. Calculate the equivalent number of trees used to produce that amount of paper.
    - Flex your math skills: One ream of paper (500 sheets) uses 6% of one tree.[4]

[4] https://www.worldatlas.com/articles/how-many-trees-does-it-take-to-make-1-ton-of-paper.html

Additional resources

Going all out for Earth Month? Check out these resources for more great activity ideas and celebrations.

TVA

Learn how to make green choices and help clean up public waterways and lands. Visit TVA.com/environment/enjoy-earth-day-with-tva to learn more.

Your local power company

Check with your local power company to see if they are hosting any events or activities for Earth Day.

Earthday.org

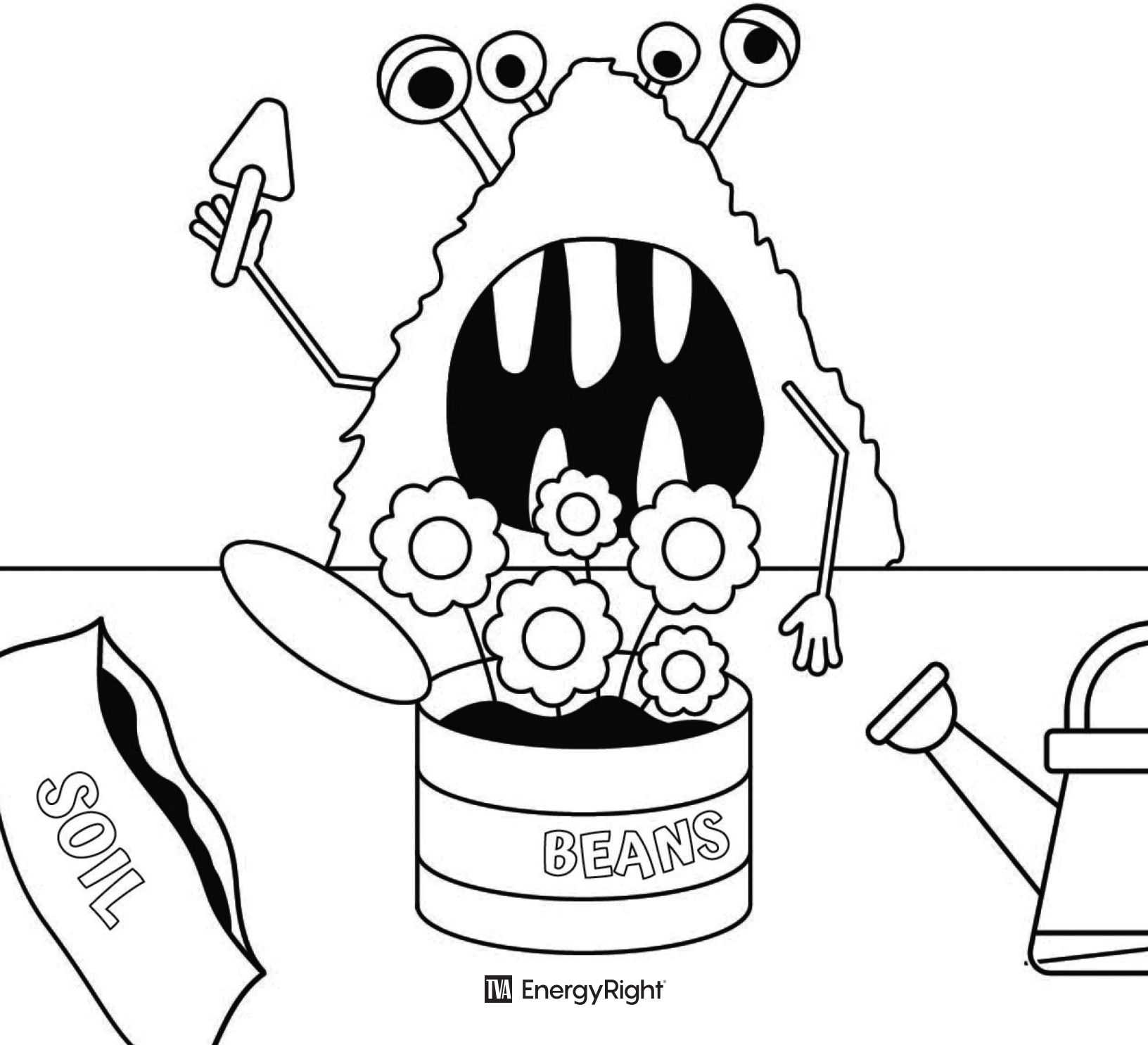
The online Earth Day Environmental Education Resource Library includes resources for classroom, at-home and community learning. Access toolkits, advocacy packets, editable PowerPoint timelines, quizzes and lesson plans. Visit earthday.org/education-resource-library to learn more.

EPA

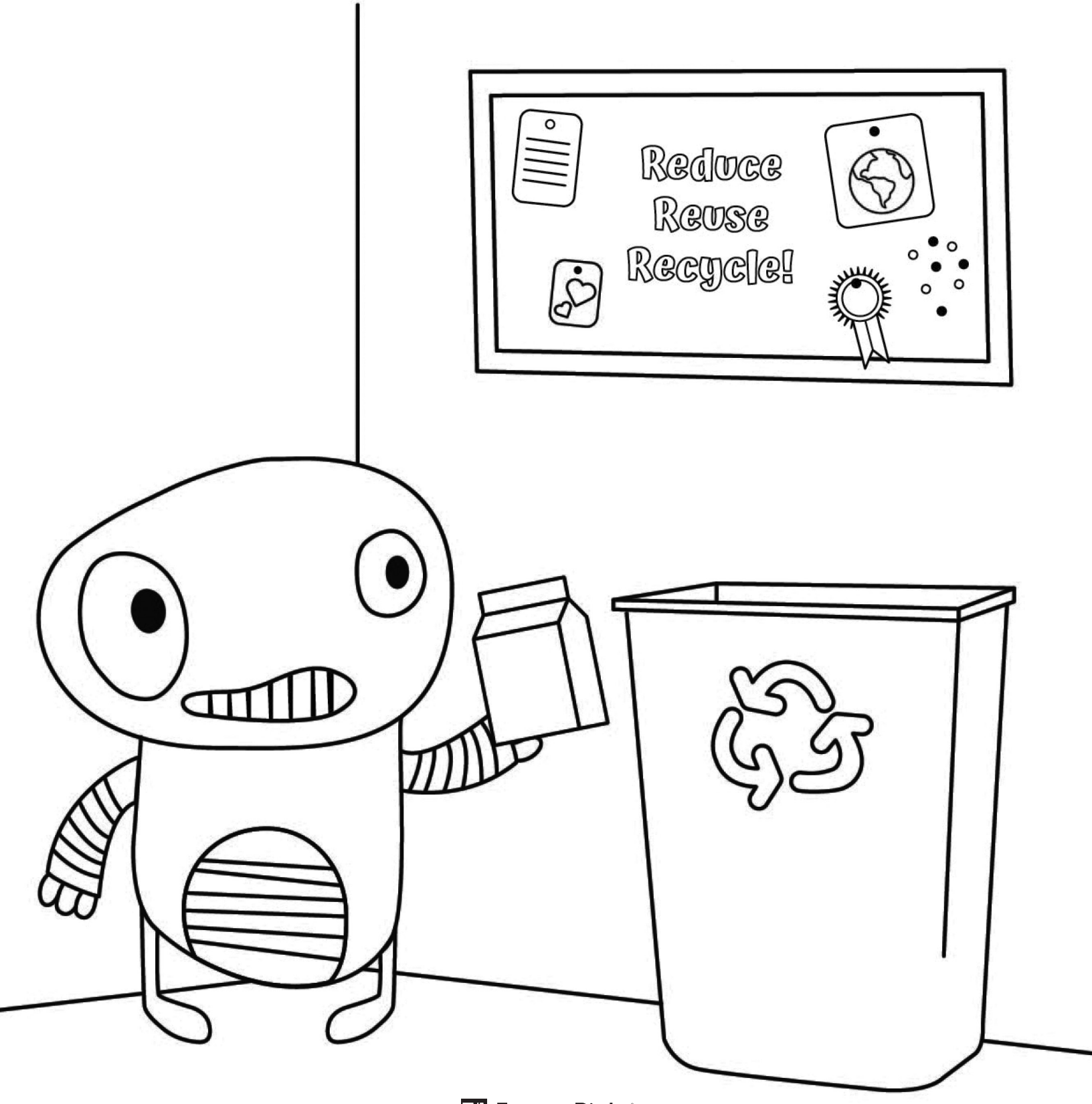
To celebrate Earth Day in the classroom, visit epa.gov/earthday for lesson ideas, facts and homework resources.

Reduce waste by using a reusable water bottle.

Reuse materials to create something beautiful!



Recycle paper and plastic!



Dear Parent/Guardian:

We are celebrating Earth Month this year by learning more about the “three Rs”: reduce, reuse and recycle. We need your help! Send your students to school with your junk mail so we can count it, weigh it, reuse it and recycle it.

Thank you!

EARTH MONTH

JUNK MAIL PERMISSION FORM

My student, _____, has my permission to bring junk mail — such as unsolicited offers, coupons, flyers or catalogs — to school for a classroom project.

I understand that these materials will be used in class and that I am responsible for removing or marking out any personal information (name, address, phone, etc.).

_____ _____

Parent/Guardian signature Date

Student Name	Monday	Tuesday	Wednesday	Thursday	Friday	Total

Introducing School Uplift to middle school students

Now it's time for the really fun stuff — getting the word out! This section is all about how to introduce School Uplift to your students. You'll find talking points, sample scripts and details for your first month of energy-saving activities.

Notes

How to introduce School Uplift to students

You know your school best, so you may already have an idea of when, where and how to introduce School Uplift and the Energy Dashboard to students. Just in case you need some thought starters, we've outlined some ideas on the next few pages.

School assembly segment

- Present the Energy Dashboard, and discuss your school's energy-reduction goal.
- Preview themes and activities for the school year.
- Provide a brief overview of the monthly campaigns and what activities will be happening.
- Provide instructions for getting involved with the school's Energy Team.

Find sample language in the What to say section.

Science classes

Preparing a unit on energy? Connect your Energy Team with your science and physics teachers to bring the Energy Dashboard to life in the classroom:

- Visit the Energy Dashboard, and explain what it is and how it's used.
- Discuss your school's energy-reduction goal and how it shows up in the Energy Dashboard.
- Explain how School Uplift involves students and how they can join the Energy Team.
- Connect energy behaviors and usage to utility bills and real-world expenses.
- Use School Uplift as a way to introduce careers in energy.

Find sample language in the What to say section.

As part of daily or weekly announcements

You can use the sample script below to explain School Uplift to students. **For greater impact and student engagement, consider asking a student representative on the Energy Team to share this announcement.**

Script: Hello, students! This school year, we're doing something new and a little different. We're taking part in a yearlong, schoolwide energy program called School Uplift, offered by TVA EnergyRight® and [INSERT LPC_NAME]. And we're going to need your help!

We've created an Energy Team made up of students and staff who will be helping to make behind-the-scenes changes in the way we operate our buildings. With their help, our school will be able to use energy more efficiently and make everyone's learning environment more comfortable.

Now here's where you come in. We're going to have a bunch of ways for you to get involved this year. So be on the lookout for new announcements each month on how to make better energy choices. Plus, we've created an Energy Dashboard that will show everyone how well our school is using energy and how that affects the environment.

[INSERT ENERGY_CHAMPION_NAME] will share more information with you, including ways you can get involved.

Find additional scripting below in the What to say section.

Open house or parent-teacher conferences

Use this opportunity to share about School Uplift with caregivers and community members. Have Energy Team members stand by the Energy Dashboard and introduce the program, your school's goal and how students and staff are participating in energy-themed activities throughout the year.

Sporting events

Take advantage of these prime opportunities to share more about your school's energy goal with students, staff and families. Have Energy Team members share information about School Uplift during halftime, or set up a table with more information. Use the Energy Dashboard to walk visitors through your school's goal and progress toward using energy more efficiently.

What to say

Use the sample announcements below, or create your own to introduce School Uplift to your students.

School Uplift

This year, we're focused on improving our impact on the environment by using energy more efficiently throughout the school.

TVA EnergyRight® and [INSERT LPC_NAME] want to help our school use energy more efficiently through a new program called School Uplift. Using the right amount of energy will save us money, make the school more comfortable and reduce our impact on the environment.

Think about it. Energy is wasted when we leave lights on in empty classrooms or prop open doors to the outside. Even a leaky faucet can mean lots of wasted water — and money — down the drain. The good news is, there are some really easy fixes to these common energy wasters.

But we need your help. You play an important role in saving energy! You'll see reminders around the school to help you practice energy-saving behaviors like turning off the lights when you leave a room or shutting off your laptop at the end of the day. You'll also have an opportunity to take part in energy-awareness activities each month.

Our Energy Team is working hard to make sure the building temperature and other controls are set correctly so that our school is more comfortable and energy efficient.

We all have a role to play in saving energy and reducing our impact on the environment. Thank you for jumping in and getting involved.

Energy Dashboard

We'll be testing ourselves each month as a school to make sure we're meeting our energy-reduction goal. The Energy Dashboard will be available for everyone to see.

[Share an example from your school, e.g., "Last year, the hall lights stayed on until it got dark. This year, all the hall lights will be turned off 30 minutes after the last bell."]

Monthly energy themes and activities

To help reach our energy-reduction goal, we'll be participating in monthly energy-related activities to learn about energy-saving behaviors.

Here are some of the themes we'll highlight throughout the school year:

- Energy Awareness
- Energy Pledge
- School Power Down
- Careers in Energy
- Power of Community
- Solar Energy
- Earth Month
- What is TVA?

How to get involved

Our school's Energy Team will share more information as we kick off each month's energy theme. But in the meantime, look for posters and stickers around the school to learn simple tips for saving energy.

The Energy Team meets every month to take a closer look at the activities we'll be exploring as a school. If you're interested in joining the Energy Team, contact [INSERT ENERGY_CHAMPION_NAME].

August activities

Introducing TVA

What Is Tennessee Valley Authority (TVA)?

The Tennessee Valley Authority, or TVA, is the largest public power company in the United States. TVA also carefully manages the nation's fifth-largest river to reduce flood damage, make rivers easier to travel, provide recreation, protect aquatic life and keep the water clean. TVA helps make the Tennessee River Valley a good place for families to live and work.

What TVA Does

Have you ever wondered what TVA does? The answer is: many different things.

TVA is the largest public power company in the United States. It's called "public" because it's owned by the U.S. government, unlike most companies that are owned by individual people or investors. Through its electricity plants, TVA supplies power to 10 million people in the Southeastern United States.

In addition to producing power for many Americans, TVA also manages the nation's fifth-largest river system. The Tennessee River flows 652 miles from East Tennessee down into Alabama and back up into Kentucky, where it joins the Ohio River. All along the Tennessee River, TVA employees work to reduce the dangers of flooding, make it possible for boats to travel safely, and keep the water clean.

In the 41,000-square-mile area drained by the Tennessee River, TVA also operates some of the country's best outdoor recreation areas. Although TVA was first set up in 1933 as an agency supported by Americans' tax dollars, today, it runs all of its programs and pays its employees with the money it earns by making and selling electricity.

So, the next time you turn on a computer, drink from the school water fountain or go fishing on a TVA reservoir, you will know what part TVA plays in helping everybody in the Valley lead a better life.

Energy Generation Videos TVA

Fossil plants:	https://www.tva.com/kids/electricity/fossil-power
Hydroelectric plants:	https://www.tva.com/kids/electricity/hydroelectric-power
Solar power:	https://www.tva.com/kids/electricity/tva-green-switch/solar-power
Nuclear plants:	https://www.tva.com/kids/electricity/nuclear-power
Natural gas plants:	https://www.tva.com/kids/electricity/natural-gas-plants
Pumped storage:	https://www.tva.com/kids/electricity/hydroelectric-power

The History of TVA

https://www.tva.com/kids/tva-history

If you were carried back in time to 1933, you might not recognize most areas in the Tennessee Valley, the region that runs through seven Southeastern states and surrounds the Tennessee River.

At that time, the region was in bad shape compared with the rest of the United States. It was dangerous to travel on major stretches of the Tennessee River. Many people who lived in the Valley had no electricity and were barely getting by. Farmers were suffering because the soil where they grew their crops was poor and worn out.

To make matters worse, the entire country was in the middle of a huge economic slump known today as the Great Depression, which meant many people had no jobs. Many families in the Tennessee Valley region were unable to buy or grow enough food to stay healthy.

When our 32nd president, Franklin Delano Roosevelt, entered office in 1933, he wanted to help the people of the Tennessee Valley become more prosperous, healthy and productive. To do this, President Roosevelt signed the Tennessee Valley Authority Act on May 18, 1933.

This act of Congress created the Tennessee Valley Authority (TVA), a federal corporation. The new agency was asked to tackle important problems facing the Valley, such as flooding, providing electricity to homes and businesses, and replanting forests. Other TVA responsibilities written in the act included improving travel on the Tennessee River and helping develop the region's business and farming.

Today, TVA has certainly lived up to President Roosevelt's hopes. TVA is the largest public power company in the United States. The agency also carefully runs the nation's fifth-largest river system to reduce flood damage, make rivers easier to travel, provide recreation and protect water quality. The Tennessee Valley is now a great place for families to live and work.

- **Printable history booklet:** https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/kids/tva-history-for-kids.pdf?sfvrsn=b66347e_2
- **Downloadable TVA Historical Photos to use in the classroom:** https://www.tva.com/kids/resources/tva-historical-photos

September activities

Classroom Power Down

In this activity, students prepare their classroom for break. You'll want to discuss the best way for each classroom to initiate power-down behaviors each day, weekend and long break.

Some schools may have teachers focus on this task, while others may ask students to be self-motivated to complete this task on the teacher's behalf.

Instructions

1. Review the attached checklist, identify the highest priority items for all classrooms in your school and find ways to roll out all checklist items school-wide by the end of the year.
2. Have students determine the things on their checklist that must happen each day and what will happen before long breaks.
3. Have students practice their daily power-down skills.
4. Print copies of the checklist for each classroom and determine who will be responsible for using the checklist.
5. On the last day of school before a long break, go through the classroom together to turn off, unplug and adjust all the items from your checklist.

Find the classroom Power Down checklist at the end of this section.

- Close doors, windows, blinds and shades. This helps the building's heating, ventilation and air conditioning work as it should.
- Turn off lights and ceiling fans. This eliminates the energy use that comes from powering them.
- Unplug electronics. Even when a device is turned off, it still uses electricity. Avoid unnecessary power waste by unplugging! Not sure if something should be turned off or unplugged? Check with your school's Energy Champion!

Here are some things to look out for:

Or to download and print it, visit EnergyRight.com/school-uplift-resources

Quick tip! When students remember every item on the checklist, don't forget to celebrate their teamwork in saving energy!

Classroom Power Down Checklist

Daily

- ☐ Close doors, windows and blinds/shades.
- ☐ Turn off lights, ceiling fans and decorations.
- ☐ Turn off TVs, radios, DVD players, etc.
- ☐ Turn off computers, monitors, speakers and printers.
- ☐ Turn off document cameras (Elmo), overheads and projectors.
- ☐ Turn off interactive whiteboards (SMART Board, Promethean ActivBoard, etc.).
- ☐ Turn off lamps and personal appliances (coffee makers, fans, space heaters, etc.).
- ☐ Turn off bathroom exhaust fan.

Short breaks

- ☐ Unplug TVs, radios, DVD players, etc.
- ☐ Unplug computers, monitors, speakers and printers.
- ☐ Unplug document cameras, projectors and interactive whiteboards.
- ☐ Unplug personal appliances (coffee makers, fans, space heaters, etc.).
- ☐ Unplug lamps (floor, desk, etc.), air fresheners and decorations (such as string lights).
- ☐ Unplug chargers (cellphones, laptops, etc.).
- ☐ Unplug electric pencil sharpeners and staplers.

Extended breaks

- ☐ Unplug clocks.
- ☐ Empty, defrost and unplug personal refrigerators.
- ☐ Remove perishable items from the classroom.

Common Areas Power Down Checklist

Daily

- ☐ Close doors, windows and blinds/shades.
- ☐ Turn off lights, ceiling fans, air fresheners and decorations.
- ☐ Turn off computers, printers, copiers and laminators.
- ☐ Turn off media equipment and audio systems (excluding PA system needed for emergencies).
- ☐ Turn off small appliances (microwaves, coffee makers, toasters, etc.).
- ☐ Turn off exhaust fans (excluding high humidity spaces and electrical rooms).

Short breaks

- ☐ Unplug computers, printers, copiers and laminators.
- ☐ Unplug small appliances (microwaves, coffee makers, toasters, etc.).
- ☐ Unplug lamps, air fresheners and decorations.

Extended breaks

- ☐ Unplug clocks.
- ☐ Unplug vending machines that do not require refrigeration.
- ☐ Empty, defrost and unplug nonessential refrigerators.

Measuring Energy Usage with a Digital Watt Meter

Students can use the digital watt meter from your School Uplift Welcome Kit to measure and analyze a classroom appliance's energy consumption (in kWh) to understand the impacts of Energy Vampires. Energy Vampires can draw power from the outlet even when the appliance is powered off.

What Is a Digital Watt Meter?

A digital watt meter is a small device that helps measure how much electricity an appliance uses. It works by checking the voltage (electric power) and current (electric flow) and then multiplying them to find the power in watts (W).

How Does It Work?

- Measures the electricity flowing through a device.
- Calculates power using a simple formula:
- Power (W) = Voltage (V) × Current (A)
- Displays the results on a digital screen.
- Plugs into a wall outlet, and the appliance plugs into the meter.

What Can It Measure?

- Power (W) – How much electricity a device is using right now.
- Energy (kWh) – The total electricity used over time.
- Voltage (V) – The strength of the electricity.
- Current (A) – How fast the electricity is flowing.

Materials:

- Digital watt meter
- Classroom appliance (Chromebook charge cart, mini fridge, or similar)
- Data recording sheet
- Calculator (optional)

1. **Introduction**
    - Discuss the concept of energy consumption and why it is measured in kilowatt-hours (kWh).
    - Introduce the digital watt meter and explain its function.
    - Explain the experiment: measuring energy use of an appliance in different states.

2. **Experiment Setup**
    - Identify electricity-consuming school appliances that may be known as "Energy Vampires."
    - Determine the amount of time that data will be collected in each operational state.
    - Distribute data recording sheets.

3. **Data Collection**
    - **First Observation:** Plug the appliance into the digital watt meter and record the power usage when the appliance is powered on.
    - **Second Observation:** Turn the appliance off but keep it plugged in, then record the power usage.
    - **Third Observation:** Unplug the appliance completely and check for residual power consumption.
    - Students should note the readings and discuss any unexpected findings.

4. **Analysis & Discussion**
    - Compare data across groups and identify trends.
    - Discuss the concept of Energy Vampires and draw a conclusion.
    - Brainstorm ways to reduce unnecessary energy consumption.

5. **Conclusion & Reflection**
    - Have students summarize their findings.
    - Discuss real-world applications and personal energy-saving habits.

Extension Activity:
Research the energy consumption of household appliances and create an energy-saving plan for home use.

MEASURING ENERGY USAGE WITH A DIGITAL WATT METER

Appliance	**Powered On** (kWh)	**Powered Off, Plugged In** (kWh)	**Unplugged** (kWh)

Observations:

MEASURING ENERGY USAGE WITH A DIGITAL WATT METER

Appliance	**Powered On** (kWh)	**Powered Off, Plugged In** (kWh)	**Unplugged** (kWh)

Observations:

October activities

National Energy Awareness Month

Your School Uplift kickoff is a great time to tie in October's National Energy Awareness Month. Below are some suggested activities that focus on raising awareness of energy. (Don't forget, all activities are optional!)

Student social media campaign

We've put together some ideas for integrating student contributions into your school's existing social media platforms. We encourage you to let students craft these messages as part of an after-school club, a schoolwide contest or as an assignment in an English or communications class.

Pick a theme from the list below, and ask students to submit an image and caption for one or multiple posts. All posts should be published through your school's social media manager. Depending on the number of submissions, aim to share one or two posts per week to provide consistent content on your preferred social media platforms. When possible, give the student credit in the post.

Theme ideas for social media

- Facts about energy in schools from the *School Uplift SEM Manual*.
- Energy-saving tips students are learning through School Uplift.
- Updates on monthly energy-saving activities.
- Monthly results from the Energy Dashboard.
- Students, staff or classrooms practicing energy-saving behaviors.

Quick tip! Flip to the Community Outreach Guide for social and e-newsletter content you can copy and paste into your communication platforms.

Social media competition

Competition is a great way to engage students. Launch a video competition to get students excited and participating in energy-saving behaviors. Have students create videos for Instagram, YouTube, TikTok, etc., based on the month's energy theme. Each class or grade can vote on their favorite.

Encourage students to come up with their own ideas too. Here are some topics for students to brainstorm:

- Energy efficiency tips.
- Energy superheroes.
- Renewable energy sources and examples.
- Motivators for saving energy.

Energy and art exhibition

Give students an opportunity to express their awareness and knowledge of energy through a student art exhibition. It could include photography, drawing, painting, woodworking, sculpting, recycled art, writing, poetry or graphic design — you name it! The only requirement is that the art piece be related to energy.

This activity can be done in a club, as a homework assignment or in an art class.

Student Sustainability Week

Choose a week to celebrate sustainability. Let students organize activities and events throughout the week that focus on sustainability. Student Sustainability Week can be implemented schoolwide, in the classroom or on a smaller basis, like in an after-school club.

We recommend letting the students choose which events or activities to hold but have also provided some suggestions below!

Sustainability Show & Tell

- Hold a Sustainability Show & Tell during which students can share the sustainable actions they take in their daily lives. They can show a picture, video or any related prop that goes with a sustainable action.
- Display students' pictures and videos on classroom or hallway TVs/monitors or bulletin boards.

Paperless Day

Go paperless! Choose a day where students only use scrap paper or paper from the recycling bin.

Vintage Day

It's like "pajama day," but instead of wearing PJs, students wear something vintage (maybe something from their parents' closet!) to highlight the importance of sustainable fashion. Talk about the environmental impact of fast fashion and the benefits of buying secondhand.

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Movie Day
Show a sustainability, environmental or energy-related movie, miniseries or documentary during class. Check out:

- "National Geographic: Renewable Energy 101" | youtube.com.
- "National Geographic: Energy Conservation" | youtube.com.
- "Bill Nye: Energy" | billnye.com.
- "Bill Nye: Electricity" | billnye.com.
- "My Octopus Teacher" | netflix.com.
- "Just Eat It: A Food Waste Story" | foodwastemovie.com.
- "David Attenborough: A Life on Our Planet" | netflix.com.
- "Switch" | switchon.org.
- "The Boy Who Harnessed the Wind" | netflix.com.
- "National Geographic: Human Footprint" | amazon.com.
- "U.S. Department of Energy: Energy Literacy Series" | energy.gov.

Walk or Bike to School Day
Reduce carbon emissions by encouraging students who live in the neighborhood to walk or bike to school once during the week.

Carpool Day
Reduce carbon emissions by encouraging students to carpool to school during the week.

Local power company engagement

Your local power company (LPC) is a great resource to engage your school and community in energy education and awareness. School Uplift is an opportunity for your LPC to connect with and educate its future customers. LPCs may provide their own ideas, show a video or give a presentation on the basics of how electricity is distributed and delivered within your service area. LPC-led education can be coordinated through your Energy Coach. They'll connect you with the right people for the activities listed below.

Ideas for LPC activities

- Invite TVA or LPC employees to visit the school and share more about their jobs.
- Ask your LPC if it has an electric vehicle students could explore.
- Ask your LPC to conduct an electricity safety demonstration.
- Invite your LPC to host a booth at an open house or parent-teacher conference.

- Take a field trip! Your school might be able to take advantage of proximity to energy-generation resources to help students become better acquainted with energy production. Field trip sites could include hydroelectric dams or solar farms. If you can't visit a location in person, consider taking a virtual field trip using videos found on TVA's website at TVA.com/kids/electricity/virtual-field-trips.

Celebrate Public Power Week

Held the first full week of October

Public Power Week is celebrated by the approximately 1,400 American Public Power Association member utilities in the U.S. to help customers better understand community-owned power and its benefits.

Public power is how your school, and most of the Valley, receives electricity. A focus on public power can help educate the school community on what public power is, its benefits and how it affects the school.

Celebrate Public Power Week by sharing resources from the American Public Power Association:

- Show this 90-second video during an assembly, a class or extracurricular discussion on energy. Find it at youtu.be/Bz55GDlWL5U.
- Learn more at publicpower.org/event/public-power-week.

Additional resources

TVA has a ton of great resources available to K-12 schools. Visit TVASTEM.com to learn more.

The U.S. Energy Information Administration offers a teacher guide with grade-appropriate resources and activities. Learn more at eia.gov/kids/for-teachers/teacher-guide.

November activities

Energy Pledge Month

Energy Pledge Month builds on all the energy awareness your students gained in October and encourages everyone in the school to pledge their commitment to making more energy efficient choices. Why? Because more energy efficient choices mean a more comfortable learning environment, a decrease in impact on the environment and a reduction in building utility costs, which leaves more money for school programming. Win-win-win!

We've outlined four different activities for the month. As always, all the activities are optional. But we encourage schools to give them a try! It reinforces the "all hands on deck" approach to School Uplift and fosters energy-saving behaviors among students.

These activities are designed to be used in the classroom, but they can also be used in before- and after-school programs or as extracurricular activities.
Here's what's coming up:

1. Individual Energy Pledge
2. Group pledge
3. Energy Pledge competition
4. Giving thanks for energy

Individual Energy Pledge

In-class instructions

Week 1

- Break students up into small groups. Have them spend 10-15 minutes brainstorming all the ways they use energy every day, as well as how they could reduce that energy use. These ideas can apply at school and at home.
- Help students who are feeling stuck to get more specific by having them think of ways they can save energy in the classroom, hallway, cafeteria, library or gym.
- Let the groups take turns sharing their ideas with each other. Discuss the connection between energy-saving behaviors and the impact those behaviors could have on their school, community and environment. For example, unplugging a laptop at the end of the day prevents it from using energy all night.

- Have students decide on one energy-saving action they want to take for the month of November. Here are some suggestions:
  - Turn the lights off when leaving a room.
  - Turn off video game consoles when done for the day.
  - Carpool with friends when going to the same location.
  - Save water by taking shorter showers.
- Give students time in class to share what pledge they'll be taking and why.
- Have students write their pledges on an *Individual Energy Pledge Card*, found at the end of this section. We've also provided some ideas below for creating your own pledge cards.
- Hang the pledge cards in a prominent place in the classroom or hallway.

Quick tip! Publicly sharing pledges provides greater support and accountability for students to stick with their pledges.

Weeks 2-4

- Hold weekly check-ins with students to discuss their pledge successes and challenges.
- Give students an opportunity to share their experiences at the end of the month. Try some of these prompts:
  - What did you like about the Energy Pledge activity?
  - What did you find hard about keeping your pledge?
  - How do you think our energy-saving actions have helped our school community and the environment?
  - Why is it important to keep practicing energy-saving behaviors?
- Challenge students to continue their commitments.

Find the *Individual Energy Pledge Card* at the end of this section. Or to download and print it, visit EnergyRight.com/school-uplift-resources.

Instructions for before or after school or during other non-curricular times such as lunch or free periods.

Week 1

- Work with your school's Energy Champion to present Energy Pledge Month to students.
- Set up a table in a highly trafficked area, like outside the lunchroom or main entrance.
- Share examples of the types of pledges students could make, like:
  - Turn off classroom lights on the way to lunch, PE and dismissal.
  - Close windows and doors when appropriate.
  - Turn off the water while you're soaping your hands.
- Have students choose a pledge they'll commit to practicing for the month of November.
- Have students sign their *Individual Energy Pledge Cards*. Hang the pledges near the Energy Dashboard or in a prominent place in the school.

Quick tip! Hang pledges around the school for more visibility and accountability — a great spot is near the Energy Dashboard!

Weeks 2-4

- Hold weekly check-ins with students to discuss their pledge successes and challenges.
- Give students an opportunity to share their experiences at the end of the month. Try some of these prompts:
  - What did you like about the Energy Pledge activity?
  - What did you find hard about keeping your pledge?
  - How do you think our energy-saving actions have helped our school community and the environment?
  - Why is it important to keep practicing energy-saving behaviors?
- Challenge students to continue their commitments.

Find the *Individual Energy Pledge Card* at the end of this section. Or to download and print it, visit EnergyRight.com/school-uplift-resources.

Creating pledge cards

We've provided pledge card templates, but you can also have students create their own! Here are a few suggestions for creating your own pledge cards and how to display them publicly:

- **Pledge hands:** Have students trace their hands on scrap paper, cut them out and then write their names and pledges on the hands. Post the pledges around the *Our Energy Pledge Sheet* found at the end of this section. **Bonus:** Using scrap paper provides an opportunity to talk about the importance of reusing materials!
- **Pledge tree:** Using butcher paper, draw the outline of a tree and branches. Have students trace their hands on scrap paper to make "leaves." Have students write their names and pledges on the leaves. Hang the leaves from the tree.
- **Create your own:** Lead students in creating their own unique way of highlighting their pledges!

Find the *Our Energy Pledge Sheet* at the end of this section. Or to download and print it, visit EnergyRight.com/school-uplift-resources.

Group Energy Pledge

Like the individual Energy Pledge, the group Energy Pledge encourages students to practice energy-saving behaviors through a public commitment. With the group Energy Pledge, students can support one another and hold each other accountable.

Instructions

Have the entire class or group brainstorm energy-saving pledges they could make. Then have students vote on which one they'd like to commit to and practice for the month of November.

Encourage students to come up with something that will be meaningful to them. Here are a few ideas:

- Turn off the lights in the lunchroom on Fridays.
- Choose one day of the week to be a "device-free" day (no cellphones, personal laptops or tablets).
- Write to a local representative about an energy-related topic.
- Write energy-saving behaviors in chalk on school sidewalks.

Use this activity in any group setting, including after-school clubs, homeroom, a specific class or an entire grade level.

Sharing the group Energy Pledge

Once the group has decided on their collective pledge, have one student write the pledge on a piece of butcher paper, or use the *Classroom/Group Energy Pledge Card* found at the end of this section. Have students sign their names, and then hang the butcher paper and the *Our Energy Pledge Sheet* in a prominent location in the classroom or school hallway.

Find the *Classroom/Group Energy Pledge Card* and the *Our Energy Pledge Sheet* at the end of this section. Or to download and print them, visit EnergyRight.com/school-uplift-resources.

Energy Pledge competition

Create excitement and enthusiasm around Energy Pledge Month by incorporating a little friendly competition! The Energy Pledge competition can be structured for classes to compete against each other (homeroom vs. homeroom or class period vs. class period) or for students to compete against one another within their class. This activity works best in a classroom setting but can be modified for an after-school club or other group setting.

Instructions

1. Make copies of the *Energy Pledge Competition Sheet* provided at the end of this section.
2. Hold a classroom brainstorming session for students to come up with energy-saving behavior ideas if you didn't do this in the individual or group Energy Pledge activities.
3. Have students select the energy-saving behavior they're willing to commit to practicing throughout November, and then have them sign individual pledge cards. Use the *Individual Energy Pledge Card* provided at the end of this section, or revisit the individual Energy Pledge section for ideas on how to create your own.
4. Hang all the pledge cards in a prominent place in the classroom or school hallway. Near the Energy Dashboard is always a good spot!
5. Have students record and date each time they complete their energy-saving behaviors on their *Energy Pledge Competition Sheet*. For example, if the pledge is to turn off lights when leaving a room, your student would write "Computer lab, 11/3" after completing that energy-saving behavior. Any energy-saving action anywhere counts—students aren't limited to school only! Remind students to keep their sheets in a handy location, like a day planner.

6. Have students ask a peer or adult who witnesses their energy-saving behaviors to verify the action by initialing the sheet. If students are alone at the time, they can talk to a peer or adult about why their particular energy-saving behaviors are important. That person can then initial the sheet as verification.
7. Have students fill in how many points their actions are worth. Each time students fulfill their pledges, they earn **5 points**. Anytime they practice another energy-saving behavior different from their pledge and have it verified, they earn **1 point**.
8. Sustain students' momentum throughout the month by holding weekly check-ins to tally points. Then, display the totals where everyone competing can see them!

The class or student with the most points at the end of the month gets a reward!

Find the *Individual Energy Pledge Card* and *Energy Pledge Competition Sheet* at the end of this section. Or to download and print them, visit EnergyRight.com/school-uplift-resources.

Giving thanks for energy

This activity is designed to get your students thinking about all the ways they use and benefit from energy in their daily lives and connecting those ideas to the Thanksgiving holiday. You can use this activity in the classroom, as a small-group activity, during a school assembly or in an after-school club.

Before Thanksgiving break

Set aside time before Thanksgiving break to discuss the different ways energy is used in students' daily lives. Ask students to think about something they value as it relates to Thanksgiving that requires energy. Here are some sample questions:

- What are some of your Thanksgiving traditions? Do any of them require energy? In what way? (Here are some examples if students get stumped: cooking a turkey, driving to see relatives, watching a football game on TV or hanging up holiday lights.)
- What are some ways you could use less energy during Thanksgiving?
- Why is it important to be mindful of our energy use?
- How does the energy we use connect to natural resources?
- What else important in your life requires energy?

After Thanksgiving break

- Hold a post-Thanksgiving classroom discussion about the ways students noticed energy being used around the holiday.
- Ask students to share any ways they practiced energy-saving behaviors over the break.
- Discuss how students can continue their pledges in new and different ways during the rest of the holiday season.

Our Energy Pledge

We pledge to

_____

_____

for the month of November to
help our school save money,
be more comfortable
and protect the environment.

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

Energy Pledge Competition

Instructions: Fill out your name and energy-saving pledge. Each time you complete your energy-saving action, write in the location and date. Have the student or adult who sees you complete your action sign their initials. If no one sees you, then talk to a student or adult about why your energy-saving action matters. Then have that person sign their initials. Earn 5 points when you complete your energy-saving action. Earn an additional 1 point for any other energy-saving actions you take during the month.

Student Name: _____

My Pledge: _____

Location & Date	Verification Initials	Points

December activities

Power Down Month

Welcome to Power Down Month! The holiday break is in sight, and we want to help you prepare your classroom and school to save as much energy as possible while the school is empty.

This month, we've put together some fun activities for your students so they can play an active role in the power down prep. Plus, you'll find helpful checklists for how to power down your classroom and/or school each day, over the weekend and during longer breaks.

Don't forget, all activities are optional! But for December, we recommend starting with Power Down Jeopardy before jumping into the rest of the activities.

Power Down Jeopardy

You'll be using an online version of Power Down Jeopardy, which means you'll have the flexibility to play it in the classroom or during before- and after-school programs, club time or whenever students gather. The game follows the televised version of *Jeopardy!* but doesn't include Double Jeopardy, Final Jeopardy or Daily Doubles.

Power Down Jeopardy themes

1. School Electronics
2. Electricity
3. Home Appliances
4. Conservation
5. Renewables

Setting up

Power Down Jeopardy is available at jeopardylabs.com/play/power-down-jeopardy-middle-school.

1. Break up the class into teams of four, based on your class size. Teams will compete against each other.
2. Enter the number of teams into the starting page of the Jeopardy Labs game board.

3. Open the link to the print version of Power Down Jeopardy, located under the "Press F11 for full-screen mode" button on the same page you entered the number of teams. This will open a new tab in your browser, which will display the answers to each question on the board. Don't let students see this screen before or during the game.
4. Press "Continue." This is the Jeopardy board. You should see a scoreboard for each team at the bottom of the screen.
5. Ask each team to choose an environment-themed name. By default, the scoreboard will say "Team 1," "Team 2," and so on, but you can enter your students' chosen team names by double-clicking on that space.
6. Designate a team captain. The captain is responsible for standing up to signal that their team would like to answer a question.

To play Power Down Jeopardy

1. Select a team to pick the first category and point amount.
2. Click on the selected box to reveal the question.
3. Whichever team captain stands up first gets the initial attempt to answer the question.
4. If that team answers correctly, reveal the answer to the class by pressing the spacebar on your keyboard. If the team answers incorrectly, do not reveal the answer! Invite the team that responded second the opportunity to answer.
5. If the second team answers incorrectly, continue inviting teams in the order they stood up to answer. Once a team answers correctly, or there are no additional guesses, reveal the answer by pressing the spacebar.
6. The team that answers the question correctly will select the next category and point box.
7. Click the plus sign for any team that answered correctly. Click the negative sign for those that answered incorrectly.
8. The Power Down Jeopardy board will automatically add or subtract the number of points a question is worth to or from the team's total score. Before returning to the main Power Down Jeopardy board, give each team their respective score.

To return to the main Power Down Jeopardy board, hit the escape key. The number in the box will fade, indicating the question has been answered. The game is over when all the answers have been revealed, the numbers have faded and the board is empty.

Game instructions

Read the instructions below to the teams before starting the game. Feel free to customize the instructions as necessary.

Script

To begin, one team will decide which category and point amount they would like to pick, such as Electronics for 200. Questions in each column are related to that category's theme. The question difficulty increases as the number value increases; 100 will be the easiest and 500 will be the most difficult.

Once you've selected your category and point amount, I will reveal the question and read it aloud. If you think you know the answer, alert your team captain. After the question has been fully read, your captain may stand up to share the answer. Correct responses can only be given after I [the teacher] have called on your captain. Captains, please wait to respond until you have been called.

If anyone on your team answers the question before they've been called on or speaks out of turn, your team will be deducted the amount of points the question was worth.

If your team captain is the first to stand up, they will answer the question on behalf of the team. If your team's answer is incorrect, your team will lose the designated points. The team who stood up second will then have a chance to respond.

If the correct response is given, the second team receives the 200 points and selects the next category and point amount.

If the second team answers the question incorrectly, the question goes to the next team that stood up until the question has been answered correctly or there are no teams left that are willing to guess. If no team can answer the question correctly, then the last team to give a correct answer will select the next category and point amount.

When the answers for each category have been revealed, the team with the most points wins!

Any questions? Good luck!

When the correct answer is revealed, use the opportunity to provide additional background information on the topic.

Festive Winter Break Shutdown

This long break is full of potential! There are many ways to save money on your power bills with little to no cost to your school. However, behavioral energy savings happen when everyone on campus is aware of the energy efficient behaviors that are most helpful.

Brainstorm with a group of students or your Energy Team to create a festive and engaging way to shut down the whole school before everyone leaves for Winter Break.

"Cool Down for the Holidays" Countdown

Create a school-wide countdown where each day leading up to winter break features an energy-saving tip (e.g., turning off lights, powering down computers). Teachers and students can track progress on a large festive display, such as a snowflake chart where each tip earns a new snowflake.

"Silent Night, Power Down Right" Event

On the last day before break, hold a brief, school-wide moment when all unnecessary lights and electronics are turned off at the same time. Pair it with a winter sing-along or candlelight (battery-operated) celebration to reinforce the importance of conserving energy.

The "Frozen" Classroom Challenge

Challenge classrooms to see who can best "freeze" their energy use before break. Students and teachers ensure all lights, electronics and heating are set to energy efficient settings. The class with the most thorough shutdown earns a "Coolest Energy Savers" award.

Snowman Shutdown Patrol

Assign student "Snowman Shutdown Teams" to check classrooms and common areas for unnecessary energy use before break. These teams can use a checklist to ensure projectors, computers and lights are off. Recognize the best shutdown efforts with a fun, winter-themed reward.

"Hibernate Your Tech" Day

Dedicate a day before break to educating students and staff about putting computers and devices into low-power modes. Students can create festive reminder signs (e.g., polar bears "hibernating" laptops) to post near classroom electronics, reinforcing energy-saving habits.

Energy Efficient Gingerbread House

Celebrate the end of Power Down Month by making an energy efficient gingerbread house! Find instructions for creating a gingerbread house on the National Energy Education Development Project website here: shop.need.org/collections/primary-guides/products/energy-efficient-gingerbread-house.

January activities

Careers in STEM Month

"What do you want to be when you grow up?" Students hear this question a lot! That's why it's never too soon to start thinking about the possibilities. This month's Careers in STEM activities take students on an exciting career exploration journey where they'll learn about career opportunities in the science, technology, engineering and mathematics fields. We'll find out what leads people to jobs in STEM and discuss the education that's required for these positions.

Local Power Company Day

A strong relationship with schools and their local power company (LPC) can be mutually beneficial. In many cases, LPCs are looking for ways to connect with the community. Often, they even have an educational program ready to share with their local schools.

Suggestions for organizing LPC Day

- **Connect with your Energy Coach.** Your coach is available to support you and can help you build a relationship with your LPC. They can help you identify the right contact! Your Energy Coach may know of additional programming options on STEM-related topics, energy careers or workforce development, too.
- **Start planning early.** LPCs have a lot going on and appreciate plenty of advance notice for an event. Planning a month or two ahead will help make sure LPC Day gets onto their calendar.
- **Be a trailblazer!** In some cases, your LPC may not have done any educational programming before. A program focused on STEM jobs is a great place to start. Working with your LPC to create this event may even open the door for more joint programming in the future.

February activities

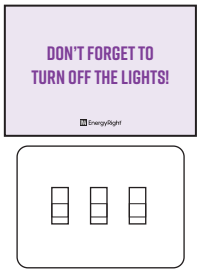
The Power of Community Month

Valentine's Day makes February the perfect time for your students to show their community some love. By conserving energy and saving money through School Uplift, your school is already strengthening the community, but why not get everyone involved? These fun activities bring it all together by getting your friends, families and community members in on the energy-saving action.

Turn Off the Lights signage

Using the *Turn Off the Lights* signage template, encourage your middle school students to use the white space to create eye-catching designs to inform and remind their community to conserve energy.

When the signs are complete, share them throughout the community. Libraries, recreation centers, businesses and other community gathering spaces are all great options for your students' art! It's a great way to foster community pride while drawing attention to your school's participation in energy-saving initiatives. We suggest utilizing poster putty or another comparable removable adhesive to hang signage.



The signage template can be found at the end of this section. You can also download it at EnergyRight.com/school-uplift-resources.

Unsure when to turn off your lights?

To learn more about the different types of bulbs and when to turn off your lights, check out the *School Uplift SEM Manual*.

Additional resources

Interested in a hands-on service opportunity for your community? Check out these resources to help organize local projects.

Green Apple Day of Service

With a focus on healthy students and a healthy planet, Green Apple Day of Service provides tips and suggestions on organizing fundraisers and projects. Learn how to plan a community-driven project for your school. Visit greenapple.org for more information.

Check with your local municipality

Your municipality may offer great programs and events that students can get involved in. To find opportunities for your students and their families, check with nonprofits and community organizations such as libraries and community centers. To pull from a larger database, try volunteermatch.org.

Light switch signage

Place above light switch

DON'T FORGET TO
TURN OFF THE LIGHTS!

TVA EnergyRight®

DON'T FORGET TO
TURN OFF THE LIGHTS!

TVA EnergyRight®

March activities

Solar Spring Month

The sun's awesome power helps fuel and sustain life. It also powers experiments, sparks inventions and lights up our communities! Even though we're already putting solar power to good use, scientists and engineers are always working to discover new and better ways to harness the sun's energy. This month, we're going to put on our lab coats and have some fun finding out how solar energy works. Then, we'll start thinking about ways we can put solar power to work in our school and community.

Solar Balloons

During this simple but powerful experiment, students will discover how color affects solar absorption. The guided questions below are based on the scientific method — question, hypothesize, experiment, observe and draw conclusions — and will help your students have a conversation about the sun's power. The instructions below are written for a full class; if conducting in a small group setting, please modify quantity of materials and instructions as needed.

Materials needed:

- Two (2) – 2-liter soda bottles.
- Two (2) – 9" latex balloons of the same color.
- Black spray paint or black duct tape.
- White spray paint or white duct tape.

Pre-experiment setup:

- Check the weather and select a warm and sunny day for the experiment.
- Make sure both bottles are completely dry before conducting the experiment.
- Spray paint (or duct tape) one of the bottles **black**.
- Spray paint (or duct tape) the other bottle **white**.

Experiment instructions:

1. Take your students and the prepared materials (white bottle, black bottle and two balloons) outside on a sunny day.

2. Share an overview of the experiment. (Question):

> ***Instructor:*** *How powerful do you think the sun is? Today we're going to find out!! We're also going to find out how color affects how the sun's rays are absorbed or reflected. Can anyone give me an example of something that absorbs or is absorbed?* (Examples could include sponge, paper towel or cotton ball.)
>
> ***Instructor:*** *Can anyone give an example of reflection?*
> (Examples could include a mirror, radar or an echo.)
>
> ***Instructor:*** *In this experiment, we have one empty white soda bottle and one empty black soda bottle. We're going to put a balloon over the top of each bottle. Then, we're going to observe what happens.*

3. Ask your students to share what they think will happen to the balloon on the white bottle. (Hypothesize)
4. Ask them what they think will happen to the balloon on the black bottle. (Hypothesize)
5. Then, in a shaded area, put one balloon over the top of the white bottle. (Experiment)
6. Put the other balloon over the top of the black bottle. (Experiment)
7. Place the bottles in direct sunlight. (Experiment)
8. After a few minutes, observe how solar energy is affecting each of the balloons. (Observe)

> *NOTE:* As the bottles heat up, the balloons should begin to expand. The balloon on the black bottle should expand more quickly than the balloon on the white bottle.
>
> **It is important to put the balloons on the bottles while outdoors!**
> **DO NOT put the balloons on the bottles indoors.**

Post-experiment conversation guide:

Visit kids.britannica.com/kids/article/alternative-energy/476218 for a few talking points about alternative and renewable energy.

Start drawing conclusions by discussing the experiment and the effects of sun and solar energy. Be prepared to discuss other renewable energy sources such as wind and water as well. Depending on the grade level and the participation, students may need some direction. Point out the benefits of using the sun to create energy. (*Hint:* It's safe and renewable!)

- What do you observe happening to the balloons?
- How are they reacting similarly?
- What's different about the balloons?
- Why do you think this reaction is occurring?
- What effect does the bottle color have on the balloons?
- Where else — outside of this experiment — do we observe the power of the sun?
    - (Examples may include the warm interior of a car on a sunny day, playground equipment on sunny days or pool/lake temperatures in the summer versus winter.)

Use the questions below to continue drawing conclusions about solar energy! Below is a sample script, including answers, to help guide your dialogue.

Q: *Based on our experiment today, would you say that the sun produces energy?*

A: *Yes! The sun does have power.*

Q: *How can you tell?*

A: *We can see that it has the power to blow up balloons, can't we? Did you know that scientists and engineers are always looking for better ways to capture the sun's heat and light to use it as a power source for generating electricity?*

Q: *If we wanted to catch some of the energy from the sun to power our school, how would we do this? Do you know what catches it?*

A: *Solar panels catch the energy and convert it into electricity. Like our black bottle, solar panels are good at collecting sunlight.*

Q: *Do you think capturing sunlight and using it for electricity is a good idea?*

A: *Yes! The main reason people are excited about sun energy — or solar energy — is because no matter how much we collect, the sun keeps creating sunshine! Because we won't run out of it, we call it a renewable energy source.*

Q: *Have you seen solar energy used anywhere in our community?*

A: *[Answers will depend on your location. Be prepared with some examples.]*

Q: *Can you think of other sources of renewable energy?*

A: *Wind and water!*

Spring break Power Down

For many schools, March's arrival means that spring break is just around the corner! Before you leave for your much-deserved break, don't forget to power down your school. You'll be surprised by how much energy you can conserve and money you can save during that week!

Check out the December section of your *Engagement Binder* for Power Down tips and suggestions or visit EnergyRight.com/school-uplift-resources.

April activities

Earth Month

Earth Day is celebrated worldwide on **April 22**. But why limit the celebration to one day? Earth Month is a great way to wrap up the school year and your school's participation in School Uplift! Here are some fun, optional activities to help your students celebrate Earth Month and learn more about sustainability.

Earth Day Jeopardy

Get students fired up with a game of Earth Day Jeopardy! This is a fun, interactive way to teach students about the history of Earth Day and why it's just as important today. Jeopardy-style questions are also a great way to share sustainability and environmental science concepts.

Similar to Power Down Jeopardy from December's activities, Earth Day Jeopardy is hosted online, so you can play it in the classroom, during recess or after school. The game follows the Jeopardy TV show's rules, but it does not include Double Jeopardy, Final Jeopardy or Daily Doubles.

Earth Day Jeopardy themes

1. Earth Day History
2. Mother Earth
3. Environmental Awareness
4. Sustainability
5. Energy and the Environment

Setting up

Earth Day Jeopardy is available at jeopardylabs.com/play/school-uplift-earth-day.

1. Break up the class into teams of four, based on your class size. Teams will compete against each other.
2. Enter the number of teams into the starting page of the Jeopardy Labs game board.
3. Open the link to the print version of Earth Day Jeopardy, located under the "Press F11 for full-screen mode" button on the same page you entered the number of teams. This will open a new tab in your browser, which will display the answers to each question on the board. Don't let students see this screen before or during the game.

4. Press “Continue.” This is the Jeopardy board. You should see a scoreboard for each team at the bottom of the screen.
5. Ask each team to choose an environment-themed name. By default, the scoreboard will say “Team 1,” “Team 2,” and so on, but you can enter your students’ chosen team names by double-clicking on that space.
6. Designate a team captain. The captain is responsible for standing up to signal that their team would like to answer a question.

To play Earth Day Jeopardy

1. Select a team to pick the first category and point amount.
2. Click on the selected box to reveal the question.
3. Whichever team captain stands up first gets the initial attempt to answer the question.
4. If that team answers correctly, reveal the answer to the class by pressing the spacebar on your keyboard. If the team answers incorrectly, do not reveal the answer! Invite the team that responded second the opportunity to answer.
5. If the second team answers incorrectly, continue inviting teams in the order they stood up to answer. Once a team answers correctly, or there are no additional guesses, reveal the answer by pressing the spacebar.
6. The team that answers the question correctly will select the next category and point box.
7. Click the plus sign for any team that answered correctly. Click the negative sign for those that answered incorrectly.
8. The Earth Day Jeopardy board will automatically add or subtract the number of points a question is worth to or from the team’s total score. Before returning to the main Earth Day Jeopardy board, give each team their respective score.

To return to the main Earth Day Jeopardy board, hit the escape key. The number in the box will fade, indicating the question has been answered. The game is over when all the answers have been revealed, the numbers have faded and the board is empty.

Game instructions

Read the instructions below to the teams before starting the game. Feel free to customize the instructions as necessary.

Script

To begin, one team will decide which category and point amount they would like to pick, such as Earth Day History for 200. Questions in each column are related to that category's theme. The question difficulty increases as the number value increases; 100 will be the easiest and 500 will be the most difficult.

Once you've selected your category and point amount, I will reveal the question and read it aloud. If you think you know the answer, alert your team captain. After the question has been fully read, your captain may stand up to share the answer. Correct responses can only be given after I [the teacher] have called on your captain. Captains, please wait to respond until you have been called.

If anyone on your team answers the question before they've been called on or speaks out of turn, your team will be deducted the amount of points the question was worth.

If your team captain is the first to stand up, they will answer the question on behalf of the team. If your team's answer is incorrect, your team will lose the designated points. The team who stood up second will then have a chance to respond.

If the correct response is given, the second team receives the 200 points and selects the next category and point amount (such as Sustainability for 100).

If the second team answers the question incorrectly, the question goes to the next team that stood up until the question has been answered correctly or there are no teams left that are willing to guess. If no team can answer the question correctly, then the last team to give a correct answer will select the next category and point amount.

When the answers for each category have been revealed, the team with the most points wins!

Any questions? Good luck!

When the correct answer is revealed, use the opportunity to provide additional background information on the topic.

Additional resources

Going all out for Earth Month? Check out these resources for more great activity ideas and celebrations.

TVA
Learn how to make green choices and help clean up public waterways and lands. Visit TVA.com/environment/enjoy-earth-day-with-tva to learn more.

Use a **solar calculator** to learn how solar energy works, and calculate the cost and payback of solar for your school or home. Visit EDT.TVA.gov to learn more.

Your local power company
Check with your local power company to see if they are hosting any events or activities for Earth Day.

Earthday.org
This online library includes resources for classroom, at-home and community learning. Access toolkits, advocacy packets, editable PowerPoint timelines, quizzes and lesson plans. Visit earthday.org/education-resource-library to learn more.

EPA
To celebrate Earth Day in the classroom, visit epa.gov/earthday for lesson ideas, facts and homework resources.

Introducing School Uplift to high school students

Now it's time for the really fun stuff — getting the word out! This section is all about how to introduce School Uplift to your students. You'll find talking points, sample scripts and details for your first month of energy-saving activities.

Notes

How to introduce School Uplift to students

You know your school best, so you may already have an idea of when, where and how to introduce School Uplift and the Energy Dashboard to students. Just in case you need some thought starters, we've outlined some ideas on the next few pages.

School assembly segment

- Present the Energy Dashboard and discuss your school's energy-reduction goal.
- Preview themes and activities for the school year.
- Provide a brief overview of the monthly themes and what activities will be happening.
- Provide instructions for getting involved with the school's Energy Team.

Find sample language in the What to say section.

Science classes

Preparing a unit on energy? Connect your Energy Team with your science and physics teachers to bring the Energy Dashboard to life in the classroom:

- Visit the Energy Dashboard, and explain what it is and how it's used.
- Discuss your school's energy-reduction goal and how it appears in the Energy Dashboard.
- Explain how School Uplift involves students and how they can join the Energy Team.
- Connect energy behaviors and usage to utility bills and real-world expenses.
- Use School Uplift as a way to introduce careers in energy.

Find sample language in the What to say section.

As part of daily or weekly announcements

You can use the sample script below to explain School Uplift to students. For greater impact and student engagement, consider asking a student representative on the Energy Team to share this announcement.

Script: Hello, students! This school year, we're doing something new and a little different. We're taking part in a yearlong, schoolwide energy program called School Uplift, offered by TVA EnergyRight® and [INSERT LPC_NAME].
And we're going to need your help!

We've created an Energy Team made up of students and staff who will be helping to make behind-the-scenes changes in the way we operate our buildings. With their help, our school will be able to use energy more efficiently and make everyone's learning environment more comfortable.

Now here's where you come in. We're going to have a bunch of ways for you to get involved this year. So be on the lookout for new announcements each month on how to make better energy choices. Plus, we've created an Energy Dashboard that will show everyone how well our school is using energy and how that affects the environment.

[INSERT ENERGY_CHAMPION_NAME] will share more information with you, including ways you can get involved.

Find additional scripting in the What to say section.

Open house or parent-teacher conferences

Use this opportunity to share more about School Uplift with caregivers and community members. Have Energy Team members stand by the Energy Dashboard and introduce the program, your school's goal and how students and staff are participating in energy-themed activities throughout the year.

Sporting events

Take advantage of these prime opportunities to share more about your school's energy goal with students, staff and families. Have Energy Team members share information about School Uplift during halftime, or set up a table with more information. Use the Energy Dashboard to walk visitors through your school's goal and progress toward using energy more efficiently.

What to say

Use the sample announcements below, or create your own to introduce School Uplift to your students.

School Uplift

This year, we're focused on improving our impact on the environment by using energy more efficiently throughout the school.

TVA EnergyRight® and [INSERT LPC_NAME] want to help our school use energy more efficiently through a new program called School Uplift. Using the right amount of energy will save us money, make the school more comfortable and reduce our impact on the environment.

Think about it. Energy is wasted when we leave lights on in empty classrooms or prop open doors to the outside. Even a leaky faucet can mean lots of wasted water — and money — down the drain. The good news is, there are some really easy fixes to these common energy wasters.

But we need your help. You play an important role in saving energy! You'll see reminders around the school to help you practice energy-saving behaviors like turning off the lights when you leave a room or shutting off your laptop at the end of the day. You'll also have an opportunity to take part in energy-awareness activities each month.

Our Energy Team is working hard to make sure the building temperature and other controls are set correctly so that our school is more comfortable and energy efficient.

We all have a role to play in saving energy and reducing our impact on the environment. Thank you for jumping in and getting involved.

Energy Dashboard

We'll be testing ourselves each month as a school to make sure we're meeting our energy-reduction goal. The Energy Dashboard will be available for everyone to see.

[INSERT EXAMPLE, e.g., "Last year, the hall lights stayed on until it got dark. This year, all the hall lights will be turned off 30 minutes after the last bell."]

Monthly energy themes and activities

To help reach our energy-reduction goal, we'll be participating in monthly energy-related activities to learn about energy-saving behaviors.

Here are some of the themes we'll highlight throughout the school year:

- Energy Awareness
- Energy Pledge
- School Power Down
- Careers in Energy
- Power of Community
- Solar Energy
- Earth Month
- What is TVA?

How to get involved

Our school's Energy Team will share more information as we kick off each month's energy theme. But in the meantime, look for posters and stickers around the school to learn simple tips for saving energy.

The Energy Team meets every month to take a closer look at the themes and activities we'll be exploring as a school. If you're interested in joining the Energy Team, contact [INSERT ENERGY_CHAMPION_NAME].

August activities

Introducing TVA

What Is Tennessee Valley Authority (TVA)?

The Tennessee Valley Authority, or TVA, is the largest public power company in the United States. TVA also carefully manages the nation's fifth-largest river to reduce flood damage, make rivers easier to travel, provide recreation, protect aquatic life and keep the water clean. TVA helps make the Tennessee River Valley a good place for families to live and work.

What TVA Does

Have you ever wondered what TVA does? The answer is: many different things.

TVA is the largest public power company in the United States. It's called "public" because it's owned by the U.S. government, unlike most companies that are owned by individual people or investors. Through its electricity plants, TVA supplies power to 10 million people in the Southeastern United States.

In addition to producing power for many Americans, TVA also manages the nation's fifth-largest river system. The Tennessee River flows 652 miles from East Tennessee down into Alabama and back up into Kentucky, where it joins the Ohio River. All along the Tennessee River, TVA employees work to reduce the dangers of flooding, make it possible for boats to travel safely, and keep the water clean.

In the 41,000-square-mile area drained by the Tennessee River, TVA also operates some of the country's best outdoor recreation areas. Although TVA was first set up in 1933 as an agency supported by Americans' tax dollars, today, it runs all of its programs and pays its employees with the money it earns by making and selling electricity.

So, the next time you turn on a computer, drink from the school water fountain or go fishing on a TVA reservoir, you will know what part TVA plays in helping everybody in the Valley lead a better life.

Energy Generation Videos TVA

Fossil plants:	https://www.tva.com/kids/electricity/fossil-power
Hydroelectric plants:	https://www.tva.com/kids/electricity/hydroelectric-power
Solar power:	https://www.tva.com/kids/electricity/tva-green-switch/solar-power
Nuclear plants:	https://www.tva.com/kids/electricity/nuclear-power
Natural gas plants:	https://www.tva.com/kids/electricity/natural-gas-plants
Pumped storage:	https://www.tva.com/kids/electricity/hydroelectric-power

The History of TVA

https://www.tva.com/kids/tva-history

If you were carried back in time to 1933, you might not recognize most areas in the Tennessee Valley, the region that runs through seven southeastern states and surrounds the Tennessee River.

At that time, the region was in bad shape compared with the rest of the United States. It was dangerous to travel on major stretches of the Tennessee River. Many people who lived in the Valley had no electricity and were barely getting by. Farmers were suffering because the soil where they grew their crops was poor and worn out.

To make matters worse, the entire country was in the middle of a huge economic slump known today as the Great Depression, which meant many people had no jobs. Many families in the Tennessee Valley region were unable to buy or grow enough food to stay healthy.

When our 32nd president, Franklin Delano Roosevelt, entered office in 1933, he wanted to help the people of the Tennessee Valley become more prosperous, healthy and productive. To do this, President Roosevelt signed the Tennessee Valley Authority Act on May 18, 1933.

This act of Congress created the Tennessee Valley Authority (TVA), a federal corporation. The new agency was asked to tackle important problems facing the Valley, such as flooding, providing electricity to homes and businesses, and replanting forests. Other TVA responsibilities written in the act included improving travel on the Tennessee River and helping develop the region's business and farming.

Today, TVA has certainly lived up to President Roosevelt's hopes. TVA is the largest public power company in the United States. The agency also carefully runs the nation's fifth-largest river system to reduce flood damage, make rivers easier to travel, provide recreation and protect water quality. The Tennessee Valley is now a great place for families to live and work.

- **Printable history booklet:** https://tva-azr-eastus-cdn-ep-tvawcm-prd.azureedge.net/cdn-tvawcma/docs/default-source/kids/tva-history-for-kids.pdf?sfvrsn=b66347e_2
- **Downloadable TVA Historical Photos to use in the classroom:** https://www.tva.com/kids/resources/tva-historical-photos

Currents of Change

To learn more about the development of TVA in the Tennessee Valley, in either large group or small group explorations, use the Currents of Change online resource!

Instructional resources associated with TVA History are available at: https://currentsofchange.net/

- PowerPoint Presentations
- Primary Sources
- Multifaceted historical lens on the Tennessee Valley

September activities

Classroom Power Down

In this activity, students prepare their classroom for break. You'll want to discuss the best way for each classroom to initiate some power-down behaviors each day, weekend and long break.

Some schools may have teachers focus on this task, while others may ask students to be self-motivated to complete this task on the teacher's behalf.

Instructions

1. Review the attached checklist, identify the highest priority items for all classrooms in your school, and find ways to roll out all checklist items school-wide by the end of the year.
2. Have students determine the things on their checklist that need to happen each day and what will happen before long breaks.
3. Have students practice their daily power-down skills.
4. Print copies of the checklist for each classroom and determine who will be responsible for using the checklist.
5. On the last day of school before a long break, go through the classroom together to turn off, unplug and adjust all the items on your checklist.

Here are some things to look out for:

- Close doors, windows, blinds and shades. This helps the building's heating, ventilation and air conditioning work as it should.
- Turn off lights and ceiling fans. This eliminates the energy use that comes from powering them.
- Unplug electronics. Even when a device is turned off, it still uses electricity. Avoid unnecessary power waste by unplugging! Not sure if something should be turned off or unplugged? Check with your school's Energy Champion!

Find the Classroom Power Down Checklist at the end of this section.

Or to download and print it, visit EnergyRight.com/school-uplift-resources

Quick tip! When students remember every item on the checklist, don't forget to celebrate their teamwork in saving energy!

Classroom Power Down Checklist

Daily

- ☐ Close doors, windows and blinds/shades.
- ☐ Turn off lights, ceiling fans and decorations.
- ☐ Turn off TVs, radios, DVD players, etc.
- ☐ Turn off computers, monitors, speakers and printers.
- ☐ Turn off document cameras (Elmo), overheads and projectors.
- ☐ Turn off interactive whiteboards (SMART Board, Promethean ActivBoard, etc.).
- ☐ Turn off lamps and personal appliances (coffee makers, fans, space heaters, etc.).
- ☐ Turn off bathroom exhaust fan.

Short breaks

- ☐ Unplug TVs, radios, DVD players, etc.
- ☐ Unplug computers, monitors, speakers and printers.
- ☐ Unplug document cameras, projectors and interactive whiteboards.
- ☐ Unplug personal appliances (coffee makers, fans, space heaters, etc.).
- ☐ Unplug lamps (floor, desk, etc.), air fresheners and decorations (such as string lights).
- ☐ Unplug chargers (cellphones, laptops, etc.).
- ☐ Unplug electric pencil sharpeners and staplers.

Extended breaks

- ☐ Unplug clocks.
- ☐ Empty, defrost and unplug personal refrigerators.
- ☐ Remove perishable items from the classroom.

Common Areas Power Down Checklist

Daily

- ☐ Close doors, windows and blinds/shades.
- ☐ Turn off lights, ceiling fans, air fresheners and decorations.
- ☐ Turn off computers, printers, copiers and laminators.
- ☐ Turn off media equipment and audio systems (excluding PA system needed for emergencies).
- ☐ Turn off small appliances (microwaves, coffee makers, toasters, etc.).
- ☐ Turn off exhaust fans (excluding high humidity spaces and electrical rooms).

Short breaks

- ☐ Unplug computers, printers, copiers and laminators.
- ☐ Unplug small appliances (microwaves, coffee makers, toasters, etc.).
- ☐ Unplug lamps, air fresheners and decorations.

Extended breaks

- ☐ Unplug clocks.
- ☐ Unplug vending machines that do not require refrigeration.
- ☐ Empty, defrost and unplug nonessential refrigerators.

Measuring Energy Usage with a Digital Watt Meter

Students can use the digital watt meter from your School Uplift Welcome Kit to measure and analyze a classroom appliance's energy consumption (in kWh) to understand the impacts of phantom load. Phantom load is the passive energy drawn from the grid, even when appliances are powered down.

What Is a Digital Watt Meter?

A digital plug-in watt meter works by continuously measuring the voltage and current flowing through an electrical circuit, then calculating the instantaneous power consumption (in watts) by multiplying those values together, displaying the result on a digital screen; essentially, it acts like a small computer that monitors your electricity usage in real-time by constantly sampling voltage and current and applying the formula: Power (W) = Voltage (V) x Current (A).

Key points about a digital plug-in watt meter:

- Measurement: It measures both the voltage (volts) and current (amperes) flowing through the circuit.
- Calculation: Using a microprocessor, it calculates the power consumption by multiplying the measured voltage and current.
- Display: The calculated power is displayed on a digital screen, often showing additional information like energy consumption (kilowatt-hours) and cost.
- Plug-in design: It is designed to be plugged directly into a standard power outlet, with the appliance then plugged into the meter itself.

What can a digital plug-in watt meter measure?

- Instantaneous power (watts): The current power usage of an appliance at any given moment.
- Energy consumption (kilowatt-hours): The total amount of electricity used over a period of time.
- Voltage (volts): The electrical potential in the circuit.
- Current (amperes): The flow of electricity in the circuit.

Materials:

- Digital watt meter
- Classroom appliance (Chromebook charge cart, mini fridge, or similar)
- Data recording sheet
- Calculator (optional)

1. **Introduction**
    - Discuss the concept of energy consumption and why it is measured in kilowatt-hours (kWh).
    - Introduce the digital watt meter and explain its function.
    - Explain the experiment: measuring energy use of an appliance in different states.

2. **Experiment Setup**
    - Identify electricity-consuming school appliances that may be known as "Energy Vampires."
    - Determine the amount of time that data will be collected in each operational state.
    - Distribute data recording sheets.

3. **Data Collection**
    - **First Observation:** Plug the appliance into the digital watt meter and record the power usage when the appliance is **powered on**.
    - **Second Observation:** Turn the appliance **off but keep it plugged in**, then record the power usage.
    - **Third Observation:** **Unplug the appliance completely** and check for residual power consumption.
    - Students should note the readings and discuss any unexpected findings.

4. **Analysis & Discussion**
    - Compare data across groups and identify trends.
    - Discuss the concept of Energy Vampires and draw a conclusion.
    - Brainstorm ways to reduce unnecessary energy consumption.

5. **Conclusion & Reflection**
    - Have students summarize their findings.
    - Discuss real-world applications and personal energy-saving habits.

Extension Activity:
Research the energy consumption of household appliances and create an energy-saving plan for home use.

Estimate the annual energy cost of an appliance based on their findings. Call your local power company to determine your cost per kWh.

MEASURING ENERGY USAGE WITH A DIGITAL WATT METER

Appliance	**Powered On** (kWh)	**Powered Off, Plugged In** (kWh)	**Unplugged** (kWh)
Example: Chromebook Cart	x.xx	x.xx	x.xx

Observations:

MEASURING ENERGY USAGE WITH A DIGITAL WATT METER

Appliance	**Powered On** (kWh)	**Powered Off, Plugged In** (kWh)	**Unplugged** (kWh)

Observations:

October activities

National Energy Awareness Month

Your School Uplift kickoff is a great time to tie in October's National Energy Awareness Month. Below are some suggested activities that focus on raising awareness of energy. (Don't forget, all activities are optional!)

Student social media campaign

We've put together some ideas for integrating student contributions into your school's existing social media platforms. We encourage you to let students craft these messages as part of an after-school club, a schoolwide contest or an assignment in an English or communications class.

Pick a theme from the list below, and ask students to submit an image and caption for one or multiple posts. All posts should be published through your school's social media manager. Depending on the number of submissions, aim to share one or two posts per week to provide consistent content on your preferred social media platforms. When possible, give the student credit in the post.

Theme ideas for social media

- Facts about energy in schools from the *School Uplift SEM Manual*.
- Energy-saving tips students are learning through School Uplift.
- Updates on monthly energy-saving activities.
- Monthly results from the Energy Dashboard.
- Students, staff or classrooms practicing energy-saving behaviors.

Quick tip! Flip to the Community Outreach Guide for social and e-newsletter content you can copy and paste into your communication platforms.

Social media competition

Competition is a great way to engage students. Launch a video competition to get students excited about and participating in energy-saving behaviors. Have students create videos for Instagram, YouTube, TikTok, etc., based on the month's energy theme. Each class or grade can vote on their favorite.

Encourage students to come up with their own ideas too. Here are some topics for students to brainstorm:

- Energy efficiency tips.
- Energy superheroes.
- Renewable energy sources and examples.
- Motivators for saving energy.

Energy and art exhibition

Give students an opportunity to express their awareness and knowledge of energy through a student art exhibition. It could include photography, drawing, painting, woodworking, sculpting, recycled art, writing, poetry or graphic design — you name it! The only requirement is that the art piece be related to energy.

This activity can be done in a club, as a homework assignment or in an art class.

Student Sustainability Week

Choose a week to celebrate sustainability. Let students organize activities and events throughout the week that focus on sustainability. Student Sustainability Week can be implemented schoolwide, in the classroom or on a smaller basis, like in an after-school club.

We recommend letting the students choose which events or activities to hold but have also provided some suggestions below!

Sustainability Show & Tell

- Hold a Sustainability Show & Tell during which students can share the sustainable actions they take in their daily lives. They can show a picture, video or any related prop that goes with a sustainable action.
- Display students' pictures and videos on classroom or hallway TVs/monitors or bulletin boards.

Paperless Day
Go paperless! Choose a day where students only use scrap paper or paper from the recycling bin.

Movie Day
Show a sustainability, environmental or energy-related movie, miniseries or documentary during class. Check out:

- "Bill Nye Solves the Energy Crisis" | youtube.com.
- "Dark Waters" | focusfeatures.com/dark-waters.
  Please note that this film is rated PG-13.
- "A Civil Action" | amazon.com.
  Please note that this film is rated PG-13.
- "My Octopus Teacher" | netflix.com.
- "Just Eat It: A Food Waste Story" | foodwastemovie.com.
- "David Attenborough: A Life on Our Planet" | netflix.com.
- "Switch" | switchon.org.
- "The Boy Who Harnessed the Wind" | netflix.com.
- "National Geographic: The Human Footprint" | amazon.com.
- "U.S. Department of Energy: Energy Literacy Series" | energy.gov.

Vintage Day
It's like "pajama day," but instead of wearing PJs, students wear something vintage (maybe something from their parents' closet!) to highlight the importance of sustainable fashion. Talk about the environmental impact of fast fashion and the benefits of buying secondhand.

Walk or Bike to School Day
Reduce carbon emissions by encouraging students who live in the neighborhood to walk or bike to school once during the week.

Carpool Day
Reduce carbon emissions by encouraging students to carpool to school during the week.

Local power company engagement

Your local power company (LPC) is a great resource to engage your school and community in energy education and awareness. School Uplift is an opportunity for your LPC to connect with and educate its future customers. LPCs may provide their own ideas, show a video or give a presentation on the basics of how electricity is distributed and delivered within your service area. LPC-led education can be coordinated through your Energy Coach. They'll connect you with the right people for the activities listed below.

Ideas for LPC activities

- Invite TVA or LPC employees to visit the school and share about their jobs.
- Ask your LPC if it has an electric vehicle students could explore.
- Ask your LPC to conduct an electricity safety demonstration.
- Invite your LPC to host a booth at an open house or parent-teacher conference.
- Take a field trip! Your school might be able to take advantage of proximity to energy-generation resources to help students become better acquainted with energy production. Field trip sites could include hydroelectric dams or solar farms. If you can't visit a location in person, consider taking a virtual field trip using videos found on TVA's website at TVA.com/kids/electricity/virtual-field-trips.

Celebrate Public Power Week

Held the first full week of October

Public Power Week is celebrated by the approximately 1,400 American Public Power Association member utilities in the U.S. to help customers better understand community-owned power and its benefits.

Public power is how your school, and most of the Valley, receives electricity. A focus on public power can help educate the school community on what public power is, its benefits and how it affects the school.

Celebrate Public Power Week by sharing resources from the American Public Power Association:

- Show this 90-second video during an assembly, a class or extracurricular discussion on energy. Find it at youtu.be/Bz55GDlWL5U.
- Learn more at publicpower.org/event/public-power-week.

Additional resources

TVA has a ton of great resources available to K-12 schools. Visit TVASTEM.com to learn more. The U.S. Energy Information Administration offers a teacher guide with grade-appropriate resources and activities. Learn more at eia.gov/kids/for-teachers/teacher-guide.

November activities

Energy Pledge Month

Energy Pledge Month builds on all the energy awareness your students gained in October and encourages everyone in the school to pledge their commitment to making more energy-efficient choices. Why? Because more energy-efficient choices mean a more comfortable learning environment, a decrease in impact on the environment and a reduction in building utility costs, which leaves more money for school programming. Win-win-win!

We've outlined four different activities for the month. As always, all the activities are optional. But we encourage schools to give them a try! It reinforces the "all hands on deck" approach to School Uplift and fosters energy-saving behaviors among students.

These activities are designed to be used in the classroom, but they can also be used in before- and after-school programs or as extracurricular activities. Here's what's coming up:

1. Individual Energy Pledge
2. Group Energy Pledge
3. Energy Pledge video competition
4. Giving Thanks for Energy

Individual Energy Pledge

In-class instructions

Week 1

- Break students up into small groups. Have them spend 10-15 minutes brainstorming all the ways they use energy every day, as well as how they could reduce that energy use. These ideas can apply at school and at home.
- Help students who are feeling stuck to get more specific by having them think of ways they can save energy in the classroom, hallway, cafeteria, library or gym.
- Let the groups take turns sharing their ideas with each other. Discuss the connection between energy-saving behaviors and the impact those behaviors could have on their school, community and environment. For example, unplugging a laptop at the end of the day prevents it from using energy all night.

- Have students decide on one energy-saving action they want to take for the month of November. Here are some suggestions:
  - Turn the lights off when leaving a room.
  - Turn off video game consoles when done for the day.
  - Carpool with friends when going to the same location.
  - Save water by taking shorter showers.
- Give students time in class to share what pledge they'll be taking and why.
- Have students write their pledges on an *Individual Energy Pledge Card*, found at the end of this section. We've also provided some ideas below for creating your own pledge cards.
- Hang the pledge cards in a prominent place in the classroom or hallway.

Quick tip! Publicly sharing pledges provides greater support and accountability for students to stick with their pledges.

Weeks 2-4

- Hold weekly check-ins with students to discuss their pledge successes and challenges.
- Give students an opportunity to share their experiences at the end of the month. Try some of these prompts:
  - What did you like about the Energy Pledge activity?
  - What did you find hard about keeping your pledge?
  - How do you think our energy-saving actions have helped our school community and the environment?
  - Why is it important to keep practicing energy-saving behaviors?
- Challenge students to continue their commitments.

Find the *Individual Energy Pledge Card* at the end of this section. Or to download and print it, visit EnergyRight.com/school-uplift-resources.

Instructions for before or after school or during other non-curricular times such as lunch or free periods.

Week 1

- Work with your school's Energy Champion to present Energy Pledge Month to students.
- Set up a table in a highly trafficked area, like outside the lunchroom or main entrance.
- Share examples of the types of pledges students could make, like:
  - Turn off classroom lights on the way to lunch, PE and dismissal.
  - Close windows and doors when appropriate.
  - Turn off the water while you're soaping your hands.
- Have students choose a pledge they'll commit to practicing for the month of November.
- Have students sign their individual *Energy Pledge Cards* and hang them near the Energy Dashboard or in a prominent place in the school.

Quick tip! Hang pledges around the school for more visibility and accountability — a great spot is near the Energy Dashboard!

Weeks 2-4

- Hold weekly check-ins with students to discuss their pledge successes and challenges.
- Give students an opportunity to share their experiences at the end of the month. Try some of these prompts:
  - What did you like about the Energy Pledge activity?
  - What did you find hard about keeping your pledge?
  - How do you think our energy-saving actions have helped our school community and the environment?
  - Why is it important to keep practicing energy-saving behaviors?
- Challenge students to continue their commitments.

Find the individual *Energy Pledge Card* at the end of this section. Or to download and print it, visit EnergyRight.com/school-uplift-resources.

Creating pledge cards

We've provided pledge card templates, but you can also have students create their own! Here are a few suggestions for creating your own pledge cards and how to display them publicly:

- **Pledge hands:** Have students trace their hands on scrap paper, cut them out and then write their names and pledges on the hands. Post the pledges around the *Our Energy Pledge Sheet* found at the end of this section. **Bonus:** Using scrap paper provides an opportunity to talk about the importance of reusing materials!
- **Pledge tree:** Using butcher paper, draw the outline of a tree and branches. Have students trace their hands on scrap paper to make "leaves." Have students write their names and pledges on the leaves. Hang the leaves from the tree.
- **Create your own:** Lead students in creating their own unique way of highlighting their pledges!

Find the *Our Energy Pledge Sheet* at the end of this section. Or to download and print it, visit EnergyRight.com/school-uplift-resources.

Group Energy Pledge

Have the entire class or group brainstorm energy-saving pledges they could make. Then have students vote on which one they'd like to commit to and practice for the month of November.

Encourage students to come up with something that will be meaningful to them. Here are a few ideas:

- Turn off the lights in the lunchroom on Fridays.
- Choose one day of the week to be a "device-free" day (no cellphones, personal laptops or tablets).
- Write to a local representative about an energy-related topic.
- Write energy-saving behaviors in chalk on school sidewalks.

Sharing the group Energy Pledge

Once the group has decided on their collective pledge, have one student write the pledge on a piece of butcher paper, or use the *Classroom/Group Energy Pledge Card* found at the end of this section. Have students sign their names, and then hang the butcher paper and the *Our Energy Pledge Sheet* in a prominent location in the classroom or school hallway.

Find the *Classroom/Group Energy Pledge Card* and the *Our Energy Pledge Sheet* at the end of this section. Or to download and print them, visit EnergyRight.com/school-uplift-resources.

Energy Pledge video competition

Create excitement and enthusiasm around Energy Pledge Month by incorporating a little friendly competition! This activity is a great add-on to the individual energy pledge activity.

The Energy Pledge video competition is structured for groups of students to compete against each other. It works best in a classroom setting but can be modified for an after-school club or other group setting!

Instructions

- Have students select their energy-saving behavior for the month, then split students into small groups. You can also choose to have the entire class make one video and compete against other classes making videos.
- Have each group make a video demonstrating how everyone in the group is practicing their individual energy-saving action.
- Encourage students to make fun and creative videos! They could integrate a popular song, make a TikTok-style video, create a reality TV show, etc.
- Submit each group's video to your school's Energy Champion once they're complete. The Energy Champion will coordinate sharing them with the student body.
- Have students vote for their favorite video.

The group or class with the most votes will earn a reward.

Giving thanks for energy

This activity is designed to get your students thinking about all the ways they use and benefit from energy in their daily lives and connecting those ideas to the Thanksgiving holiday. You can use this activity in the classroom, as a small-group activity, during a school assembly or in an after-school club.

Before Thanksgiving break

Set aside time before Thanksgiving break to discuss the different ways energy is used in students' daily lives. Ask students to think about something they value as it relates to Thanksgiving that requires energy. Here are some sample questions:

- What are some of your Thanksgiving traditions? Do any of them require energy? In what way? (Here are some examples if students get stumped: cooking a turkey, driving to see relatives, watching a football game on TV or hanging up holiday lights.)
- What are some ways you could use less energy during Thanksgiving?
- Why is it important to be mindful of our energy use?
- How does the energy we use connect to natural resources?
- What else important in your life requires energy?

After Thanksgiving break

- Hold a post-Thanksgiving classroom discussion about the ways students noticed energy being used around the holiday.
- Ask students to share any ways they practiced energy-saving behaviors over the break.
- Discuss how students can continue their pledges in new and different ways during the rest of the holiday season.

Our Energy Pledge

We pledge to

_____

_____

for the month of November to
help our school save money,
be more comfortable
and protect the environment.

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

I pledge to

_____

for the month of November.
I will try to practice my
energy-saving action at
school and home.

Signature: _____

December activities

Power Down Month

Welcome to Power Down Month! The holiday break is in sight, and we want to help you prepare your classroom and school to save as much energy as possible while the school is empty.

This month, we've put together some fun activities for your students so they can play an active role in the power down prep. Plus, you'll find helpful checklists for how to power down your classroom and/or school each day, over the weekend and during longer breaks.

Don't forget, all activities are optional! But for December, we recommend starting with Power Down Jeopardy before jumping into the rest of the activities.

Power Down Jeopardy

You'll be using an online version of Power Down Jeopardy, which means you'll have the flexibility to play it in the classroom or during before- and after-school programs, club time or whenever students gather. The game follows the televised version of *Jeopardy!* but doesn't include Double Jeopardy, Final Jeopardy or Daily Doubles.

Power Down Jeopardy themes

1. School Electronics
2. Electricity
3. Home Appliances
4. Conservation
5. Renewables

Setting up

Power Down Jeopardy is available at jeopardylabs.com/play/power-down-jeopardy-high-school.

1. Break up the class into teams of four, based on your class size. Teams will compete against each other.
2. Enter the number of teams into the starting page of the Jeopardy Labs game board.

3. Open the link to the print version of Power Down Jeopardy, located under the "Press F11 for full-screen mode" button on the same page you entered the number of teams. This will open a new tab in your browser, which will display the answers to each question on the board. Don't let students see this screen before or during the game.
4. Press "Continue." This is the Jeopardy board. You should see a scoreboard for each team at the bottom of the screen.
5. Ask each team to choose an environment-themed name. By default, the scoreboard will say "Team 1," "Team 2," and so on, but you can enter your students' chosen team names by double-clicking on that space.
6. Designate a team captain. The captain is responsible for standing up to signal that their team would like to answer a question.

To play Power Down Jeopardy

1. Select a team to pick the first category and point amount.
2. Click on the selected box to reveal the question.
3. Whichever team captain stands up first gets the initial attempt to answer the question.
4. If that team answers correctly, reveal the answer to the class by pressing the spacebar on your keyboard. If the team answers incorrectly, do not reveal the answer! Invite the team that responded second the opportunity to answer.
5. If the second team answers incorrectly, continue inviting teams in the order they stood up to answer. Once a team answers correctly, or there are no additional guesses, reveal the answer by pressing the spacebar.
6. The team that answers the question correctly will select the next category and point box.
7. Click the plus sign for any team that answered correctly. Click the negative sign for those that answered incorrectly.
8. The Power Down Jeopardy board will automatically add or subtract the number of points a question is worth to or from the team's total score. Before returning to the main Power Down Jeopardy board, give each team their respective score.

To return to the main Power Down Jeopardy board, hit the escape key. The number in the box will fade, indicating the question has been answered. The game is over when all the answers have been revealed, the numbers have faded and the board is empty.

Game instructions

Read the instructions below to the teams before starting the game. Feel free to customize the instructions as necessary.

Script

To begin, one team will decide which category and point amount they would like to pick, such as Electronics for 200. Questions in each column are related to that category's theme. The question difficulty increases as the number value increases; 100 will be the easiest and 500 will be the most difficult.

Once you've selected your category and point amount, I will reveal the question and read it aloud. If you think you know the answer, alert your team captain. After the question has been fully read, your captain may stand up to share the answer. Correct responses can only be given after I [the teacher] have called on your captain. Captains, please wait to respond until you have been called.

If anyone on your team answers the question before they've been called on or speaks out of turn, your team will be deducted the amount of points the question was worth.

If your team captain is the first to stand up, they will answer the question on behalf of the team. If your team's answer is incorrect, your team will lose the designated points. The team who stood up second will then have a chance to respond.

If the correct response is given, the second team receives the 200 points and selects the next category and point amount.

If the second team answers the question incorrectly, the question goes to the next team that stood up until the question has been answered correctly or there are no teams left that are willing to guess. If no team can answer the question correctly, then the last team to give a correct answer will select the next category and point amount.

When the answers for each category have been revealed, the team with the most points wins!

Any questions? Good luck!

When the correct answer is revealed, use the opportunity to provide additional background information on the topic.

Festive Winter Break Shutdown

This long break is full of potential! There are many ways to save money on your power bills with little to no cost to your school. However, behavioral energy savings happen when everyone on campus is aware of the energy efficient behaviors that are most helpful.

Brainstorm with a group of students or your Energy Team to create a festive and engaging way to shut down the whole school before everyone leaves for Winter Break.

"Cool Down for the Holidays" Countdown

Create a school-wide countdown where each day leading up to winter break features an energy-saving tip (e.g., turning off lights, powering down computers). Teachers and students can track progress on a large festive display, such as a snowflake chart where each tip earns a new snowflake.

"Silent Night, Power Down Right" Event

On the last day before break, hold a brief, school-wide moment when all unnecessary lights and electronics are turned off at the same time. Pair it with a winter sing-along or candlelight (battery-operated) celebration to reinforce the importance of conserving energy.

The "Frozen" Classroom Challenge

Challenge classrooms to see who can best "freeze" their energy use before break. Students and teachers ensure all lights, electronics, and heating are set to energy efficient settings. The class with the most thorough shutdown earns a "Coolest Energy Savers" award.

Snowman Shutdown Patrol

Assign student "Snowman Shutdown Teams" to check classrooms and common areas for unnecessary energy use before break. These teams can use a checklist to ensure projectors, computers and lights are off. Recognize the best shutdown efforts with a fun, winter-themed reward.

"Hibernate Your Tech" Day

Dedicate a day before break to educating students and staff about putting computers and devices into low-power modes. Students can create festive reminder signs (e.g., polar bears "hibernating" laptops) to post near classroom electronics, reinforcing energy-saving habits.

Energy Efficient Gingerbread House

Celebrate the end of Power Down Month by making an energy efficient gingerbread house! Find instructions for creating a gingerbread house on the National Energy Education Development Project website here: shop.need.org/collections/primary-guides/products/energy-efficient-gingerbread-house.

January activities

Careers in STEM Month

"What are you going to do after you graduate?" High school students hear this question a lot. That's why now's the time to start thinking about the possibilities. This month's Careers in STEM activities take students on an exciting career exploration journey where they'll learn about career opportunities in the science, technology, engineering and mathematics fields. We'll find out what leads people to jobs in STEM and discuss the education that's required for these positions. We'll also discuss things students can do now and after high school to prepare for these roles.

Panel With the Pros

This extracurricular activity will introduce students to career possibilities in the energy field. Create a fun, welcoming event that students will want to attend. (We highly recommend incentives like pizza, donuts, school attire passes or other rewards to encourage students' interest and participation.) Students who attend this activity will have the opportunity to meet professionals in the energy field, ask questions and gain a broader understanding of energy-related job options.

Planning the event

Below are suggestions for developing and promoting the Panel With the Pros event.

- **Choose a panel host.** Select someone from your school staff who will serve as the host for the Panel With the Pros. This person could be the event planner, but it doesn't have to be! The host should be able to keep the discussion on track, ask leading questions and have a good idea of the event goals.
- **Plan the panel.** Contact your Energy Coach and ask for recommendations for two to four panelists. Ideally, your panel will include professionals from different departments and with different career stories.

  Tip: Utilize your school's alumni network for potential panelists.

- **Select a date.** Work with your panelists to select the best date for your event.
- **Decide on a location.** Find a space that's large enough for food, students and your panel of experts. Make reservations if you need to and have a backup location in case your event is bigger or smaller than you'd originally anticipated.

- **Promote the event.** Make good use of your school's communication channels and get creative with your promotion! For example, have your LPC park a bucket truck out front for the week leading up to the event. Make sure parents and guardians are informed as well.
- **Promise food and require sign-up.** Encourage students to attend with the promise of a giveaway — free food works well — and start a sign-up sheet so you have an idea of how much food to order.
- **Invite individual students.** As you plan the event, a few students may come to mind who'll need extra encouragement to attend. Reach out to them directly or work with your counseling office to invite students who have shown an interest in STEM-related work.
- **Finalize details.** As you get closer to the event and you have a good idea of how many people will be attending, reconfirm your panelists and finalize details such as location, event setup and food ordering.

The event

While panel details may vary depending on the time allotted for the conversation, a basic program outline can provide space for introductions, reflection and Q&A.

1. **Welcome students.** Provide any expectations for participation, including good listening practices and space for questions.
2. **Make introductions.** After welcoming students to the event, ask the panelists to introduce themselves. Sharing their name, job and years of service is a great place to start!
3. **Ask questions.** Below are sample questions you could use with your panelists:
    - Tell us about your path to your role. What education and experience did you need to get to where you are today?
    - When did you know you wanted to be in this type of work? How did you know?
    - If your high school self was here today, what would you want to tell them? Would your high school self be surprised by where you are today?
    - If someone wants to learn more about this career path, what can they do now to prepare?

4. **Provide space for the students to ask questions.** The host can help reframe unclear questions so that the panelists can understand them and respond appropriately.

5. **Say thanks.** Conclude with a "thank you" for the panelists.

Event follow-up

Take note of any student who is positively engaged during the panel conversation and follow up with an invitation to continue exploring an energy-related career path.

STEM Career and Trade School Fair

The STEM Career and Trade School Fair focuses on organizations offering pathways toward STEM careers. These include college and university vendors as well as trade schools, apprenticeship programs and companies that provide post-secondary training and hiring. Career and trade fairs give students a chance to expand their knowledge about potential career paths, practice their communication skills and help them make smart curricular choices while still in high school.

Preparing for the event

Below is a suggested checklist to prepare for hosting this event.

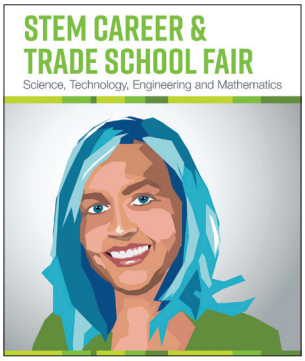
- **Involve your school counseling or guidance office.** With the focus on post-secondary planning, your school's counseling or guidance office will be a helpful and resourceful support in planning and hosting this event.

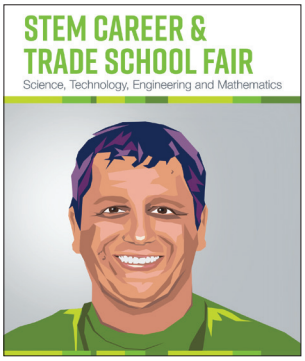
- **Confirm a time and location.** A large gathering space, such as a gym or cafeteria, is an ideal location for a fair.

- **Invite vendors early.** To ensure a strong turnout of fair vendors, send event invitations three months in advance, with instructions on how to RSVP. Follow up with a call or email a few weeks after to increase vendor attendance (see below for a sample invitation).

- **Partner with other high schools or colleges in your area.** By widening the circle, you can share the benefits and responsibilities of hosting an event of this size.

- **Promote the event.** Begin promotion at least a month in advance, if not earlier. Utilize all the promotional channels at your disposal. These could include newsletters, email blasts, social media, announcements, posters, screens, web calendars, etc. **Marketing assets can be found at the end of this section. You can also download them at EnergyRight.com/school-uplift-resources.**





- **Request volunteer support.** It takes a team to make this event successful, so ask for volunteer support from staff, parents or student clubs (National Honor Society, Robotics Club, etc.). Volunteers may be needed in the following areas:

    - **Setup** (at least three people): They're responsible for getting your space ready to host the event. This includes setting up and arranging tables and chairs, preparing a refreshment space for vendors and setting up event signage to indicate parking, restrooms, etc.

    - **Vendor hospitality/liaison** (one to two people): They're available to assist vendors with any questions or needs that arise during the event.

    - **Information and contest table** (two to three people): This "welcome" table should be located near the entrance to the event. Volunteers are responsible for welcoming attendees and answering questions related to the event. They can also handle tasks related to any giveaways or contests.

- **Tech support** (one person): They're available to troubleshoot any problems that arise around technology issues. Potential questions may involve Wi-Fi log-in and service and AV equipment (if using).

- **Security** (one to two people): Volunteers are available to monitor the visitors to the school grounds and can step in if needed to provide support.

- **Teardown** (at least three people): They're responsible for taking down tables and cleaning up after the event.

Sample vendor invitation

Dear [INSERT ORGANIZATION_NAME],
We are excited to announce the [INSERT SCHOOL_NAME] STEM Career and Trade School Fair, taking place on [DATE] at [TIMEFRAME] at [ADDRESS] in the [ROOM_LOCATION].

While this is our first year hosting this event, we are inviting [NUMBER_OF] organizations to attend. There is a great interest in STEM-related careers within our student body of [NUMBER_OF] students. Our team is so excited to fuel their passions with this event.

Vendors for the STEM Career and Trade School Fair will receive the following accommodations: [INSERT_BENEFITS: {information such as exhibit space, special event giveaways or additional marketing opportunities and other exhibitor details}].

Please consider joining us on [DATE] for this inaugural event. You can RSVP by [INSERT information on how to RSVP, deadlines and contact information].

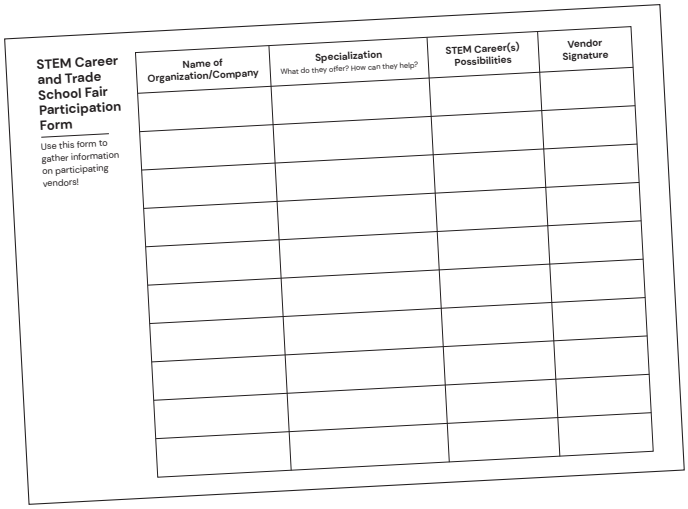
Sincerely,

_____

During the event

Encourage participation through a contest or assignment! Use the *STEM Career and Trade School Participation Form* to encourage student participation! **(The Participation Form can be found at the end of this section or you can download it at EnergyRight.com/school-uplift-resources.)** This form is designed to encourage students to visit vendors, ask questions and receive vendor signatures.

Use this form for entry into an event giveaway (e.g., vendor-provided merchandise/swag) or encourage teachers to give extra credit for fair participation.



STEM Career and Trade School Fair Participation Form

Use this form to gather information on participating vendors!

Name of Organization/Company	Specialization What do they offer? How can they help?	STEM Career(s) Possibilities	Vendor Signature

Event follow-up

Send a note or letter to vendors, thanking them for their participation. Be sure to mention if plans are forming for next year's event (if annual).

STEM Career and Trade School Fair Participation Form

Use this form to gather information on participating vendors!

Name of Organization/Company	Specialization What do they offer? How can they help?	STEM Career(s) Possibilities	Vendor Signature

You're invited!

STEM CAREER AND TRADE SCHOOL FAIR

February activities

The Power of Community Month

Valentine's Day makes February the perfect time for your students to show their community some love. By conserving energy and saving money through School Uplift, your school is already strengthening the community, but why not get everyone involved? These fun activities bring it all together by getting your friends, families and community members in on the energy-saving action.

STEM Competition

Science, technology, engineering and mathematics (STEM) competitions allow students to apply theoretical concepts by brainstorming and creating their own project.

Students can ideate, build and implement projects that can save energy in their community. STEM competitions can be stand-alone events or can be incorporated into preexisting science fairs, innovation labs or other events.

The ideal scoring committee size will depend on the volume of students and projects at each school. A typical scoring committee's size ranges from four to five individuals. We recommend a mix of school staff, community leaders and even students from higher grades. This committee should also be responsible for developing a scoring rubric for all participating projects.

Examples of STEM projects include:

- Building a solar oven.
- Creating a nightlight.
- Investigating a real-world environmental problem.

For more examples, refer to the *Science Buddies* link in the Additional resources section on the next page.

Show off your projects!

Final projects can be displayed throughout the community — in locations such as libraries, businesses and other community gathering spaces — to highlight students' work while initiating local conversations about energy-saving efforts.

> Encourage community members to attend the competition! Promote the event via social media, newspaper articles or flyers. Local government departments may also cross-promote the event via their channels for greater outreach.

Additional resources

Want to host your own STEM competition? Check out these resources to help you plan.

STEM competition best practices

To learn more about necessary steps and best practices for organizing a STEM competition at your school, check out the American Association of University Women (AAUW). Visit ww3.aauw.org/resource/workshop-hosting-a-stem-event to learn more.

Project examples

Trying to brainstorm project ideas? Visit Science Buddies to spark your students' creativity: sciencebuddies.org/science-fair-projects/project-ideas/high-school.

Ongoing STEM competitions for students

If your students loved their first STEM competition and want to do more, the Oak Ridge Institute for Science and Education (orise.orau.gov/resources/k12/competitions-for-students.html) routinely posts contests just for students.

March activities

Solar Spring Month

The sun's awesome power helps fuel and sustain life. It also powers experiments, sparks inventions and lights up our communities! Even though we're already putting solar power to good use, scientists and engineers are always working to discover new and better ways to harness the sun's energy. This month, we're going to put on our lab coats and have some fun finding out how solar energy works. Then, we'll start thinking about ways we can put solar power to work in our school and community.

Solar Savings

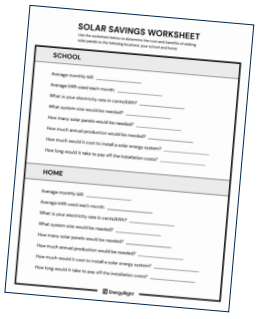
With the help of a solar calculator, students will examine the impact solar power could have on their homes and school. This activity helps students calculate the cost of installation, pay-off period and other factors related to solar power. In addition to calculating system size, annual electricity production and estimated costs and payback, the activity will help students learn how to read and understand electricity bills. This activity can be implemented in the classroom (especially science or math) or in an after-school club or program.

Facilitator preparation:

1. Familiarize yourself with the TVA Solar Calculator, available online at EDT.TVA.gov. Be prepared to instruct students on how to use it (see step four under Activity instructions section below).
2. Find a copy of your home energy bill and use it as an example. (Review step six in the Activity instructions section below.)
3. Request a copy of your school's electricity bill or obtain the following information from your school for the *Solar Savings Worksheet*:
    a. Average monthly bill: _____
    b. Average kWh used each month: _____
    c. What is your electricity rate in cents/kWh? _____

Materials needed:

- Copies of the *Solar Savings Worksheet* for each student. The worksheet is available at the end of this section or available for download at EnergyRight.com/school-uplift-resources.


SOLAR SAVINGS WORKSHEET

SCHOOL

HOME

- Sample residential electricity bill.
- School electricity usage data or electricity bill.
- Computer or mobile device for each student or group.

Activity instructions:

1. Start with an introduction to solar energy. Lead a discussion by asking questions that prompt students to share what they already know. (Prepare for this discussion by reviewing content for your own knowledge. The U.S. Department of Energy can provide a good foundation: energy.gov/eere/solar/how-does-solar-work.)
   Questions could include:
   a. How would you define solar energy?
   b. Do you see solar energy used anywhere? If so, where and how is it being used?
   c. Why do you think people decide to use solar energy?
   d. Solar energy is a renewable energy source. What makes solar energy renewable?
   e. What other types of renewable energy can you think of?

2. After the discussion, introduce the *Solar Savings Worksheet* and solar calculator. This worksheet prompts students to consider the current energy use and possible future solar energy use of their school and homes.

3. Introduce TVA's Solar Calculator, available online at EDT.TVA.gov.

4. Demonstrate how to use the calculator by clicking the navy blue Get Started button. Then, click the light blue Advanced Options button. (Fill in the information that you have available. If you don't have all the data you need, the form auto-populates with average TVA rates. You can find printable instructions for using the calculator at EDT.TVA.gov/manuals/How%20to%20use%20the%20Solar%20Calculator.pdf).

5. Point out how the *Solar Savings Worksheet* aligns with the information needed to use the calculator.

6. Demonstrate how to use the calculator by inputting information from your home/residential electric bill.

7. Provide students with information from the school's electricity bill.

8. With students working in groups or on their own, provide 10-15 minutes to use the TVA Solar Calculator and add the information to the corresponding lines within the worksheet.

9. Encourage your students to experiment with the "Percentage of electricity use covered by solar" to see how it impacts system size, generation and payback.

10. Review the findings with the whole class.

11. Ask students to share their thoughts on the benefits and obstacles of converting to solar energy.

12. Assign students to complete the bottom of the worksheet and explore solar energy solutions for their homes. Prepare students to ask parents or guardians to find the first three questions for the home section of the worksheet:
    a. Average monthly bill: _____
    b. Average kWh used each month: _____
    c. What is your electricity rate in cents/kWh? _____

13. Encourage students to do their best to find this information and to follow up if they are running into problems. If students are unable to find utility information for their homes, we've provided sample electric bills at the end of this section. They're also available for download at EnergyRight.com/school-uplift-resources.

The Next Big Solar Invention

All over the world, scientists and inventors are coming up with new and exciting ways to use solar energy to make the world a better, cleaner place. This month, challenge your students to dream big and come up with The Next Big Solar Invention! Students will spend a week brainstorming their world-changing energy inventions, then they'll spend a week creating visuals or prototypes to demonstrate their ideas. By the end of the month, they should be ready to present and demonstrate their inventions.

Facilitator preparation:

1. Print copies of the presentation rubric for each student in your class. This rubric can be found at the end of this section and is available for download at EnergyRight.com/school-uplift-resources.

2. Review examples of recent solar energy inventions or innovations to share during the activity. See step one in Activity instructions below for more information. Below are website resources for finding recent solar innovation news:
    a. The National Renewable Energy Library: nrel.gov/solar.
    b. SolarReviews: solarreviews.com/blog/solar-panel-technologies-that-will-revolutionize-energy-production.

3. Decide on a prize or incentive for the winning competition. (Free pizza, school store credit, gift certificates, school attire passes, extra credit, homework passes, etc.)

4. Schedule and plan for The Next Big Solar Invention presentations. If you're using class time for the presentations, you may need to spread them out over several days. If your classroom isn't big enough, reserve a space for the completed invention prototypes and presentations.

Activity instructions:

The following instructions are intended for use in a classroom setting; however, The Next Big Solar Invention can also be held as a school-wide competition or as an after-school club activity. Adjust the instructions to fit your context.

1. Share examples of recent discoveries or advancements in the field of solar energy. Alternative: Instead of providing examples, have your students do this research as part of the innovation stage of the competition.

    Announce The Next Big Solar Invention contest:

    > ***Instructor:*** *Feeling inspired? Now it is your turn to innovate and invent. I'm going to split the class up into groups of three or four. As a small group, your challenge is to design The Next Big Solar Invention! First, we'll spend a week brainstorming and ideating solar inventions. Then, we'll spend a week developing our plans and creating PowerPoints, posters or building prototypes. The choice is yours! Finally, we'll spend a week polishing and presenting our work. The Next Big Solar Invention culminates in a judged competition. The winner or winners will receive [INSERT INCENTIVE/PRIZE]*

    Divide students into groups of three or four and provide each student with a copy of the presentation rubric.

2. While specifics can vary, explain that groups will be asked to follow three stages:
    a. **Ideate (week one):**

> ***Instructor:*** *During ideate week, you'll brainstorm solar energy ideas together. Consider how traditional or non-renewable energy sources are currently used. Then, think about how to use solar energy as a supplemental or alternative energy source. Alternatively, is there a power problem that solar energy could help solve? Think big!*

    b. **Build (week two):**

> ***Instructor:*** *In week two, your group will select one solution identified in the Ideate stage and expand on the idea. What would this idea look like in practice? How would it help? How would it be implemented? Your group should be able to physically demonstrate the solution you developed by building a prototype, creating a detailed poster or developing a PowerPoint presentation. Use your imagination during the build week and create a visual representation of your idea. Prototypes or models should be as realistic as possible, but do not need to be operational.*

    c. **Presentation preparation (week three):**

> ***Instructor:*** *During presentation preparation week, your group will spend time refining your invention and planning your presentation. Your group's presentation should walk the audience through the development process and answer questions such as: Why did you choose this solution? How does this idea help improve energy efficiency or save money? What does this idea look like in practice? How does it work? What questions remain?*

3. Presentation week: At the end of the month, reserve some class time each day for a few five- to 10-minute presentations. After each presentation, allow a few minutes for questions and feedback from the audience (student peers, special guests and fellow teachers).

4. Choose the winners: Points should be awarded based on presentation rubric. Consider having multiple awards (e.g., most out-of-the-box idea, best prototype).

Spring break Power Down

For many schools, March's arrival means that spring break is just around the corner! Before you leave for your much-deserved break, don't forget to power down your school. You'll be surprised by how much energy you can conserve and money you can save during that week!

Check out the December section of your *Engagement Binder* for Power Down tips and suggestions or visit EnergyRight.com/school-uplift-resources.

SOLAR SAVINGS WORKSHEET

Use the worksheet below to determine the cost and benefits of adding solar panels to the following locations: your school and home

SCHOOL

Average monthly bill: _____

Average kWh used each month: _____

What is your electricity rate in cents/kWh? _____

What system size would be needed? _____

How many solar panels would be needed? _____

How much annual production would be needed? _____

How much would it cost to install a solar energy system? _____

How long would it take to pay off the installation costs? _____

HOME

Average monthly bill: _____

Average kWh used each month: _____

What is your electricity rate in cents/kWh? _____

What system size would be needed? _____

How many solar panels would be needed? _____

How much annual production would be needed? _____

How much would it cost to install a solar energy system? _____

How long would it take to pay off the installation costs? _____

THE NEXT BIG SOLAR INVENTION
PRESENTATION RUBRIC

Scoring Instructions:

Each section is worth 10 possible points. Groups can score up to two points per question. For each question, score using the following criteria:

- **Zero points** if the question wasn't addressed or if the response was inadequate.
- **One point** if the presenters addressed the question adequately.
- **Two points** if the presenters exceeded expectations in their response.

The presentation should address the following areas:

Build stage evaluation
(10 points possible)

	Score
1. Did the group present a visual model or working prototype that represented their idea?	
2. Did the group share their initial research question(s) that shaped the visual model or prototype they developed?	
3. Did the group describe the obstacles they encountered while developing their prototype or working model?	
4. Did the group explain how they found solutions to these obstacles?	
5. Did the group work together as a team to develop the visual model or prototype?	

Ideate stage evaluation
(10 points possible)

	Score
1. Did the group explain how they came up with their solar energy idea, and how they conducted research to develop this idea?	
2. Did the group share ideas they didn't pursue?	
3. Did the group explain why they ultimately chose this idea?	
4. Were group members collaborative, supportive and receptive to others' ideas?	
5. Does this solution solve a current energy problem, or create a realistic solution that could lead to less waste and better performance?	

Presentation preparation evaluation
(10 points possible)

	Score
1. Was the group prepared to present their idea?	
2. Did the group take the activity seriously?	
3. Were all group members involved with the presentation?	
4. Did the presentation include clear introduction (problem), content (solution) and conclusion segments?	
5. Was the group able to answer any follow-up questions?	

TOTAL SCORE

YOUR LOCAL POWER COMPANY

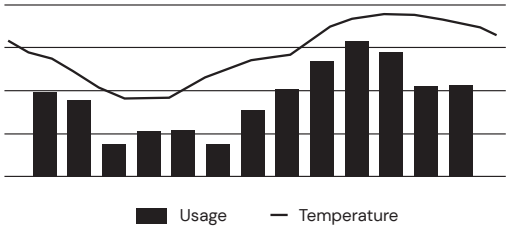
ALABAMA SAMPLE ELECTRIC BILL

Billing Date: February 26
Account Number: 00-0000000
Customer Name: Business Name
Service Address: 1234 Street Address
City, State 12345-6789
Rate Class: RESIDENTIAL ELECTRIC
Electricity Rate: 13.08¢

Account Summary

	Days	kWh	Cost/Day
Current Billing	31	1,150	4.85
Previous Billing	30	1,169	4.30
Last Year Billing	31	647	2.35

Electricity Use



Summary of Charges

Previous Balance	$ 129.08
Payments Received	$ 129.08
Balance Forward	$ 0.00

Current Charges

Electric Power	$ 150.47

Total Balance Due **$ 150.47**

Details

Meter Number		835878
New kWh Meter Reading - Actual	2/22/22	29,642
Previous kWh Meter Reading - Actual	1/22/22	28,492
Total kWh Used This Period		1,150

Please detach and return in the enclosed envelope with payment.

YOUR LOCAL POWER COMPANY

#00 000000000 000000000 00000
Account Number: 00-0000000

YOUR NAME
1234 STREET ADDRESS
CITY, STATE 12345-6789

Amount Due:	**$ 150.47**
Due Date:	**March 12**

Please be sure address appears in the window of the envelope.

Your Local Power Company
1234 Street Address
City, State 12345-6789

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YOUR LOCAL POWER COMPANY

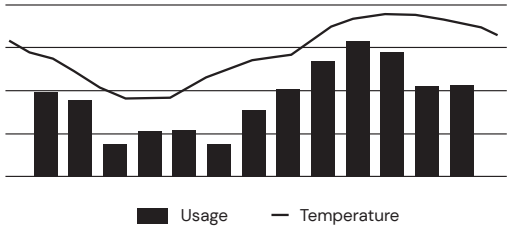
GEORGIA SAMPLE ELECTRIC BILL

Billing Date: February 26
Account Number: 00-0000000
Customer Name: Business Name
Service Address: 1234 Street Address
City, State 12345-6789
Rate Class: RESIDENTIAL ELECTRIC
Electricity Rate: 12.60¢

Account Summary

	Days	kWh	Cost/Day
Current Billing	31	1,082	4.40
Previous Billing	30	1,169	4.30
Last Year Billing	31	647	2.35

Electricity Use



Summary of Charges

Previous Balance	$ 129.08
Payments Received	$ 129.08
Balance Forward	$ 0.00

Current Charges

Electric Power	$ 136.35

Total Balance Due **$ 136.35**

Details

Meter Number		635373
New kWh Meter Reading - Actual	2/22/22	42,873
Previous kWh Meter Reading - Actual	1/22/22	41,791
Total kWh Used This Period		1,082

Please detach and return in the enclosed envelope with payment.

YOUR LOCAL POWER COMPANY

#00 000000000 000000000 00000
Account Number: 00-0000000

YOUR NAME
1234 STREET ADDRESS
CITY, STATE 12345-6789

Amount Due:	**$ 136.35**
Due Date:	**March 12**

Please be sure address appears in the window of the envelope.

Your Local Power Company
1234 Street Address
City, State 12345-6789

00 0000000000 0000000000 0000000000 00000000 00000000

YOUR LOCAL POWER COMPANY

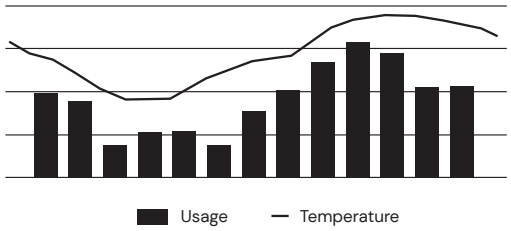
KENTUCKY SAMPLE ELECTRIC BILL

Billing Date: February 26
Account Number: 00-0000000
Customer Name: Business Name
Service Address: 1234 Street Address
City, State 12345-6789
Rate Class: RESIDENTIAL ELECTRIC
Electricity Rate: 11.51¢

Account Summary

	Days	kWh	Cost/Day
Current Billing	29	1,117	4.43
Previous Billing	30	1,169	4.30
Last Year Billing	31	647	2.35

Electricity Use



Summary of Charges

Previous Balance	$ 129.08
Payments Received	$ 129.08
Balance Forward	$ 0.00

Current Charges

Electric Power	$ 128.52

Total Balance Due **$ 128.52**

Details

Meter Number		635373
New kWh Meter Reading - Actual	2/20/22	23,710
Previous kWh Meter Reading - Actual	1/22/22	22,593
Total kWh Used This Period		1,117

Please detach and return in the enclosed envelope with payment.

YOUR LOCAL POWER COMPANY

#00 000000000 000000000 00000
Account Number: 00-0000000

YOUR NAME
1234 STREET ADDRESS
CITY, STATE 12345-6789

Amount Due:	**$ 128.52**
Due Date:	**March 12**

Please be sure address appears in the window of the envelope.

Your Local Power Company
1234 Street Address
City, State 12345-6789

00 0000000000 0000000000 0000000000 00000000 00000000

YOUR LOCAL POWER COMPANY

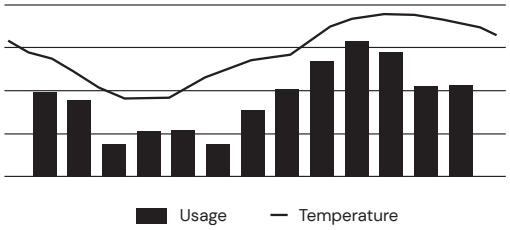
MISSISSIPPI SAMPLE ELECTRIC BILL

Billing Date: February 26
Account Number: 00-0000000
Customer Name: Business Name
Service Address: 1234 Street Address
City, State 12345-6789
Rate Class: RESIDENTIAL ELECTRIC
Electricity Rate: 11.73¢

Account Summary

	Days	kWh	Cost/Day
Current Billing	29	1,177	4.76
Previous Billing	30	1,169	4.30
Last Year Billing	31	647	2.35

Electricity Use



Summary of Charges

Previous Balance	$ 129.08
Payments Received	$ 129.08
Balance Forward	$ 0.00

Current Charges

Electric Power	$ 138.02

Total Balance Due **$ 138.02**

Details

Meter Number		435375
New kWh Meter Reading - Actual	2/20/22	46,550
Previous kWh Meter Reading - Actual	1/22/22	45,373
Total kWh Used This Period		1,177

Please detach and return in the enclosed envelope with payment.

YOUR LOCAL POWER COMPANY

Amount Due:	**$ 138.02**
Due Date:	**March 12**

#00 000000000 000000000 00000
Account Number: 00-0000000

YOUR NAME
1234 STREET ADDRESS
CITY, STATE 12345-6789

Please be sure address appears in the window of the envelope.

Your Local Power Company
1234 Street Address
City, State 12345-6789

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YOUR LOCAL POWER COMPANY

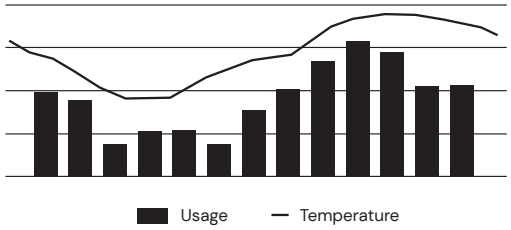
NORTH CAROLINA SAMPLE ELECTRIC BILL

Billing Date: February 26
Account Number: 00-0000000
Customer Name: Business Name
Service Address: 1234 Street Address
City, State 12345-6789
Rate Class: RESIDENTIAL ELECTRIC
Electricity Rate: 11.50¢

Account Summary

	Days	kWh	Cost/Day
Current Billing	30	1,059	4.06
Previous Billing	30	1,169	4.30
Last Year Billing	31	647	2.35

Electricity Use



Summary of Charges

Previous Balance	$ 129.08
Payments Received	$ 129.08
Balance Forward	$ 0.00

Current Charges

Electric Power	$ 121.76

Total Balance Due **$ 121.76**

Details

Meter Number		635373
New kWh Meter Reading - Actual	2/22/22	43,522
Previous kWh Meter Reading - Actual	1/22/22	42,463
Total kWh Used This Period		1,059

Please detach and return in the enclosed envelope with payment.

YOUR LOCAL POWER COMPANY

#00 000000000 000000000 00000
Account Number: 00-0000000

YOUR NAME
1234 STREET ADDRESS
CITY, STATE 12345-6789

Amount Due:	**$ 121.76**
Due Date:	**March 12**

Please be sure address appears in the window of the envelope.

Your Local Power Company
1234 Street Address
City, State 12345-6789

00 0000000000 0000000000 0000000000 0000000000 0000000000

YOUR LOCAL POWER COMPANY

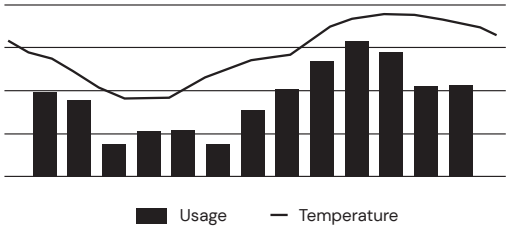
TENNESSEE SAMPLE ELECTRIC BILL

Billing Date: February 26
Account Number: 00-0000000
Customer Name: Business Name
Service Address: 1234 Street Address
City, State 12345-6789
Rate Class: RESIDENTIAL ELECTRIC
Electricity Rate: 11.15¢

Account Summary

	Days	kWh	Cost/Day
Current Billing	31	1,215	4.37
Previous Billing	30	1,169	4.30
Last Year Billing	31	647	2.35

Electricity Use



Summary of Charges

Previous Balance	$ 129.08
Payments Received	$ 129.08
Balance Forward	$ 0.00

Current Charges

Electric Power	$ 135.46

Total Balance Due **$ 135.46**

Details

Meter Number		475377
New kWh Meter Reading - Actual	2/22/22	21,257
Previous kWh Meter Reading - Actual	1/22/22	20,042
Total kWh Used This Period		1,215

Please detach and return in the enclosed envelope with payment.

YOUR LOCAL POWER COMPANY

#00 000000000 000000000 00000
Account Number: 00-0000000

YOUR NAME
1234 STREET ADDRESS
CITY, STATE 12345-6789

Amount Due:	**$ 135.46**
Due Date:	**March 12**

Please be sure address appears in the window of the envelope.

Your Local Power Company
1234 Street Address
City, State 12345-6789

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YOUR LOCAL POWER COMPANY

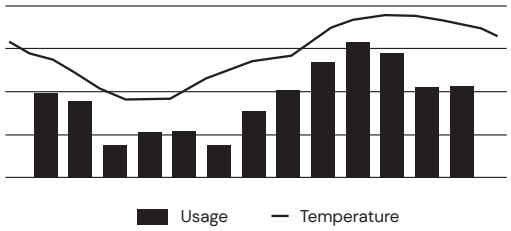
VIRGINIA SAMPLE ELECTRIC BILL

Billing Date: February 26
Account Number: 00-0000000
Customer Name: Business Name
Service Address: 1234 Street Address
City, State 12345-6789
Rate Class: RESIDENTIAL ELECTRIC
Electricity Rate: 12.14¢

Account Summary

	Days	kWh	Cost/Day
Current Billing	29	1,093	4.58
Previous Billing	30	1,169	4.30
Last Year Billing	31	647	2.35

Electricity Use



Summary of Charges

Previous Balance	$ 129.08
Payments Received	$ 129.08
Balance Forward	$ 0.00

Current Charges

Electric Power	$ 132.70

Total Balance Due	**$ 132.70**

Details

Meter Number		635373
New kWh Meter Reading - Actual	2/20/22	19,771
Previous kWh Meter Reading - Actual	1/22/22	18,678
Total kWh Used This Period		1,093

Please detach and return in the enclosed envelope with payment.

YOUR LOCAL POWER COMPANY

Amount Due:	**$ 132.70**
Due Date:	**March 12**

#00 000000000 000000000 00000
Account Number: 00-0000000

YOUR NAME
1234 STREET ADDRESS
CITY, STATE 12345-6789

Please be sure address appears in the window of the envelope.

Your Local Power Company
1234 Street Address
City, State 12345-6789

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April activities

Earth Month

Earth Day is celebrated worldwide on **April 22**. But why limit the celebration to one day? Earth Month is a great way to wrap up the school year and your school's participation in School Uplift! Here are some fun, optional activities to help your students celebrate Earth Month and learn more about sustainability.

Ecochallenge

Ecochallenge is a platform that empowers your school community to connect their actions to science-based, sustainable solutions.

Your class or school community can earn points on the ecochallenge.org platform by completing and tracking energy-saving actions. Small groups, clubs, classes or entire grades can compete against one another to see who's the greenest and to drive sustainable habits. Or you can even take on your neighboring school or school district for green bragging rights!

Instructions

1. Visit campus.ecochallenge.org/users/join to create an account for your team.
2. Type in "School Uplift" in the "Organization" text box.
3. Enter the time period for your challenge in "Team Check-in Window." We suggest two to three weeks.
4. Select actions that your team will commit to completing throughout the challenge. Some examples of energy actions include "adjust your thermostat," "switch to cold water" and "complete an online energy audit."
5. Click "Invite Teammates" located on the left side of the "Dashboard" page and share the referral link with interested students. You may need to remind them to accept the invitation.
6. Start saving energy and completing the actions you've selected!
7. Go to the "Dashboard" and click "Check In" when actions have been completed. Select the daily or one-time actions that you have completed. Your team will earn points every time you "Check In" on an action. (Please note: Ecochallenge points are not connected to School Uplift grants.)

Helpful hint: Ecochallenge.org has video tutorials and answers to FAQs on their website. Visit campus.ecochallenge.org/about/resources for help with creating an account, forming teams or choosing actions that are right for your school community.

Additional resources

Going all out for Earth Month? Check out these resources for more great activity ideas and celebrations.

TVA
Learn how to make green choices and help clean up public waterways and lands. Visit TVA.com/environment/enjoy-earth-day-with-tva to learn more.

Use a **solar calculator** to learn how solar energy works, and calculate the cost and payback of solar for your school or home. Visit EDT.TVA.gov to learn more.

Your local power company
Check with your local power company to see if they are hosting any events or activities for Earth Day.

Earthday.org
This online library includes resources for classroom, at-home and community learning. Access toolkits, advocacy packets, editable PowerPoint timelines, quizzes and lesson plans. Visit earthday.org/education-resource-library to learn more.

EPA
To celebrate Earth Day in the classroom, visit epa.gov/earthday for lesson ideas, facts and homework resources.

Introduction to the School Uplift video

Use our two-minute School Uplift video to give viewers an informational and motivational introduction to the program and what it can mean for your school. Find it at EnergyRight.com/school-uplift-resources.

Who should use it?

This video is a great resource for your school's Energy Team, administrators and communications team.

Where should it be used?

The video gives a high-level overview of School Uplift. Here are some of the ways you can use it to spread the word about your school's participation:

- Have your Energy Champion share it with the rest of the Energy Team.
- Play it at a staff meeting.
- Share it with local elected officials.
- Share it at a school board meeting, or share with the local board of education.
- Play it at a school assembly, or give teachers the video to play in their classrooms.
- Post it on your school's website.
- Share it with your greater school community (parents, caregivers, volunteers, etc.) via social media or e-newsletter.

Watch the School Uplift video at EnergyRight.com/school-uplift-resources.

Notes

Community Outreach Guide

School Uplift isn't just a schoolwide effort — it includes the whole community too! Getting the word out about your school's participation in School Uplift is a great way to keep your larger school community engaged, strengthen relationships with community members and increase awareness of energy conservation. Plus, sharing your school's commitment to energy efficiency and energy education can inspire others to try the same energy-saving behaviors students are practicing.

By using online communication channels, like email and social media, you can quickly and easily keep parents, school board members, elected officials, volunteer groups and more informed and up to date on your School Uplift activities and progress.

Use the School Uplift Community Outreach Guide to find prewritten community-facing messages, learn social media best practices and even get access to imagery you can use with your posts and updates.

Notes

Using the Community Outreach Guide

Who should use this guide?

The Community Outreach Guide is for Energy Team members and those responsible for school communications. Have someone from your Energy Team connect with your school communications manager (or the admin of your social media pages and email service provider) to hand off proposed copy found in this guide, student-produced work from the monthly energy activities and general updates and progress reports.

Where do we share School Uplift content?

The content in the Community Outreach Guide is written for your school's Facebook page and e-newsletter campaigns. These channels were identified by School Uplift pilot participants as the most widely used forms of communication with students, parents and the community. This material can easily be adapted to other social media platforms or print communications.

How do we use the Community Outreach Guide?

It's simple! We've already written the content — all you need to do is fill in a few blanks, copy and paste. Each piece of content also comes with a supporting image or a visual recommendation. Feel free to adjust the content to meet your school's specific needs and audience. We've provided ideas for customization as well.

Creating visuals

Download ready-to-go images at EnergyRight.com/school-uplift-resources.

Or if you'd like to create your own visuals for your posts, we encourage you to use images or videos that reflect your unique school community. Be sure to familiarize yourself with your school's or district's student photography and social media policies so that student privacy, as defined by your school, is maintained.

Here are some helpful, free resources you can use to create your own imagery:

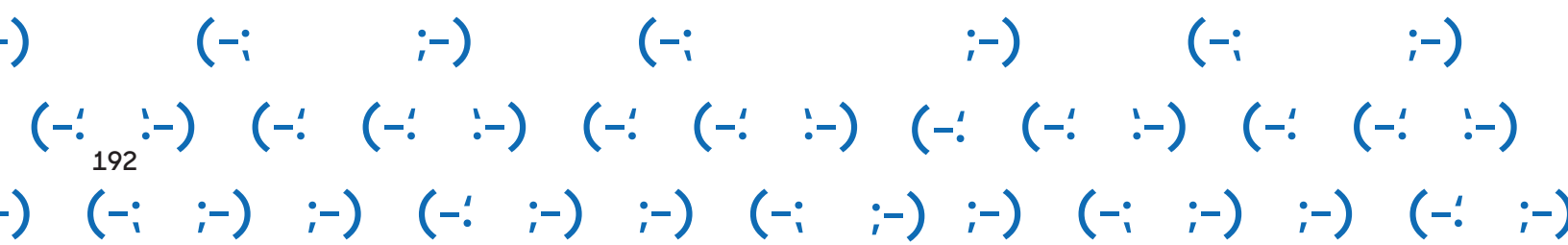
- **Canva:** Easy-to-use graphic design templates and software. Learn more at canva.com.
- **Unsplash:** Royalty-free stock photography. Learn more at unsplash.com.
- **Pixabay:** Royalty-free images, videos and illustrations. Learn more at pixabay.com.

Best practices for maximum engagement

Growing and engaging your audience requires more than a "set it and forget it" strategy. You've got to start to understand who these people are, what they care about and where they hang out online, specifically on Facebook. We've put together some questions and tips that can help you find and grow your audience successfully!

Facebook

- **Who is our audience?** Use Facebook Insights (Facebook's analytics tool) to learn about your audience: age, gender, interests and more. Use those insights to craft messages that will appeal to your predominant audience. From your admin page, go to *Facebook Insights > People*.
- **When is our audience online?** Breaking through Facebook's noisy feed isn't always easy. Give yourself a leg up by using Facebook Insights to find out when your audience is most active. Schedule your posts to go live during those times so that your audience will be more likely to see them. Don't forget to engage with your audience at that time too! From your admin page, go to *Facebook Insights > Posts > When Your Fans Are Online*.
- **How does our audience respond to different kinds of posts?** Not all posts are created equal! Your audience may respond best to video content, or maybe they like photo carousels or memes. Once you start to learn what your audience engages with most, you can create more content like it. From your admin page, go to *Facebook Insights > Posts > Post Types*.
- **Have we posted about this topic recently?** You'll want to work closely with your school's communications team or social media manager to schedule School Uplift content strategically. To increase awareness of your school's participation in the program, aim to post about School Uplift at least twice per month. This will also help to keep the momentum going and encourage your audience to experiment with their own energy-saving behaviors. From your admin page, go to *Facebook Insights > Posts > All Posts Published*.
- **How does our audience engage with our content?** Are you getting more likes than comments? More comments than shares? Understanding how your audience engages with what you post can help you structure content more strategically and increase engagement. From your admin page, go to *Facebook Insights > Actions on Page*.



E-newsletter

- **On average, what time of day do we see the highest open rates?** Every email service provider (ESP) should provide an analytics section in your dashboard. Use your ESP's analytics tool to find the day of the week and the time of day your audience is opening your emails. Look for any trends, and experiment with sending your emails at peak activity times to increase engagement.
- **What type of content gets the most clicks?** Opening an email is one thing, but it's even better when readers take action on your content. Maybe they click a link, register for an event, download a PDF — whatever it is, you can count that as a deeper form of engagement. Use your ESP's analytics tool to see what's getting the most clicks. Check out your click-through rate. Then, begin to draft content that includes the type of content a reader will want to click.

Plug and play content

In this next section, you'll find prewritten copy and preselected images you can share with your communications team for posting. Each month includes two Facebook posts and two e-newsletters.

October Facebook and e-newsletter content

Content focus 1: Introduction to School Uplift

Provided visual 1: Designed graphic of the School Uplift video being played on a computer. Find it at EnergyRight.com/school-uplift-resources.

Facebook post copy 1: Big news! This year, our school will be participating in School Uplift, a new program from TVA EnergyRight® and [INSERT LPC_NAME]. This is a huge opportunity for us!

School Uplift is going to help us make smarter energy choices, save money on energy bills and reduce our impact on the environment.

Stay tuned for more information on how you can get involved too!

Learn more about School Uplift at EnergyRight.com/school-uplift-resources.

E-newsletter copy 1: Big news! This year, our school will be participating in School Uplift, a new program from TVA EnergyRight® and [INSERT LPC_NAME]. This is a huge opportunity for us!

School Uplift is going to help us make smarter energy choices, save money on energy bills and reduce our impact on the environment. Students will be learning about energy and practicing energy-saving behaviors all year.

Our participation in School Uplift includes you too! Each month, we'll provide opportunities for the greater school community — parents and caregivers, elected officials, school board members and volunteers — to get involved with our energy-saving activities.

Check out this short School Uplift video that explains more about the program and why it matters to our school and community.

[EMBED_VIDEO]

Be on the lookout for more information about School Uplift all year! Learn more here. [hyperlink "Learn more here" to EnergyRight.com/school-uplift-resources.]

Content focus 2: Energy Dashboard

Custom visual 2: A photo of your Energy Dashboard on display at your school.

Facebook post copy 2: Next time you're here, be sure to check out our School Uplift Energy Dashboard! Our goal this year is to reduce our energy use by [insert your school's reduction goal]. And we're doing it with the help of TVA EnergyRight® and [INSERT LPC_NAME].

This week, ask your student(s) what they're doing to save energy!

E-newsletter copy 2: Earlier this month, we shared that our school is participating in School Uplift, the energy-saving program for schools from TVA EnergyRight® and [INSERT LPC_NAME]. And we are officially up and running!

Our goal this year is to reduce our energy use by [INSERT PERCENTAGE_NUMBER]. Students, faculty and staff are already learning about energy and practicing new energy-saving behaviors.

To keep track of our progress, we're using an Energy Dashboard. It's like a report card for our school's energy-saving measures each month. And everyone in our school gets to see it!

The Energy Dashboard tracks several metrics, like:

- Our energy-saving measures and how those measures affect the environment.
- The amount of carbon emissions we avoided.

Our Energy Dashboard is located [INSERT DASHBOARD_LOCATION, e.g., "in the lobby"]. That way, it keeps energy top of mind for everyone as we work toward our energy-reduction goal! It also reinforces energy-saving behaviors by showing students and staff the impact of their energy-saving actions.

We'll start sharing results next month!

We're so proud of everyone for diving into School Uplift! Our actions are already making a difference.

Next time you're here, drop by the Energy Dashboard to check out the results for yourself!

Learn more about School Uplift here. [hyperlink "Learn more about School Uplift here" to EnergyRight.com/school-uplift.]

November Facebook and e-newsletter content

Content focus 1: Introduction to the Energy Team

Provided visual 1: Designed graphic that reads "Meet Our Energy Team." Find it at EnergyRight.com/school-uplift-resources.

Custom visual 1: A group photo of your school's Energy Team.

Facebook post copy 1: Meet our School Uplift Energy Team! These are the folks spearheading our energy-saving efforts this year. Our team includes:

- (Example) Bob Smith: Head of Operations and Maintenance, and Energy Champion.
- (Example) Caroline Jones: fourth grader and Team Scribe.

If you see Energy Team members around school, make sure to say hello and show support for their hard work! Together with TVA EnergyRight® and [INSERT LPC_NAME], our Energy Team members are helping us make smarter energy choices, save money on energy bills and reduce our impact on the environment.

Want to get involved in School Uplift? Contact [INSERT ENERGY_CAMPNION_NAME/CONTACT_INFO].

E-newsletter copy 1:

Meet our School Uplift Energy Team!

These are the staff, teachers, administrators and students who are spearheading our energy-saving efforts this year. Together, they're helping us track performance, manage our school's operations, engage with the community, train students and staff and implement education activities for students.

(Find the different types of Energy Team members and role descriptions in the *School Uplift SEM Manual*. Adjust this section to reflect your current Energy Team members.)

Our Energy Team includes:

- **[INSERT ENERGY CHAMPION_NAME]:** Energy Champion
  [INSERT ENERGY CHAMPION_NAME] leads the Energy Team and manages our school's participation in School Uplift.
- **[INSERT ENGAGEMENT_AND_EMPOWERMENT_CHAMPION_NAME]:** Engagement and Empowerment Champion
  [INSERT ENGAGEMENT_AND_EMPOWERMENT_CHAMPION_NAME] implements education and awareness activities for teachers and students.
- **[INSERT DATA_CHAMPION_NAME]:** Data Champion
  [INSERT DATA_CHAMPION_NAME] manages our school's performance by tracking energy data and updating the Energy Dashboard each month.
- **[INSERT TRAINING_CHAMPION_NAME]:** Training Champion
  [INSERT TRAINING_CHAMPION_NAME] plans and coordinates job- and system-specific training for faculty and students.
- **[INSERT FACILITY/SYSTEMS_CHAMPION_NAME]:** Facility/Systems Champion
  [INSERT FACILITY/SYSTEMS_CHAMPION_NAME] monitors our building's operating systems, making sure we're not wasting any energy.
- **[INSERT TEAM_SCRIBE_NAME]:** Team Scribe
  [INSERT TEAM_SCRIBE_NAME] is the Energy Team's student representative and helps develop meeting agendas, records notes and action items, keeps meetings on time and distributes information to the rest of the team.
- [Insert any other Energy Team members, their roles and responsibilities]

If you see Energy Team members around school, make sure to say hello and show support for their hard work! Together with TVA EnergyRight® and [INSERT LPC_NAME], our Energy Team members are helping us make smarter energy choices, save money on energy bills and reduce our impact on the environment.

Want to get involved in School Uplift? Contact [INSERT ENERGY_CHAMPION_NAME/CONTACT_INFO].

Content focus 2: Energy Pledge Month

Provided visual 2: Designed graphic of sample Energy Pledge cards. Find it at EnergyRight.com/school-uplift-resources.

Custom visual 2: A photo of your school's Energy Pledge Month display.

Facebook post copy 2: We know small changes can make a big difference, so this month, students are learning about simple energy-saving actions they can take to help our school reach its energy-reduction goal.

As part of School Uplift's Energy Pledge Month, students, teachers and staff are making and practicing their energy pledges! Maybe it's turning off the classroom lights at the end of the day, shutting down computers or turning off monitors when they're not being used — everyone's pledges help us save energy!

What pledge can you take and practice for the rest of the month? Drop your answer in the comments!

(You can also share some of the activities your school has used during Energy Pledge Month, like the pledge tree, and include photos or quotes from students about the activities.)

E-newsletter copy 2:

We know small changes can make a big difference, so this month, students are learning about simple energy-saving actions they can take to help our school reach its energy-reduction goal.

As part of School Uplift's Energy Pledge Month, students, teachers and staff are making and practicing their energy pledges! We've asked students to commit to their pledges for the entire month. Every energy-conscious action helps us move one step closer to meeting our energy-reduction goal.

Here are just a few of the pledges students have made:

- [INSERT PLEDGE_EXAMPLE]
- [INSERT PLEDGE_EXAMPLE]
- [INSERT PLEDGE_EXAMPLE]

(You can also share some of the activities your school has used during Energy Pledge Month, like the pledge tree, and include photos or quotes from students about the activities.)

At the end of the month, we'll encourage students to continue their energy-saving actions moving forward — and maybe even pick a new one too!

Don't forget to ask your student(s) about their Energy Pledge and why they think the pledges are important to practice.

December Facebook and e-newsletter content

Content focus 1: Power Down Month

Provided visual 1: Designed graphic of a multiple choice question from Power Down Jeopardy. Find it at EnergyRight.com/school-uplift-resources.

Custom visual 1: A photo of a class playing Power Down Jeopardy or Power Down Trivia.

Facebook post copy 1: Winter break is just around the corner. That means it's also Power Down Month! Students, teachers and staff will be working together to get the school ready for break. Everyone will be taking actions that help us to reduce energy use — and even eliminate some of it altogether — while we're closed. By properly powering down the school, we can reduce our energy use by up to 20%. That's HUGE!

As part of Power Down Month, students will be playing Power Down Jeopardy or Power Down Trivia to learn the different ways we can help the school save energy. Check in with your student(s) to find out what they're doing in their classroom to help us power down!

E-newsletter copy 1: Winter break is just around the corner. That means it's also Power Down Month! Students, teachers and staff will be working together to get the school ready for break. Everyone will be taking actions that help us to reduce energy use — and even eliminate some of it altogether — while we're closed.

We'll be turning off and unplugging lights, fans, computers, AV equipment and more. By properly powering down the school when it's closed, we can reduce our energy use by up to 20%. That's HUGE!

As part of Power Down Month, students will be playing Power Down Jeopardy or Power Down Trivia to learn the different ways we can help the school save energy. Then they'll get to work together as a class to practice some of their new power-down skills.

Did you know:

- Saving water saves energy? It takes energy to treat, pump and heat water before it's delivered to faucets or showerheads.
- During cool months, blinds and shades should be closed at the end of the day? This helps keep the room temperature comfortable.
- You should unplug your devices at the end of the day? Shutting down helps, but devices still use energy as long as they're plugged in, even if they're not being used.

(Try including a quote from a student or teacher about their experience with Power Down Month.)

Check in with your student(s) to find out what they're doing in their classroom to help us power down!

Content focus 2: At-Home Power Down

Provided visual 2: Designed graphic of an at-home power down checklist. Find it at EnergyRight.com/school-uplift-resources.

Facebook post copy 2: Heading out of town for the holidays? Power down your home before you go! Just by taking a few small actions — like turning your thermostat down to 50-55 degrees Fahrenheit — you can save a lot of energy and come home to a lower utility bill!

Staying home and need something to do? Play Power Down Jeopardy, made available to our school and all of you from TVA EnergyRight® and [INSERT LPC_NAME], and discover lots of new ways to save energy! Find it at jeopardylabs.com/213752.

E-newsletter copy 2: Heading out of town for the holidays? Power down your home before you go! (We'll be doing our own version of this for the school!) Just by taking a few small actions, you can save a lot of energy and come home to a lower utility bill! Here are a few things to try:

- Turn all thermostats down to 50-55 degrees Fahrenheit.
- Adjust your water heater to 120 degrees Fahrenheit.
- Unplug all small electronics, TVs, power strips, computers, etc.

And of course, don't forget to turn everything back on when you get back!

Want even more ideas for reducing your energy use? Check out everyday lifestyle changes you can make for even more ways to save energy at home. [hyperlink "everyday lifestyle changes" to EnergyRight.com/residential/education-advice.]

Staying home and need something to do? Play Power Down Jeopardy, made available to our school and all of you from TVA EnergyRight® and [INSERT LPC_NAME], and discover lots of new ways to save energy! Find it here. [hyperlink "Find it here." to jeopardylabs.com/213752.]

January Facebook and e-newsletter content

Content focus 1: Careers in STEM Month preview

Recommended Timing: Beginning of January

Provided visual 1: Use the *Exploring Careers* graphic to share what your students are learning about STEM and energy-related careers. This graphic can be found at EnergyRight.com/school-uplift-resources.

Customizable visual 1: Post a picture of a student or a group of students holding written sign(s) of what STEM career interests them.

Facebook post copy 1: January is Careers in STEM Month at [INSERT SCHOOL_NAME]! Our staff will be leading classroom activities focused on STEM and energy-related careers. We'll be [INSERT ACTIVITIES {such as: learning about local STEM heroes, meeting with professionals from our community and more!}] Through our partnership with the School Uplift program from TVA EnergyRight and [INSERT LPC_NAME], we're planting career seeds that just might bloom into lifelong careers!

E-newsletter copy 1:
Subject: January is Careers in STEM Month

This month, our students are exploring career opportunities in the fields of science, technology, engineering and mathematics (STEM). Through our partnership with the School Uplift program from TVA EnergyRight and [INSERT LPC_NAME], we're planting career seeds that just might bloom into lifelong careers!

We'll be [INSERT ACTIVITIES {such as: learning about local STEM heroes, meeting with professionals from our community and more! Be specific and include any ways the broader community can get involved.}]

Here's what [INSERT STUDENT_NAME(S)] want to do when they grow up! [INSERT STUDENT_QUOTE {quote should reflect their dream STEM career.}]

Find out more about STEM careers at TVASTEM.com/stem-careers.

Content focus 2: Recap of Careers in STEM Month

Recommended Timing: End of January

Customizable visual 2: Share picture(s) of Careers in STEM event(s) at your school!

Facebook post copy 2:
Careers in STEM Month was a HUGE success! We sparked imaginations and expanded our students' understanding of what careers in science, technology, engineering and mathematics look like. We have some future STEM pros on our hands! Go ahead, ask your student what they want to be when they grow up.

[Feature an activity your school participated in during Careers in STEM Month. Include a student quote about what they learned as well!]

E-newsletter copy 2:
Subject: Careers in STEM Month recap

We just wrapped up our Careers in STEM Month at [INSERT SCHOOL_NAME]. We led activities and hosted events that spotlighted careers in the fields of science, technology, engineering and mathematics. It was a huge success, and we had so much fun expanding our students' ideas about possible career paths.

[INSERT recap of the month's activities. You could provide one or a mix of the following:

- A one- or two-sentence summary of the activity. Be sure to include any stats that demonstrate success. If sharing more than one type of activity, consider using bullets. If multiple classrooms hosted the same activity, feel free to group them.

(Continued on next page)

Examples:

- "Last Thursday we hosted 'Panel With the Pros' pizza lunch. Over 20 students showed up to talk with Stephen and Tamara, a lineperson and a power plant engineer from our local power company. This 30-minute presentation flew by, with our student audience asking thoughtful questions."
- "Our second through fifth grade teachers all presented STEM Heroes, an activity that got our students thinking about possible STEM careers. We had so much fun, and our hallways are now covered with our students' future plans in STEM."

- Quotes from students and staff about the activity and what they learned.
- Pictures of the activity in action.
- If applicable, provide any additional resources or opportunities families can use if their student showed a great interest in a possible career in STEM ("Join robotics club" or "Our local parks and recreation department hosts a math club.").

Ask a student what STEM career caught their attention this month!

February Facebook and e-newsletter content

Content focus 1: Introducing the Power of Community Month

Recommended Timing: Beginning of February

Provided visual 1: Use the *Power of Community* graphic to communicate how students are sharing their energy education with the community. Your visual can be found at EnergyRight.com/school-uplift-resources.

Facebook post copy 1: Valentine's Day is around the corner, and we can't wait to shine some love on our community! By conserving energy and saving money through School Uplift, our students are already doing just that. And they want to share the love with you during our Power of Community Month. Here are a few $$$-saving energy tips for you … so you can spend more on chocolate!

1. Open blinds in the winter to capture the heat from the sunlight.
2. Unplug chargers and personal appliances when not in use.
3. Turn off the lights when you leave the room.

TIP: Tag a local business, community center or friend to encourage them to use these tips!

E-newsletter copy 1:
Subject: School Uplift and the Power of Community

Our students have learned so much about saving energy — we don't want to keep that knowledge to ourselves! It's February, which is the month of love, so there's no better time to show our community what we've loved learning!

We asked our students to share some of their expert advice on saving energy, and they were more than happy to spread the love. They had some great ideas for ways the community can start saving energy, too!

(Continued on next page)

[INSERT QUOTES from students sharing energy-saving advice.]

Let's work together to save money AND natural resources to create a healthier environment for everyone in our community.

Here are a few things we learned during the Power of Community Month:

1. Open blinds in the winter to capture the heat from the sunlight.
2. Unplug chargers and personal appliances when not in use.
3. Turn off the lights when you leave the room.

Let's work together to save energy. There's Power in Community!

Content focus 2: The Power of Community Month activities

Recommended Timing: Mid-February

Customizable visual 2: Share a photo of students participating in a Power of Community activity. The activities can be accessed within the February section of your *Engagement Binder* or online at EnergyRight.com/school-uplift-resources.

Facebook post copy 2:
This month we're celebrating the Power of Community by empowering friends and neighbors to save energy. Here's how: [INSERT ACTIVITY that your students completed this month. See below for grade-level examples.]

1. Our elementary students illustrated what they love about our community in pictures!
2. Our middle school students created *Turn Off the Lights* signage to remind others to conserve energy.
3. Our high schoolers created exciting STEM projects and displayed them throughout our community.

Find these projects on display at [INSERT COMMUNITY_LOCATION]!

E-newsletter copy 2:
Subject: What powers your community?

We've learned so much through the School Uplift program, it's time to share with others! This month, we celebrated our community and the Power of Community by sharing energy education and savings tips. Small changes in how we use our energy can have big impacts for our community.

Did you know that local businesses and organizations can reduce costs AND help the environment by implementing the energy management principles that our school is learning? The activities we're doing this month work just as well at home and in our community as they do in the classroom. Saving energy together means using fewer resources, creating fewer carbon emissions and strengthening our community!

[INSERT the Power of Community activity. Include pictures and describe the impact on the community, if you can. Example: "Third graders from SCHOOL_NAME hanging *Turn Off the Lights* signage at the library."]

Help us strengthen our community by joining us in this mission!

March Facebook and e-newsletter content

Content focus 1: Solar Spring Month

Recommended Timing: Beginning of March

Provided visual 1: Use the *Solar Spring* visual found at EnergyRight.com/school-uplift-resources.

Facebook post copy 1: No matter the weather, March is going to be sunny here at [INSERT SCHOOL_NAME] as we dive into Solar Spring! We're learning all about solar energy and how it can power the world around us. Hands-on experiments and competitions will keep us busy all month long! Be sure to ask your student about the power of the sun.

E-newsletter copy 1:
Subject: Here comes the sun: It's Solar Spring at [INSERT SCHOOL_NAME]

No matter the weather, March is going to be sunny here at [INSERT SCHOOL_NAME] as we dive into Solar Spring! We're learning all about solar energy and how it can power the world around us. Hands-on experiments and competitions will keep us busy all month long! Be sure to ask your student about the power of the sun.

We're participating in School Uplift, which is a free energy management program from TVA EnergyRight and [INSERT LPC_NAME]. School Uplift is helping our school save energy and spend less on energy costs, so we can invest in our future. In addition to learning how to use less energy, we're also learning about renewable energy. Solar power is a renewable resource and it can be a great way to lower our carbon footprint!

Students will participate in hands-on activities to learn about the power and potential of solar energy.

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[INSERT ACTIVITY (See examples below):

Elementary and Middle: "Students will learn how dark and light colors absorb heat from the sun differently!"

High: "Students will brainstorm ideas for the *Next Big Solar Invention* and/or calculate how much solar it would take to power our school and homes!"

Warming up to the idea of solar and want to learn more? Check out how TVA is incorporating solar energy into the Valley: TVA.com/energy/technology-innovation/solar-technology.

Content focus 2: Spring break Power Down

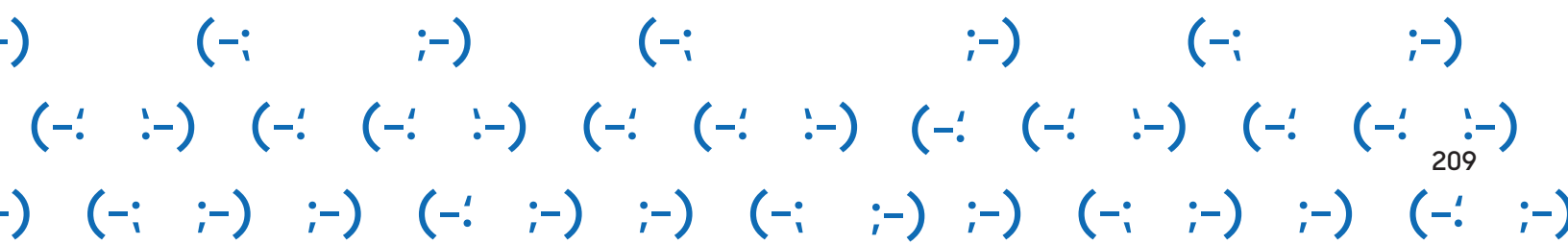
Recommended Timing: End of March — either right before or after spring break

Customizable visual 2: Include a picture of students completing spring break Power Down.

Facebook post copy 2a (if shared BEFORE spring break):
[INSERT SCHOOL_NAME] students are getting ready for a well-deserved spring break because they have been hard at work saving energy and learning about solar power!

Before we go, our students, teachers and staff are getting the school ready for the break. By unplugging appliances and computers, turning off lights and adjusting the thermostats, our spring break Power Down can reduce our energy use by up to 20%!

Ask a student what you can do at home to save energy.



Facebook post copy 2b (if shared AFTER spring break):
[INSERT SCHOOL_NAME] students enjoyed a well-deserved spring break after working hard to save energy and learn about solar power all month long!

Before we left, students, teachers and staff worked together to get the school ready for the break. By unplugging appliances and computers, turning off lights and adjusting the thermostats, our spring break Power Down helped us reduce our energy use!

Ask a student what you can do at home to save energy.

E-newsletter copy 2a (if shared BEFORE spring break):
Subject: Power Down for spring break

[INSERT SCHOOL_NAME] students are getting ready for a well-deserved spring break because they have been hard at work saving energy and learning about solar power!

Before we go, our students, teachers and staff are getting the school ready for the break. By unplugging appliances and computers, turning off lights and adjusting the thermostats, our spring break Power Down can reduce our school's energy use by up to 20%!

Are you going somewhere for spring break? If so, you can save energy, help the environment and lower your electricity bill by powering down your home, too! Here are a few things to try:

- Unplug all small electronics, TVs, power strips, computers, etc.
- Make sure all windows and doors are properly shut and sealed tightly.
- Set the refrigerator to 35-38 degrees Fahrenheit and the freezer to 0-5 F.

Looking for more energy-saving advice for your home? Ask a student or check out EnergyRight.com/residential/education-advice.

E-newsletter copy 2b (if shared AFTER spring break):
Subject: Power Down for spring break

[INSERT SCHOOL_NAME] students enjoyed a well-deserved spring break after working hard to save energy and learn about solar power all month long!

Before we left, students, teachers and staff worked together to get the school ready for the break. By unplugging appliances and computers, turning off lights and adjusting the thermostats, our spring break Power Down helped us reduce our energy use!

Come home to a lower electric bill! The next time you take a vacation or a weekend getaway, you can Power Down your home and save a lot of energy!

Here are a few things to try:

- Unplug all small electronics, TVs, power strips, computers, etc.
- Make sure all windows and doors are properly shut and sealed tightly.
- Set the refrigerator to 35-38 degrees Fahrenheit and the freezer to 0-5 F.

Looking for more energy-saving advice for your home? Ask a student or check out EnergyRight.com/residential/education-advice.

April Facebook and e-newsletter content

Content focus 1: School Uplift Brightest Moments – Favorite activity

Recommended Timing: Beginning of April

Provided visual 1: Save slide 7 of the School Uplift Brightest Moments template as a JPEG file to share a favorite activity from the year. Your template can be found at EnergyRight.com/school-uplift-resources.

Customizable visual 1: Post an image of students participating in an energy awareness campaign.

Facebook post copy 1: This year our students learned a megawatt (that's a lot!) about where energy comes from and how we can save BIG by using less. Thanks to TVA EnergyRight and [INSERT LPC_NAME] the School Uplift energy management program taught us how to save energy and $$$. Here we are having a blast with [INSERT ACTIVITY_NAME]!

E-newsletter copy 1:
Subject: School Uplift Brightest Moments: A few of our favorite things!

This year our students learned a megawatt — that's a lot! — about where energy comes from and how we can save BIG by using less.

Thanks to TVA EnergyRight and [INSERT LPC_NAME], the School Uplift energy management program taught us how to save energy and money by learning how to use energy wisely. We also learned why reducing energy waste is important for our classroom, the environment and the economy.

Our entire school community participated in this yearlong program. Simple behavior changes — like turning off the lights, powering down at the end of the day and unplugging before breaks — helped our school save significantly on energy costs.

By incorporating energy-saving measures in our operations and maintenance

(Continued on next page)

processes, we'll keep on saving for years to come! That's more money in our budget for books, supplies and learning.

School Uplift helped our school save energy and money, and we had a blast while doing it! Our students and staff learned about energy awareness and management through interactive activities, games, posters and more!

[Insert a couple of activities your students did throughout the year, such as: "We learned how to prepare our school and classroom for the winter/spring break with Power Down Trivia!!" Additionally, include a quote from a student about their perception of School Uplift, such as what they learned or what activities they enjoyed.]

Thank you to all of those who participated in this year's School Uplift program.

Content focus 2: School Uplift Brightest Moments – Energy savings

Recommended Timing: End of April

Provided visual 2: Save slide 5 of the School Uplift Brightest Moments template as a JPEG file to share your energy savings this year. Your template can be found at EnergyRight.com/school-uplift-resources.

Customizable visual 2: Share a photo of students gathered next to your Energy Dashboard.

Facebook post copy 2a (if you DO have data to report):
We are excited to share results from our participation in School Uplift, the energy management program from TVA EnergyRight and [INSERT LPC_NAME]! This year, we set a goal to reduce our energy use by ____ %. Our commitment to using energy wisely has resulted in _____ . Not only does this mean we saved money, which can be spent on books, supplies, and learning, but it also has a huge environmental impact! Our energy-saving efforts are equal to ____ .

Ask a student or staff member how they helped save energy with School Uplift!

Facebook post copy 2b (if you DON'T have data to report):
We've learned so much this year in School Uplift, the energy management program from TVA EnergyRight and [INSERT LPC_NAME]! We are excited about what we learned and are committed to continuing to save energy and money.

Ask a student or staff member how they helped save energy with School Uplift!

E-newsletter copy 2a (if you DO have data to report):
Subject: The Results are in: Our School Uplift Report Card

We are wrapping up School Uplift, and it's a powerful accomplishment! Not only did we learn how to practice energy-saving behaviors every day, but we also learned how to make our school run more efficiently and use less energy.

After a year of fun activities and behavior-changing actions, we are excited to share our results!

This year, we set a goal to reduce our energy use by ____%. Our commitment to using energy wisely has resulted in ____ so far! In terms of carbon reduction, that equates to _____ . [If known, include details about how financial savings will be reinvested in the school; for example, "We're purchasing _____ books for our library."]

We are very proud of all the staff, administrators and students who helped make our participation in School Uplift such a success. Thank you to everyone involved!

Want to learn more? Ask a student or staff member how they helped save energy with School Uplift!

E-newsletter copy 2b (if you DON'T have data to report):
Subject: School Uplift: Wrapping up a great year!

We are wrapping up School Uplift, and it's a powerful accomplishment! Not only did we learn how to practice energy-saving behaviors every day, but we also learned how to make our school run more efficiently and reduce wasted energy. Here are a few things we learned this year:

- Our biggest energy users are heating and cooling, computers and lights.
- We can reduce our operating costs by 15% by simply using less energy.
- [INSERT additional lessons here.]

While our cohort is ending, we are excited and committed to continuing our efforts to save energy and money. Thank you to everyone involved!

Want to learn more? Ask a student or staff member how they helped save energy with School Uplift!

Notes