

# Day 5

## Weather Brings Us Together





## Introduction

Weather is a universal experience. It connects us to each other, to the world around us, and even supports us. Weather, seasons, and climate affect and shape the communities we live in.

Communities often come together to celebrate weather and the seasons. Washington, DC has the Cherry Blossom Festival every spring. Countries around the world celebrate ice and snow or rain. *Teej* festivals in India and Nepal welcome and celebrate the monsoons. Harvest festivals celebrate fall and the collection of different crops around the world. In Pennsylvania in February, we ask Puxatawney Phil, a groundhog, if he thinks winter will be long or short!

Communities also experience extreme weather and climate change together. Sometimes the way the community grows — how buildings and streets are built and how many trees and plants live in the community — can affect how hot it is or how well rainwater is absorbed into the ground.

No matter how you look at it, communities both experience and celebrate weather together in many ways.

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## Questions to guide explorations and experiments

- What are ways that weather affects activities and events in daily life?
- What important consequences does weather have for people? For communities? For plant and animal life?
- What can communities do to adapt as climate changes and weather becomes more extreme?

- Why do communities hold celebrations that are based on the seasons or the weather?
- Do you have a favorite holiday, festival, or celebration that is related to weather or the seasons?

### Books and activities

- **Books:** about how weather and seasons are celebrated and how weather impacts people and communities
- **Activities:** understanding how weather and climate bring people together and impact the way we live



Page spread from *We Are Grateful: Otsaliheliga* by Traci Sorell, illustrated by Frané Lessac





## Children's Books

### Fiction

- *Almost Time* by Gary D. Schmidt and Elizabeth Stickney (Ages 4-8)
- *Apple Picking Day* by Candice Ransom (Ages 3-6)
- *A Fall Ball for All* by Jaime Swenson (Ages 4-8)
- *Firsts and Lasts: The Changing Seasons* by Leda Schubert (Ages 4-8)
- *Groundhog Gets It Wrong* by Jess Townes (Ages 4-8)
- *I Am the Wind* by Michael Karg (Ages 4-8)
- *I'm in Charge of Celebrations* by Byrd Baylor (Ages 6-9)
- *Kite Flying* by Grace Lin (Ages 3-6)
- *The Longest Storm* by Dan Yaccarino (Ages 6-9)
- *One World: 24 Hours on Planet Earth* by Nicola Davies (Ages 6-9)
- *Our Roof Is Blue* by Sara E. Echenique (Ages 5-8)
- *Over in the Wetlands: A Hurricane-on-the-Bayou Story* by Caroline Starr Rose (Ages 5 and up)
- *Pumpkin Pumpkin* by Jeanne Titherington (Ages 4-8)
- *Snow Horses: A First Night Story* by Patricia MacLachlan (Ages 4-8)
- *The Snowy Day* by Ezra Jack Keats (Ages 3-8)
- *Sun Bread* by Elisa Kleven (Ages 3-6)
- *Still This Love Goes On* by Buffy Sainte-Marie (Ages 3-8)
- *The Sugaring-Off Party* by Jonathan London (Ages 4-8)
- *The Sun Shines Everywhere* by Mary Ann Hoberman (Ages 4-8)
- *Thanking the Moon: Celebrating the Mid-Autumn Moon Festival* by Grace Lin (Ages 4-8)
- *Together We Grow* by Susan Vaught (Ages 4-8)
- *Together with You* by Patricia Toht (Ages 3-6)
- *Twelve Kinds of Ice* by Ellen Bryan Obed (Ages 9-12)
- *Weather Together* by Jessica Sima (Ages 4-8)
- *When the Storm Comes* by Linda Ashman (Ages 4-8)
- *Wild Is the Wind* by Grahame Baker-Smith (Ages 6-9)
- *A Year of Celebraciones* by Carrie Lara (Ages 4-8)



## Children's Books

### Poetry

- *A Cold Snap! Frosty Poems* by Audrey B. Baird (Ages 4-8)
- *Every Month is a New Year: Celebrations Around the World* by Marilyn Singer (Ages 6-12)
- *Watersong* by Tim McCanna (Ages 4-8)
- *Winter Bees and Other Poems of the Cold* by Joyce Sidman (Ages 6-10)

### Nonfiction

- *The Autumn Equinox: Celebrating the Harvest* by Ellen Jackson (Ages 6-9)
- *Buried Sunlight: How Fossil Fuels Have Changed the Earth* by Molly Bang and Penny Chisholm (Ages 4-8)
- *Climate Action: What Happened and What We Can Do* by Seymour Simon (Ages 6-10)
- *Climate Change and Energy Technology* by Rebecca E. Hirsch (Ages 8-12)
- *Climate Warriors: 14 Scientists and 14 Ways We Can Save Our Planet* by Laura Gehl (Ages 7 and up)
- *Emperor of the Ice: How a Changing Climate Affects a Penguin Colony* by Nicola Davies (Ages 6-9)
- *Groundhog Day* by Gail Gibbons (Ages 4-8)
- *The Longest Day: Celebrating the Summer Solstice* by Wendy Pfeffer (Ages 3-8)
- *Renewable Energy: Discover the Fuel of the Future* by Joshua Sneideman (Ages 9-12)
- *Running on Sunshine: How Does Solar Energy Work?* by Carolyn Cinami DeCristofano (Ages 4-8)
- *The Shortest Day: Celebrating the Winter Solstice* by Wendy Pfeffer (Ages 3-8)
- *Snack, Snooze, Skedaddle: How Animals Get Ready for Winter* by Laura Purdie Salas (Ages 4-8)
- *Solar Power* by Rebecca Pettiford (Ages 7 and up)
- *Solar Story: How One Community Lives Alongside the World's Biggest Solar Plant* by Allan Drummond (Ages 4-8)
- *The Spring Equinox: Celebrating the Greening of the Earth* by Ellen Jackson (Ages 6-9)
- *We All Celebrate!* by Chitra Soundar (Age 5-8)
- *We Are Grateful: Otsaliheliga* by Traci Sorell (Ages 4-8)
- *We Gather Together: Celebrating the Harvest Season* by Wendy Pfeffer (Ages 6-9)
- *What Do You Celebrate? Holidays and Festivals Around the World* by Whitney Stewart (Ages 5-9)
- *Where We Live: Mapping Neighborhoods of Kids Around the Globe* by Margriet Ruurs (Ages 7-10)
- *Wind Energy: Blown Away!* by Amy S. Hansen (Ages 7-10)



# Activity 1: Weather Celebrations

## Introduction

In Spearfish, South Dakota on January 22, 1943, the temperature was  $-4$  degrees at about 7:30 a.m. Then the Chinook winds blew in and picked up speed rapidly. Two minutes later the temperature was 45 degrees above zero. The temperature in Spearfish got to  $+54$  degrees that day before the Chinook winds died down, and the temperature dropped back to  $-4$  degrees in 27 minutes, shattering windows and freezing vehicles. Spearfish is in the Guinness Book of World Records for “world’s fastest temperature drop” and “world’s fastest temperature rise.”

And Spearfish celebrates this with Chinook Days, a winter festival with music, arts, food, sports, a bonfire, and community events!



What weather, season, or aspect of your climate would kids like to see celebrated in your community? Work with kids to research and choose a kind of weather or seasonal event worthy of a celebration. Then plan your event and celebrate!

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## Supplies

- materials to research celebrations including books, magazines, newspapers, and/or library or internet access
- paper and pencil for taking notes
- craft materials to make decorations, posters, or games
- other materials determined by the celebration you choose to have

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## Get kids thinking ...

Talk with kids about existing activities that bring your community together. Are there cultural celebrations? Holiday parades?

**Ask kids:** When you hear people talking about our weather, what are they saying? What do you find unusual or wonderful about the weather or climate where we live? Can you think of



## Activity 1: Weather Celebrations

anything in our community related to our weather and climate that we should celebrate? What is your favorite kind of weather or season? How could you create a party to celebrate it? Throw out some ideas to get kids brainstorming:

- How about a festival that celebrates plants that grow in our climate like cherry trees, tulips, cacti, or ramps?
- What about a celebration related to an activity that takes place in a specific season or type of weather, such as harvesting, kite flying, maple syrup making, or bird or butterfly watching of specific species

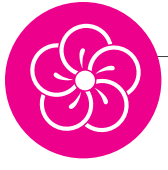
Next, read *I'm in Charge of Celebrations* by Byrd Baylor. Discuss with kids how the narrator in the story finds things in the natural world to celebrate. Some of them are related to weather: the dust devils and the rainbows. Others happen in certain seasons. The narrator ultimately chooses to celebrate a new year in spring instead of in January, near the winter solstice. Talk about how where the narrator lives shapes her celebration.

Other books about seasonal celebrations or fun weather-related activities can shape a conversation too.

### Explore other celebrations:

- **Going to a Cherry Blossom Festival in Japan:** <https://youtu.be/WDy4ciwgLTc>
- **Cherry Blossom Festival:** <https://youtu.be/k68VdWyMGJM>
- **Plymouth Annual Ice Festival:** <https://www.clickondetroit.com/video/news/2023/02/03/plymouth-hosting-41st-annual-ice-festival-this-weekend/>





## Activity 1: Weather Celebrations

### Let's get started!

Make a plan to celebrate weather (or a season or seasonal event) in your community.

**Step 1:** Have kids work together in small groups to develop recommendations of what to celebrate. Ask them to present their ideas to the larger group, hold some discussion, and then choose together what will be celebrated.

**Step 2:** Research the chosen weather, season, or event. What is it? When and how does it happen? Research if this topic is celebrated in other places around the world. (For example, are you celebrating ice and snow? Hurricanes? Rain starting or stopping? Trees blooming or losing leaves? Commemorating a record-breaking weather event?) How do people celebrate? Discuss WHY the chosen theme is important to the group or community. (Are there lots of apple trees near you? Do birds stop in or return to your area when they migrate?) Discuss HOW the chosen theme is related to weather, season, or climate.

**Step 3:** Brainstorm ideas of how you'd like to celebrate. Ask kids how they celebrate things in their family or neighborhood. What kinds of traditions do they know about? Make a list of possible elements like foods, music, performances, games, contests, parades, special clothes, decorations, speeches or presentations, etc.

**Step 4:** Identify the community to be invited to the celebration, pick a date, and find an appropriate location. Is it just your Weather Wonders group? That's fine! Do you want to throw a bigger party and get the neighborhood or larger community involved? You can do that, too. You can do this with the kids or make this decision on your own based on your program's constraints.

**Step 5:** Identify elements of your celebration. Have the kids create a skit or video about the celebration, sharing what they've learned. If your event is based on a seasonal food, like blueberries or pumpkins, include recipes with that ingredient. Do they want to invite people to share their experiences such as farmers, people who make art with snow or sand, or experts on animals or plants? Can the kids think of games or contests that would be appropriate?

**Step 6:** Have kids choose elements to work on, including invitations, posters, or outreach if you are thinking big — and get to work. Here are some examples of things to do:





# Activity 1: Weather Celebrations

- Research and invite guests/speakers
- Create presentations or performances informing guests about and celebrating the theme
- Make decorations
- Prepare games or contests (materials, rules, judges/referees)
- Research and prepare food options
- Make posters and invitations and invite guests/community members, publicize your event, invite families of Weather Wonders participants

**Step 7:** Celebrate! Bring people together and celebrate your theme as a community — small or large. Reflect on what the theme means to your community, how it brings you together, and how you can share that with others.



Page spread from *We All Celebrate!* by Chitra Soundar, illustrated by Jenny Bloomfield



# Activity 1: Weather Celebrations

## More festival and celebration activities

### Fall Activities

<https://winterkids.org/blog/11-outdoor-learning-activities-that-celebrate-fall/>

### Winter Activities

<https://www.backwoodsmama.com/2018/01/7-winter-carnival-activities-for-kids.html>

### Spring Activities

<https://www.hillsboroughstreet.org/blog/post/spring-fest-kids-zone-activities>

### Earth Day

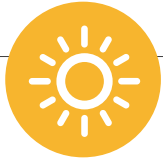
<https://www.earthday.org>

### Summer Activities

<http://www.walkthroughindia.com/festivals/the-10-major-monsoon-festivals-in-india/>  
(Monsoon Festivals)

<https://runwildmychild.com/100-outdoor-summer-activities/>





## Activity 2: Weather Powered

### Introduction

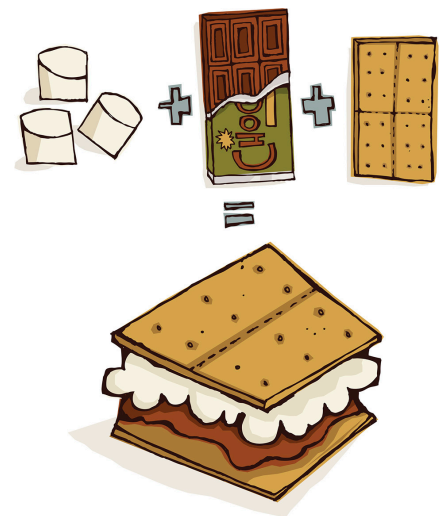
Energy begins with the Sun — energy on Earth originated with the Sun! The Sun’s energy is stored in coal, petroleum, natural gas, food, water, and wind. It is also the power source of our weather, such as wind and rain, which we use to power windmills and dams to make electricity.

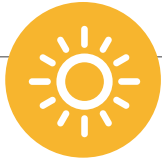
Energy from the Sun is transferred through space and through the atmosphere to Earth’s surface. This transfer is called **radiation**. Since this energy warms the Earth’s surface and atmosphere, some of it is or becomes heat energy.

With this activity, kids learn more about the Sun’s heat energy by making a solar oven and cooking up some tasty treats.

### Supplies

- a sunny day!
- cardboard box with attached lid that closes tightly. Look for a box with flaps that is at least 3 inches deep and large enough to fit an aluminum pie pan inside, such as a pizza box
- aluminum foil
- clear plastic wrap
- glue stick
- duct tape or other strong tape
- stick (about 1 foot long) to prop open reflector flap. (Use a skewer, knitting needle, ruler, or whatever you have.)
- ruler or straight edge
- box cutter or Xacto knife (with adult help, please!)
- graham crackers
- large marshmallows
- plain chocolate bars (thin)
- aluminum pie pan





## Activity 2: Weather Powered

### Get kids thinking ...

Find out what kids know about energy and where it comes from. **Ask:** What is energy? What are some sources of energy? How does energy change? What do we use energy for? How does the need people have for energy bring them together?

Next get them thinking and talking about how energy provides the power to make something work. Have kids list all the energy forms and/or power sources they have used so far today (electricity to run their refrigerator or television, natural gas to heat hot water or cook, gas/oil in a bus or car they rode in, food that gave them energy to run and play, etc.) See who has used the greatest variety of energy sources and talk about what the Sun has to do with all of the energy sources they have shared.

**Make S'Mores With a Solar Oven!** <https://climatekids.nasa.gov/smores/>

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### Let's get started!

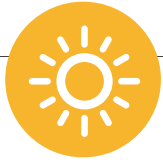
A basic tenet of meteorology is that the Sun warms the ground and the ground warms the air. This activity focuses on radiation, the process by which the Sun warms the ground. Energy from the Sun is the driving force behind weather and climate.

Almost all the energy on Earth comes from the Sun. The Sun's energy warms the Earth — the ground, water, and atmosphere — and is turned into heat that creates winds — and weather — in the atmosphere. When energy from the Sun is focused in other ways, it can provide power to spin a turbine or power an engine to generate electricity. It can even be focused to heat a solar oven that can cook food.

**Step 1:** Depending on the size of the box, have kids use a ruler and a straight edge to draw a 1½ to 2 inch border on the three sides of the box lid that aren't attached to the box. After kids have finished drawing, an adult should use their guidelines and a box cutter or knife to cut a three-sided flap.

**Step 2:** Kids should fold back the just-made flap and cover the inside with a layer of glue then affix aluminum foil with the shiny side out. Have them try not to wrinkle the foil and ask them why it would be important to have a smooth reflective surface.





## Activity 2: Weather Powered

**Step 3:** Next, kids should open the box and cover the bottom and sides with foil.

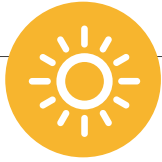
**Step 4:** Close the box, but have one child hold the flap open while another covers the flap opening with a layer of plastic wrap. Tape the plastic wrap tightly into place along three sides. Then open the box lid and add a layer of plastic wrap to the underside of the box lid. **Ask kids** what they think the purpose of the plastic wrap is. What are their ideas about how it will help cook their s'mores?

**Step 5:** Have kids test the stick or other object they will use to prop open the reflective flap. Head outside to a sunny spot and let them experiment with how they will keep the flap open and facing the Sun.

**Step 6:** Once they have their flap secure and facing the Sun, let the oven "preheat" for 15 minutes or so. While the oven is warming, kids can get their ingredients for s'mores.

**Step 7:** Get cooking! Have kids break graham crackers in half to make squares and place four squares in the pie pan. Place a marshmallow on each square then put the pan into the preheated oven. They should close the lid tightly and make sure the flap is reflecting sunlight into the box.





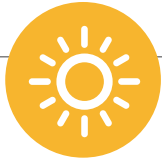
## Activity 2: Weather Powered

**Step 8:** Watch and wait. While waiting, talk about what’s happening. The foil covered flap is collecting the sunlight and directing it into the box. The sunlight is transformed into heat which is trapped inside the box, making it possible to cook the s’mores. Ask kids to think about and share other foods they could make in their solar oven. Talk about their ideas for improving upon their solar oven. What would happen if they used a box that was a different shape or size? What about changing the shape of their reflector? What if they used a different kind of plate to cook on?

The marshmallows can take up to an hour to get melty. When they squish with a poke, kids should carefully — the solar oven can get very hot! — add a piece of the chocolate bar to the top of each marshmallow and another graham cracker square on top of the chocolate. Have them close the oven again for about 10 to 15 minutes to let the chocolate soften.

**Step 9:** Eat! As kids enjoy their treats, keep the discussion going. **Ask:** How does cooking with the Sun relate to the weather? Is it quick to cook using the Sun? What are some problems or limits you might face cooking only with the Sun? What other ways are there to cook marshmallows?





## Activity 2: Weather Powered

### More weather-powered energy activities

#### **Renewable Energy Virtual Experiments**

The National Renewable Energy Laboratory (NREL) offers virtual 60-minute experiments related to an NREL research topic (solar, wind, or energy transformation). Register for a virtual experiment, offered every Tuesday and Thursday from 1:00 to 2:00 p.m.

<https://calendly.com/k-8th-grade-programs/1-day-experiment-grades-k-6?month=2023-04>

#### **Energy Choices and Climate Change**

<https://scied.ucar.edu/interactive/energy-choices-and-climate-change>

#### **Energy!**

<https://www.pbslearningmedia.org/resource/reach-with-stem-energy/energy/>

#### **What Is Energy? Short Demos**

[https://www.teachengineering.org/activities/view/cub\\_energy2\\_lesson01\\_activity1](https://www.teachengineering.org/activities/view/cub_energy2_lesson01_activity1)

#### **Melts in your bag, not in your hands**

[https://www.weather.gov/jetstream/ll\\_melts](https://www.weather.gov/jetstream/ll_melts)

#### **Watching the weather**

<https://artuk.org/learn/learning-resources/watching-the-weather>

#### **Build a Wind Turbine**

<https://www.msichicago.org/science-at-home/hands-on-science/wind-turbine/>



## Activity 3: Climate Check! Hot Stuff

### Introduction

Climate change is responsible for the increasing number of extreme weather events, including heat waves. As climate changes, people are coming together in their communities to solve immediate problems and work to reduce climate change. In order to develop new adaptations for current and future impacts of climate change, it is important to understand more about climate science.

This activity will help kids understand how different surfaces of the Earth reflect and absorb heat and think about what that means for communities in a changing climate.

### Supplies

- a sunny day!
- two clean, empty metal cans of the same size (28 oz. to 3 lb.)
- flat white and flat black paint (spray paint works best or other paint that will cover metal). One can will be painted white, the other black. You'll want to do this ahead of time, giving the paint time to dry.
- white and black fabric (old t-shirts) or white and black pieces of cardboard
- thermometer
- timer
- cold water
- ice cubes

### Get kids thinking ...

Talk with kids about what they know about [greenhouse gases](#) and the [greenhouse effect](#). What would Earth be like if our planet and its atmosphere did not absorb the Sun's energy? Why do they think that understanding how much energy from the Sun is reflected back out to space and how much becomes heat is important for understanding climate and climate change?





# Activity 3: Climate Check! Hot Stuff

## Let's get started!

Have kids imagine they are getting ready to get dressed and find out that the weather today is going to be 100 degrees! What would be the best clothes to wear to stay cool? What is the best color to wear outside on a hot day? Ask kids to share other ideas of when color makes a difference in how hot something gets in the Sun. Then have them see the difference for themselves with this demonstration.



**Step 1:** Fill the two cans with about two inches of cold water.

**Step 2:** Use a thermometer to find the temperature of the water in each can. They should be the same temperature. Have kids note what the temperature is.

**Step 3:** Remove the thermometer and take the cans outside to a sunny spot that will get about two hours of sunlight. Have kids predict and make a note of what they think will happen to the temperature of the water in each can.

While you are waiting, talk about what's happening in your demonstration. On Earth, surfaces reflect and absorb light. Lighter colored surfaces such as ice, clouds, snow, and sand reflect more light. Dark surfaces such as the ocean and bare mountains absorb more. Scientists use the word **albedo** to explain how strongly a surface reflects back solar energy.

**Learn more about albedo:** <https://www.pbslearningmedia.org/resource/buac912-sci-whatalbedo/whatalbedo/>

**Step 4:** After two hours, use the thermometer to measure and compare the water temperature in each can.

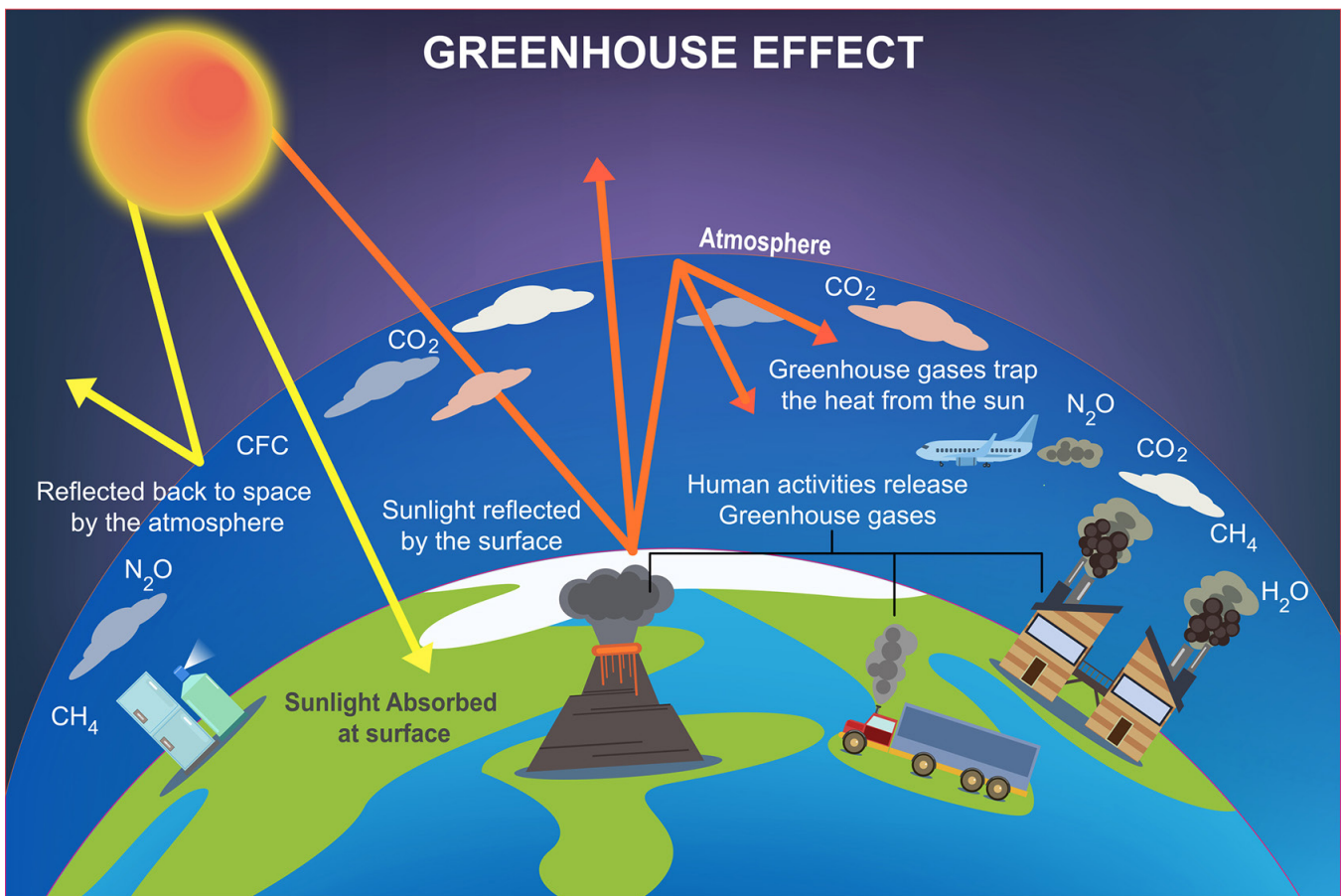
Talk about what the results mean in terms of climate and climate change. Kids should recognize that the darker color absorbed more of the Sun's energy and made the water warmer than the water in the white container.

If the Earth absorbs more energy from the Sun than it sends back out into space, the Earth gets warmer. If the Earth reflects more of the Sun's energy than it absorbs, the Earth gets colder. If



# Activity 3: Climate Check! Hot Stuff

the Earth's climate is colder and there is more snow and ice on the planet, albedo increases. That means more sunlight is reflected out to space, and the climate gets even cooler. When more heat is trapped by greenhouse gases and higher temperatures cause snow and ice to melt, darker colored surfaces are exposed. Then albedo decreases and less solar energy is reflected out into space, causing the Earth to warm even more.



**Next, let kids work in small groups to try their own albedo experiment.**

**Step 1:** Provide each group with a black piece and a white piece of fabric or cardboard.

**Step 2:** Head outside and have kids lay their two surfaces side-by-side in direct sunlight.

**Step 3:** Give each group eight ice cubes — four for each surface. Have them place the ice cubes



## Activity 3: Climate Check! Hot Stuff

on their surfaces in approximately the same positions. Ask them to predict and note what they think will happen.

**Step 4:** Have each group observe what happens on each surface and how long it takes. Ask them to think about what else besides color might affect how a surface reflects or absorbs the Sun's energy.

Let each group share their observations after the ice has melted. How does this affect their understanding of the Earth's changing climate and rising temperatures? What places on Earth do they think absorb the most solar energy and which would absorb the least?

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### Community connection

Urban areas don't have a lot of water, plants, or trees, and they are full of dark colors, like black asphalt and brick buildings. Without water to evaporate, the Sun's energy goes into warming the surface. Without plants and trees, there's no increase in water vapor in the atmosphere to bring clouds and precipitation. In places like this, urban heat islands form.

After learning about albedo, get kids thinking about heat in their own community. **Ask:** Is it an urban heat island? Are there lots of places that are usually warmer, such as areas covered with black asphalt versus white cement? What can people do about adapting to the high temperatures that many communities are already experiencing? How can what we know about albedo help?



Some cities now paint roofs white to help deal with the urban heat island effect or create green roofs with rooftop gardens. Ask kids to come up with ideas for what they could do to help keep their neighborhood cooler and ideas to get the attention of adults in their community who could help them put their ideas into action.





## Activity 3: Climate Check! Hot Stuff

More heat absorption and reflection activities

**Earth's Albedo and the Sun's Brightness Affect Climate**

<https://scied.ucar.edu/interactive/albedo-brightness>

**Can the Color of Your House Reduce Your Energy Footprint?**

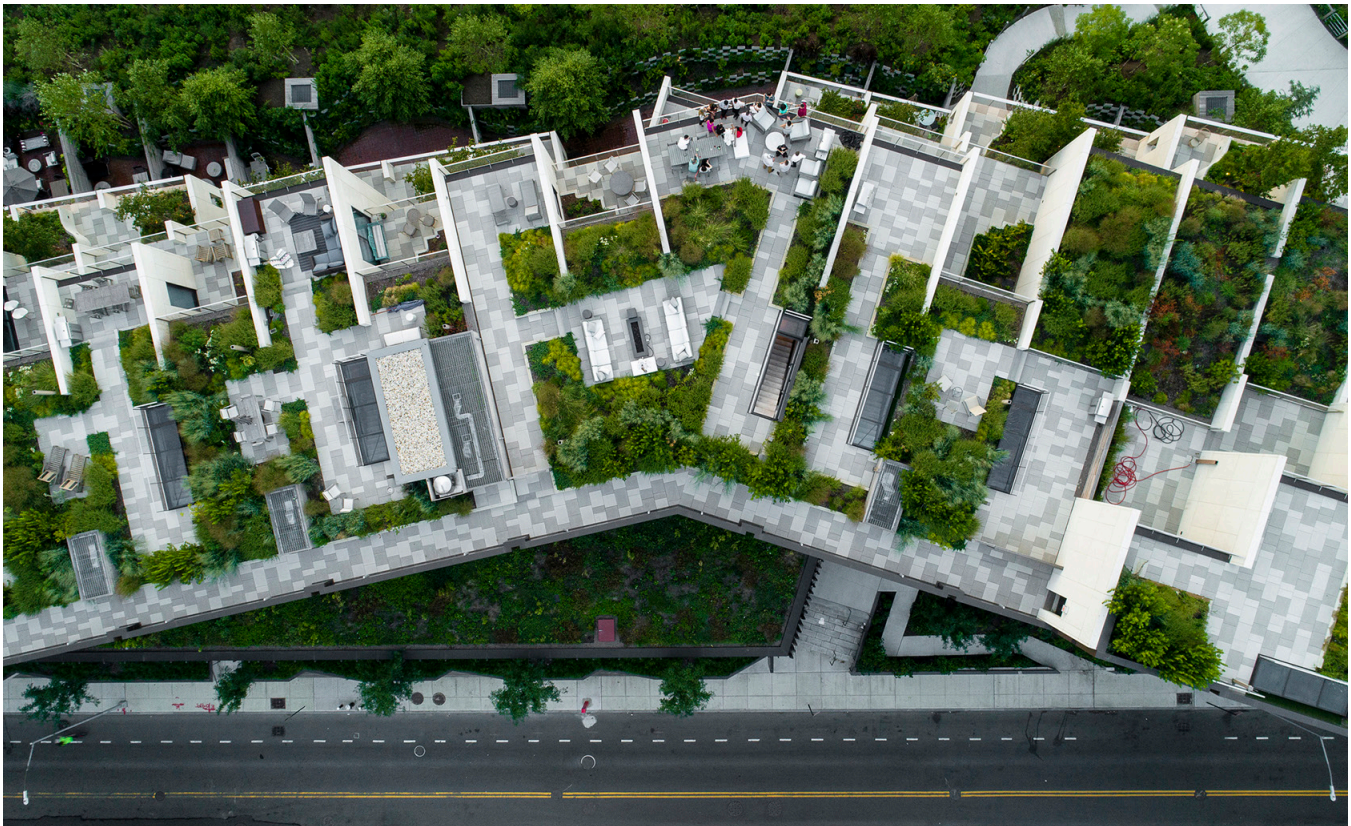
[https://www.sciencebuddies.org/science-fair-projects/project-ideas/EnvEng\\_p012/environmental-engineering/can-the-color-of-your-house-reduce-your-energy-footprint](https://www.sciencebuddies.org/science-fair-projects/project-ideas/EnvEng_p012/environmental-engineering/can-the-color-of-your-house-reduce-your-energy-footprint)

**Do Different Colors Absorb Heat Better?**

[https://www.teachengineering.org/activities/view/colors\\_absorb\\_heat\\_better](https://www.teachengineering.org/activities/view/colors_absorb_heat_better)

**A Mini Urban Heat Island**

<https://youtu.be/4kPsc6N2MiA>







# WEATHER WALK

# 5

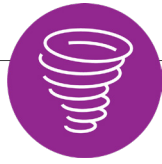
Take kids outside to observe the weather. After the **Daily Data Collection** and **Sky Sketch**, ask kids if they see clues or evidence of any precipitation or significant weather changes.

Do they see any clues that could help them predict the weather or a change in the season? Do they see any evidence of the community preparing for a weather event (like a coming storm) or a celebration? What do they notice about people they see and how they are experiencing today's weather? Invite them to share their observations, why they think what they see is an indication of precipitation or changing weather, and write them in their **Weather Journals**.

Follow up on your **World Weather Wise** activity and talk more about the weather, season, and climate of this location. Discuss what weather this location is currently experiencing and ask kids how they can tell. Ask if they found any evidence of that community preparing for a weather event or seasonal celebration.

If you have the opportunity, take the kids outside more than once during the day to observe how the weather changes.

**Repeat the Daily Weather Walk every day.**



## Weather Movement

### Weather dance

In previous weather movement activities, kids have come up with actions that show various weather forms. Have them build on those actions and explore other movement possibilities to develop a sequence of movements or a dance that celebrates the weather or a season! Start by sharing some inspiration:

#### **The Waltz of the Snowflakes from The Nutcracker**

[https://youtu.be/UYalQNjAX\\_8](https://youtu.be/UYalQNjAX_8)

#### **Maypole Dance**

<https://youtu.be/nclAdeQGxoo>

#### **Traditional Hawaiian Rain Dances**

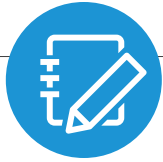
[https://youtu.be/Y0vbRhL\\_\\_l4](https://youtu.be/Y0vbRhL__l4)

Next, get kids thinking about how dance brings people together and bonds communities and cultures. Then, work with kids to create an inclusive dance that celebrates the climate and weather of your community. Talk with kids about how they would describe their climate and weather. What parts of it do they want to recognize or celebrate through movement?

After you develop a list together, have kids work out movements that could be part of a circle dance. Once they've given each weather element its own movement, write the steps down so you can be the dance "caller" as kids circle to the music you've chosen together for their dance. Here's an example:

- "Beautiful Sunny days are all around us. All join hands and circle to the left."
- "Step with your feet and feel the heat." (Drop hands and reach arms up toward the Sun while circling.)
- "Breezes come to keep us cool. Blow on back on the same track." (Holding hands, circle back to the right.)
- "Our summer weather is fun to spend together. Come into the center with a cheer for the season." (Holding hands, walk toward the center of the circle, throw arms up and down with a whoop, then back out.)

Add as many steps as you like and/or repeat them in any order you choose.



## Writing About Weather

### Weather jokes

Nothing brings people together like a good laugh — about the weather! Have kids channel their inner comedian and write their own riddles and knock-knock jokes about the weather.

One way to write a riddle is to ask a question that describes something without actually naming what it is. Then come up with an answer that has an unusual twist! Here are some examples:

- What do clouds way up high in the atmosphere say as they pass each other? *Have an ice day!*
- What do clouds wear under their raincoats? *Thunderwear!*



Knock-knock jokes follow a pattern. There are 5 lines of text, with the first line always “Knock knock” and the second line “Who’s there?” To write a knock-knock joke, find a noun (person, place, or thing) for the third line that can also sound like another word or phrase used in the fifth line. Here’s an example:

- *Knock knock!*  
Who’s there?  
*Snow.*  
Snow who?  
*Snow one is there. It was just the wind!*

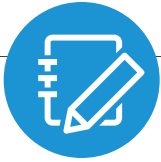
Compile everyone’s jokes into a book and spread the laughs around.

**Note:** You might also want to look at the book: *Partly to Mostly Funny: The Ultimate Weather Joke Book* (from the American Meteorological Society). <https://bookstore.ametsoc.org/catalog/book/partly-mostly-funny>

### Dear Sun

Have kids imagine that they are planning an event that will take place outside and requires a certain kind of weather — a sunny day for a picnic, a windy day for a kite festival, a cold day for an ice carnival, etc. To ensure they get the weather they need, have them write a letter to the Sun, requesting their desired forecast, describing their event, and why it is important to their event that they get the weather they are asking for.





# Writing About Weather

## Weather folklore

Weather sayings and rhymes are a part of American folklore and have been shared in communities around the country long before weather satellites and radar helped predict the weather.

Ask kids to share any sayings they might have heard before. Then share these Weather Lore Sayings (see link below) which include the saying and the real weather behind it. Next, have kids come up with specific details about a weather phenomenon of their choosing and make up their own weather saying to go with it.

**Weather Lore Sayings:** <https://www.nps.gov/grte/learn/education/classrooms/upload/Weather-Lore-Sayings.pdf>

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## Climate change comic

Share, read, and discuss *A Kid's Guide to Climate Change* comic from NPR. Then have kids think about some of the problems that contribute to climate change. Get them to explore different solutions to climate change problems that involve people planning and working together. Ask them to share these ideas in their very own comic.

**A Kid's Guide to Climate Change:** <https://www.npr.org/2023/01/17/1144849154/climate-change-kids-guide>





# Kid-Friendly Digital Media

## Online games

### Greenhouse Gas Game

<https://scied.ucar.edu/activity/greenhouse-gas-game>

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## Websites

### Butterfly Festivals

<https://butterflywebsite.com/butterfly-festivals.cfm>

### Spring Celebrations

<https://kids.nationalgeographic.com/celebrations/article/spring-celebrations>

### Winter Celebrations

<https://kids.nationalgeographic.com/pages/topic/winter-celebrations>

### What's the winter solstice?

<https://kids.nationalgeographic.com/history/article/winter-solstice>

### What Is an Urban Heat Island?

<https://climatekids.nasa.gov/heat-islands/>

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## Video

### Cooking Cookies with Solar Power

<https://www.pbslearningmedia.org/resource/phy03.sci.phys.mfe.zsolar/cooking-cookies-with-solar-power/>

### Exploring Windmill Design

<https://www.pbslearningmedia.org/resource/phy03.sci.phys.matter.zmill/exploring-wind-mill-design/>

### Climate Change's Best Hope

<https://www.pbs.org/video/climate-changes-best-hope-wfgae1/>

### What Is Climate Adaptation?

<https://www.youtube.com/watch?v=tn0IYD3D31U>