



Prepare with Pedro!

POWER OUTAGES

Dear Educator:

Thank you again for inviting us to share our *Prepare with Pedro* emergency preparedness program with your students. To help build on our presentation we have developed these K-2 lesson plans, with separate activity sheets for two age levels.

Pedro will guide you, your students and their households through engaging, standards-based activities that teach science and health concepts, while building language arts and critical-thinking skills. The lessons follow a Before–During–After approach to navigating power outages that will empower students to be safety advocates at home.

We hope that you will use these resources to further enrich your students' learning experience and help them prepare for emergencies.

Sincerely,
Your Friends at the American Red Cross

Grades K-1

To teach students about power outages, these activities follow a Before–During–After approach. That is, students learn how to prepare for power outages, how to stay safe when a power outage occurs, and what to do once the power comes back on. Activity 1 focuses on “Before,” teaching students four important steps households should take in preparation for a power outage.

Begin by asking students for examples of things they use every day that use or work by electricity. Then, share with students a definition of **power outage**. **Say:** A power outage is when the electricity goes out in your home or other places. This means that the lights, TV, refrigerator and anything else that is plugged in will not work. Sometimes power outages are planned and other times they happen without warning. Sometimes outages can last for just a few minutes, and sometimes they last a long time.



Activity 1

No Power? No Problem!

Objectives

- Familiarize students with the nature and causes of power outages
- Teach key steps to take to prepare for a power outage
- Strengthen visual discrimination, visual literacy, vocabulary and writing skills
- Promote parent/caregiver involvement through at-home activities

Ask students: Have you ever experienced a power outage? What was it like? What did you do during it? What can you do to prepare for a power outage?

After the discussion, **say:** Now we are going to learn about some things you and your household can do to prepare for a power outage to help keep yourselves safe!

Distribute copies of the activity sheet and explain that students are going to help Pedro the Penguin and his friend Ramona prepare for a power outage at Ramona's home. First, direct students' attention to the image in the **top left panel**: Pedro is checking the local weather report. **Ask:** What do you think Pedro is doing in this picture? **Say:** Lots of the time, power outages are caused by weather like thunderstorms, winter storms and hurricanes that damage the equipment that brings electricity into your home. Power outages also happen in the Western parts of the U.S. during hot and dry weather to reduce the chance of wildfires. **Ask:** Why would he want to know when a storm is coming? **Say:** Checking the weather is a great way to know that a power outage might happen.

Have students circle or color in the TV. Then read the words from the word box at the top of the page and write them on the board. **Ask:** Which of these words completes the sentence under the picture: "Check the _____."? (**weather**) Students can either volunteer answers or you can read each word aloud and have them raise hands to vote. Confirm the answer and have students write the word "weather" on the blank line.

Next, direct students' attention to the **top right panel** of the page: Pedro and Ramona gathering flashlights and batteries. **Ask:** What are Pedro and Ramona doing in this picture? Why do you think they are gathering these items to prepare for a power outage? **Say:** Because electrical lights (lights with wires) don't work during a power outage, it's important to have battery-powered lights ready to go. Being prepared means having several flashlights and lots of batteries on hand. Have students circle or color in the bin of supplies. Follow the same process as above to fill in the blank: "Gather _____ and batteries." (**flashlights**)

Continue by directing students' attention to the **bottom left panel**: Ramona's mom unplugging a TV. **Say:** In this picture, Ramona's mom is unplugging a TV. **Ask:** Why do you think she is doing that? **Say:** When power comes back on, it can create a surge or spike in power that can damage appliances. It can be dangerous if all the electrical equipment in your home comes back on all at once. Have students circle or color in the image. Follow the same process as above to fill in the blank: "Turn off and unplug major _____." (**appliances**)

Finally, direct students' attention to the **bottom right panel**: Pedro and Ramona checking the household's food supply. **Ask:** What are Pedro and Ramona doing in this picture? Why do you think they are doing that? **Say:** If the power is out for more than about four hours, food in your refrigerator and freezer will start to get warm, so it becomes unsafe to eat. To be "power outage prepared," keep a supply of foods in your home that do not need to go in the refrigerator, since these foods will not go bad if the power goes out. These are non-refrigerated foods—they do not have to be cold. Have students circle or color in the food items on the kitchen counter. Follow the same process as above to fill in the blank: "Have _____ ready."

(**food**) Invite students to name some of their favorite non-refrigerated foods.

To wrap up the activity, review the four preparedness activities and the fill-in-the-blank sentences. Then read the directions at the bottom of the activity sheet, which encourage households to work together to gather flashlights and batteries at home in preparation for a power outage.

Emphasize to the children that they should not do these safety protection actions on their own. **Say:** Remember, you should share this information with the grown-ups in your home and help them prepare. Your grown-ups will be in charge of making the plan. You're the helper. Do not do this on your own.

If you have computer access, display a weather app or website such as **weather.gov**. Demonstrate how a household can input their zip code to check the weather to know if it might cause a power outage. As a class, identify the upcoming weather in your area and note if any severe weather is on the way. Explain to students that some power outages can be planned if you are in an area where wildfires or other hazards occur. Students can do the same preparedness actions and practice the same skills in this instance.



Grades 1-2

For **Part 1**, complete the same introduction and exercises as in the Grades K-1 activity. For **Part 2**, **say:** Now, we will learn a few more important tips to be prepared for a power outage. Read each item aloud:

- **USE FLASHLIGHTS, NOT CANDLES.** **Ask:** Why do you think we should not use candles in a power outage? **Say:** Although candles create light, which we may need during a power outage, they can also get knocked over or touch something that can burn and start a fire. Stick to flashlights!
- **CHARGE YOUR PHONES AND TABLETS.** **Ask:** Why do you think this is important for households to do before a power outage? **Say:** You will not be able to charge devices once the power goes out, so, if you have them, keep your phones and tablets, charged so you can use them during a power outage.

- **LEAVE IT OUTSIDE. Say:** If a household has a generator which makes power, a camping stove or grill, they should leave it outside. **Ask:** Why do you think that is? **Say:** Bringing generators or outdoor cooking appliances inside can cause fires. They can also release carbon monoxide, a dangerous gas, into your home, that can make you very sick.
- **BUY COOLERS OR BAGS OF ICE. Ask:** Why do think it's a good idea to have coolers and extra ice for a power outage? **Say:** Putting cold food in a cooler or surrounded by ice in the refrigerator will keep it colder for longer during a long power outage.
- **HAVE EXTRA WATER AND BLANKETS. Ask:** Why do you think households need water and blankets? **Say:** Air conditioners will not work when the electricity goes out, so households should have extra water when it is hot. And heaters will not work, so households may need blankets to stay warm.

Next, have students complete the true/false quiz at the bottom of the page. Review the answers as a class, prompting students to explain the “why” behind each answer.

Answers: 1. False; 2. True; 3. False

Conclude by reading the message at the bottom of the activity sheet, which encourages households to work together to gather flashlights and batteries at home in preparation for a power outage.

Emphasize to students that they should not do these safety protection actions on their own. **Say:** Remember, you should share this information with the grown-ups in your home and help them prepare. Your grown-ups will be in charge of making the plan. You're the helper. Do not do this on your own.

Activity 2

When the Power Is Out

Objectives

- Familiarize students with safe and empowering actions to take during a power outage
- Describe the science behind food safety and fire/electrical hazards
- Strengthen visual discrimination, visual literacy and vocabulary skills
- Promote parent/caregiver involvement through at-home activities

Grades K-1

This activity focuses on the “During” of navigating power outages, teaching students safe and empowering behaviors for when the power goes out. Familiarize yourself with the following:

- **DO:** Keep refrigerator and freezer doors closed as much as possible. Each time you open the doors, cold air escapes and warmer air gets in, increasing the possibility of food

spoilage. A closed refrigerator will keep foods cold for about four hours and a full, unopened freezer will keep its temperature for about 48 hours (24 hours if it is half full).

- **AVOID:** Broken, fallen or downed wires that are on the ground or hanging outside. They can be dangerous and cause electric shocks. Children should tell a grown-up if they see a broken wire.
- **DO:** Have non-electronic activities on hand to occupy your time, such as books, puzzles, craft projects and board games.
- **AVOID:** Candles, since they can cause fires if they get knocked over or touch something flammable, such as curtains or newspapers. Use flashlights instead.

Distribute copies of the activity sheet and read the directions at the top. **Say:** Each pair of pictures shows one SAFE and one NOT SAFE thing to do during a power outage. Let's help Pedro and Ramona stay safe!

Direct students to the **first** set of images (food on a counter vs. open refrigerator). **Ask:** Which picture shows what is safe to do during a power outage? Why? **Say:** Since your refrigerator and freezer are electrical appliances, they are not able to stay cold for more than a few hours when the power goes out. You want to keep the doors closed as much as you can, because each time you open the doors cold air escapes and warmer air gets in, which can make your food go bad or spoil. Households should have food that does not have to go in the refrigerator. **Say:** Circle or color in the picture that shows the safe thing to do during a power outage.



Direct students to the **second** set of images (biking near downed wire vs. doing a puzzle). **Ask:** Which picture shows what is safe to do during a power outage? Why? **Say:** Downed power lines that are on the ground or broken wires hanging can be dangerous. You should stay away from them. Do not touch them or play near them. Tell a grown-up if you see a broken wire. If it is not safe to play outside during a power outage and you cannot use electronic devices, make sure to have fun indoor activities to do with your household. **Say:** Circle or color in the picture that shows the safe thing to do during a power outage.

Direct students to the **third** set of images (candles vs. flashlight). **Ask:** Which picture shows what is safe to do during a power outage? Why? **Say:** You might think that candles would be a great thing to use during a power outage, because they create light. But candles can cause fires if they get knocked over or touch something that can catch fire, so you should use flashlights instead (and all those batteries you collected!). **Say:** Circle or color in the picture that shows the safe thing to do during a power outage.

Answers: 1. Eat unrefrigerated food to keep refrigerator closed; 2. Have fun indoor activities to do; 3. Use flashlights

Conclude by reading the message at the bottom of the activity sheet, which encourages households to make a list of indoor activities they can do together when the power goes out.

Emphasize to students that they should ask a grown-up about any safety questions. **Say:** Remember, you should share this information with the grown-ups in your home and help them prepare. Ask your grown-ups any safety questions you have.



Grades K-2 Take-Home Activity

Be “Power Out” Prepared

Objectives

- Empower students to teach their households about actions to take before and during a power outage
- Build critical thinking, problem-solving and planning skills
- Strengthen vocabulary, reading and writing skills
- Promote parent/caregiver involvement through at-home activities

This activity reviews the “Before” and “During” steps of power outage safety, and introduces the “After,” that is, what students and their households should do once the power comes back on. **Say:** For this activity, you will get to teach your households all about the power outage preparedness tips you have learned, so your grown-ups can lead you in creating a plan for your household. Remember, your grown-ups will be in charge of making the plan. You’re the helper.

As a class, review Activities 1 and 2, discussing all the tips the students have learned. Ensure students will have these worksheets at home so they can refer to them when sharing what they have learned with their households. Distribute copies of the take-home activity and tell students that there is information for grown-ups to read on this sheet, and then together they will make a plan to be prepared for power outages, stay safe during an outage, and know what to do after the power comes back on. They will make a poster with words and pictures with their households.

Resources

- American Red Cross: [redcross.org/poweroutage](https://www.redcross.org/poweroutage)
- Ready.gov: [ready.gov/power-outages](https://www.ready.gov/power-outages)
- Centers for Disease Control and Prevention: [cdc.gov/disasters/poweroutage/needtoknow.html](https://www.cdc.gov/disasters/poweroutage/needtoknow.html)



Grades 1-2

For **Part 1**, complete the same introduction and exercises as in the Grades K-1 activity. For **Part 2, say:** Let’s help Pedro and Ramona find activities that don’t require electricity that they can do during a power outage to have fun safely. Direct students to the scrambled words and have them (on their own or in pairs) unscramble the words and write them on the answer lines. Review the answers as a class and then discuss other activities they could do to keep themselves occupied during a power outage.

Answers: 1. puzzles; 2. books; 3. games

Conclude by reading the message at the bottom of the activity sheet, which encourages households to make a list of indoor activities they can do together when the power goes out.

Emphasize to students that they should ask a grown-up about any safety questions. **Say:** Remember, you should share this information with the grown-ups in your home and help them prepare. Ask your grown-ups any safety questions you have.