



Activity Guide for Daisies,  
Brownies, and Juniors

## World Thinking Day— Daisies, Brownies, Juniors

**I**n Girl Scouts, you are part of a special group that stretches across the world. On February 22 of each year, Girl Scouts and Girl Guides from 150 countries celebrate World Thinking Day. That's one big celebration! World Thinking Day is a way to celebrate with Girl Scouts and Girl Guides all over the world by doing the same activities around a shared theme.

The 2023 World Thinking Day theme is **“Our World, Our Peaceful Future: The environment, peace, and security.”**

To earn your World Thinking Day award, you will explore environmental problems and learn how you can work with nature to create a more peaceful and secure future for girls everywhere.

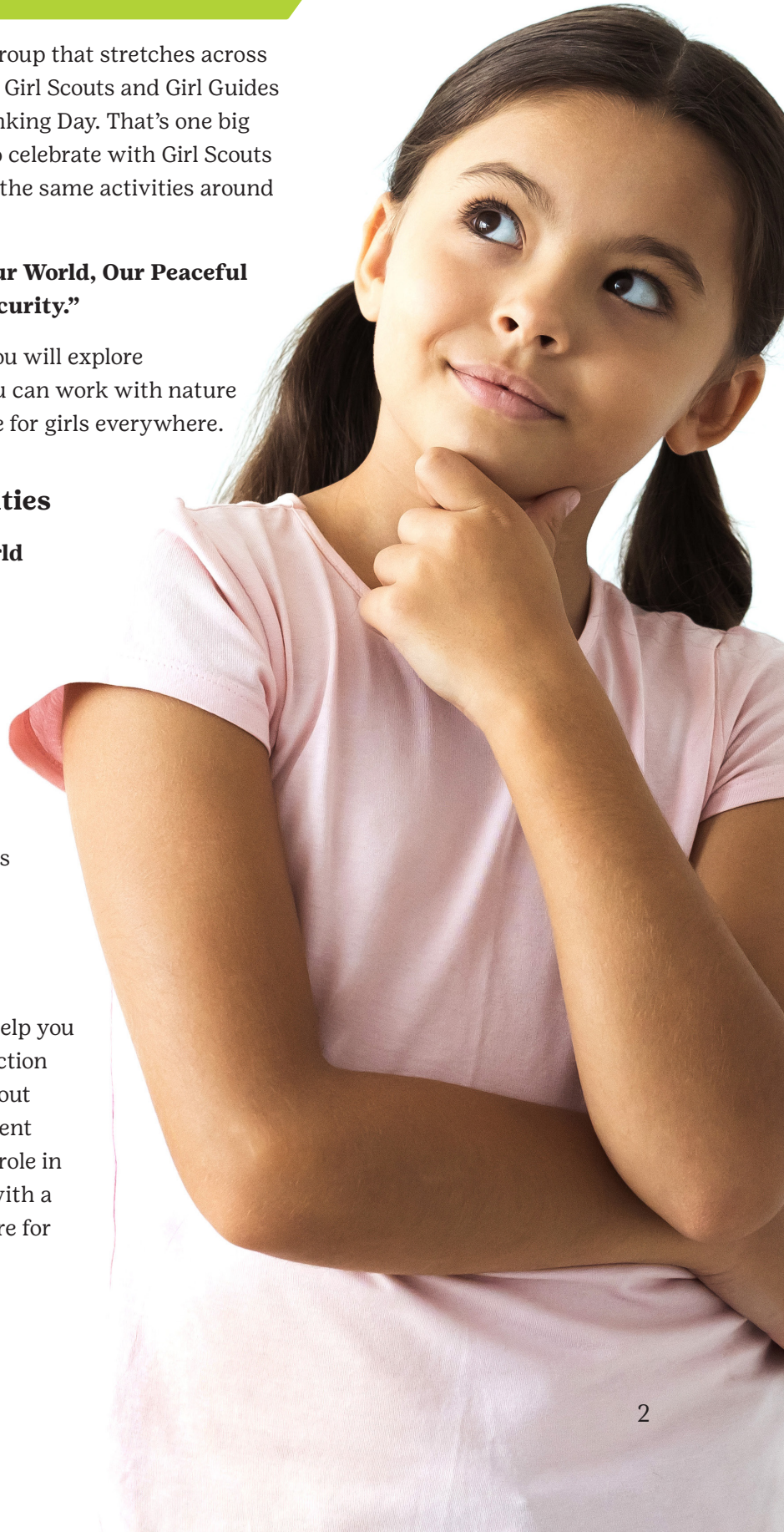
### World Thinking Day Award Activities

**There are five steps to earning your World Thinking Day award.**

1. Explore World Thinking Day.
2. Find out about environmental problems around the world.
3. Explore the environment's link to peace and security.
4. Investigate ways to protect communities and ecosystems.
5. Commit to a better future for the environment, peace, and security.

The first four steps have choices that will help you explore World Thinking Day and the connection of nature to peace and security. You'll find out why it's important to protect the environment during times of conflict and how it plays a role in peacemaking. In step five, you'll come up with a project to help you commit to a better future for the environment, peace, and security.

Let's get started!



## STEP 1: Explore World Thinking Day

Every year, Girl Scouts and Girl Guides celebrate February 22 as a day of international friendship called World Thinking Day.

It all started back in 1926 at a big gathering of Girl Scouts and Girl Guides. During that meeting, they created Thinking Day to celebrate global sisterhood. They chose February 22 because it's the birthday of Robert Baden-Powell who founded the Girl Guides with his sister Agnes Baden-Powell. It is also the birthday of Robert's wife, Lady Olave Baden-Powell, World Chief Girl Guide.

Six years later, in 1932, someone suggested that the birthday celebrations should have gifts. So, it was decided that all Girl Scouts and Girl Guides would give back to our Movement in honor of Thinking Day. In Girl Scouts, we support the Juliette Low World Friendship Fund, which helps Girl Scouts and Girl Guides travel to meet up around the world.

In 1998, Thinking Day was renamed World Thinking Day to recognize our Global Sisterhood.

Every year Girl Scouts and Girl Guides explore a new World Thinking Day theme. This year the theme is **“Our World, Our Peaceful Future: The environment, peace, and security.”** You'll explore what we can learn from the environment and how we can work with nature to create a more peaceful and secure future for girls everywhere. You'll also look at how conflicts can cause damage to the environment and the role the environment plays in peace and security.



### **Choice 1: Create a brave space.**

**To experience global sisterhood, everyone needs to be included, respected, and heard.**

Standing up for what you believe in and speaking your truth requires brave actions. That's part of your World Thinking Day journey to explore the environment, peace, and security.

For this activity gather your Girl Scout friends, sit in a circle, and take turns finishing any of these statements. You can do one or as many as you like!

- ▶ I feel brave when . . . (You might say things like, “I try something new,” “I recite my poetry,” or “I ride a rollercoaster.”)
- ▶ I like it when someone . . . (You might say things like, “is nice to me,” or “helps me do something I can’t.”)
- ▶ I'm happiest when . . . (You might say things like, “I'm hanging out with friends,” or “I'm writing, drawing, running with my team, or playing music.”)

# YOUR VOICE MATTERS

Once you've heard from everyone, talk about these questions with your Girl Scout friends:

- ▶ In this activity, do you feel you respected each other and actively listened to each other?
- ▶ Was there a time in your life when you felt your voice was heard? What did that feel like?
- ▶ Was there a time in your life when you didn't feel your voice was heard? What did that feel like?

Many years ago, the founder of the World Association of Girl Guides and Girl Scouts (WAGGGS), Lord Baden-Powell, shared a legend about two hostile communities in West Africa that decided to live together in peace—they flung down their shields, which were carried on their left arms, and advanced, unprotected, to greet each other with their left hands extended in trust and friendship. Now that left-hand greeting is used in WAGGGS.

In your brave space, give the left-hand greeting to each other, or create your own greeting that signifies trust, peace, and friendship.

## **Choice 2: Write a message for your peaceful future.**

This year's World Thinking Day theme is "Our World, Our Peaceful Future: The environment, peace, and security." You'll explore how conflicts can cause damage to the environment and why it's important to protect it.

How do you see peace and the environment in the future? What would you want to see changed?

In this activity, you'll write or draw your ideas for the future on a piece of paper.

Think about things that would make the world a better place, such as:

- ▶ A cleaner planet
- ▶ An end to all wars
- ▶ Clean water for everyone
- ▶ Education for all girls
- ▶ No more poverty
- ▶ No one goes hungry
- ▶ Kindness
- ▶ Healthcare for all people
- ▶ Equal rights for all people



Write or draw your vision for what you want to see happen in the future.

Then, decorate a cardboard tube from paper towels, using markers, stickers, and any other craft supplies you have.

Share your message with your troop, then put it in your cardboard tube. Store it somewhere safe until next year's World Thinking Day. When that time comes, share what you wrote with your Girl Scout friends and family. Did any of your hopes come true?

### **Choice 3: Make a World Thinking Day Sisterhood collage.**

As part of the Girl Guide and Girl Scout global sisterhood, you have 10 million sisters in over 150 different countries. Included in this group is a network of Advocacy Champions, young women who are set to change the world.

In this activity, you'll create a global sisterhood and friendship collage. A collage is artwork made by gluing pieces of different materials to a flat surface.

You'll need paper, glue or paste, safety scissors, and collage items, such as:

- ▶ Pictures cut out of magazines
- ▶ Scraps of paper, ribbon, or fabric
- ▶ Sequins, glitter
- ▶ Natural objects (leaves or feathers)
- ▶ Pipe cleaners, craft sticks, buttons

World Thinking Day is a day of international friendship. What are some ways you showed that in your collage?

Who could you share this collage with?

## **STEP 2: Find Out About Environmental Problems Around the World**

So much is happening around the world when it comes to the environment. You may have heard stories about forests burning, ice caps melting, air getting polluted, and animal species becoming endangered.

In this step, you'll explore what the environment is facing through climate change, environmental accidents, and pollution. Then in the next steps, you'll discover how environmental problems become even worse when there is conflict, such as war or invasions.



Check out some of these headlines from [Kids.Earth.Org](https://www.earth.org/);

- ▶ [“The Arctic Could Have Ice-Free Summers by 2050”](#)
- ▶ [“Plastic Litter in the Ocean Will Triple by 2040 if We Do Nothing to Stop It”](#)
- ▶ [“California is Experiencing Its Worst Fires Ever Recorded”](#)
- ▶ [“Massive Russian Oil Spill! What Does This Mean for the Environment?”](#)<sup>1</sup>

How do you feel when you read these headlines?

With an adult’s help, watch [this video](#)<sup>2</sup> to get an idea of what some problems we have with our environment.

These are some problems to think about. Choose one problem to explore further!

**Air Pollution:** Gas, dust, and smoke get into our air and make it unclean and unsafe to breathe. Air pollution also harms and destroys plants.

**Deforestation:** The loss of trees hurts the environment because trees produce the oxygen we need to breathe and, therefore, survive. Animals of all kinds depend on trees and forests to live.

**Garbage and Waste:** When you throw trash away, it goes to a dump or a landfill. Garbage is the biggest problem in the world because the growing number of people make so much waste that there’s not enough space to put it all. It can end up in rivers and oceans, which affects the animals living there. Garbage also causes pollution and can contaminate the soil where we grow our food.

**Ocean and Water Pollution:** When we pour chemicals or trash in our oceans, we damage our water sources and threaten marine life. We also pour chemicals in lakes and other freshwater sources that cause water pollution and threaten our clean water sources.

**Overpopulation:** Because the world has so many people, there are not enough resources for everyone. More people living on earth also means more pollution.



1 Credit: Earth.Org, <https://earth.org/>

2 Credit: Smile and Learn – English, <https://smileandlearn.com/en/>

## **Choice 1: Conserve water by taking a 90-second shower (or pretending to).**

Water is not abundant everywhere. One-third of the world's population live in countries considered to be "water stressed." Water stress means that the demand for water is greater than what's available. There's just not enough water for everyone—people are thirsty or don't have enough water to cook or to clean themselves. If this continues, one in every three people on earth will suffer water stress by 2025.

During a drought in Cape Town, South Africa, to save water, residents started limiting their showers to 90 seconds!

For this activity, you'll try taking a 90-second shower and saving water while you do it!

If you're in a meeting setting with your friends, just set a timer to 90 seconds and each pretend to take a shower to see what that would feel like. Make sure to pretend having the things you typically use for a shower, such as soap, washcloths, and hair products. Can you get everything done in 90 seconds?

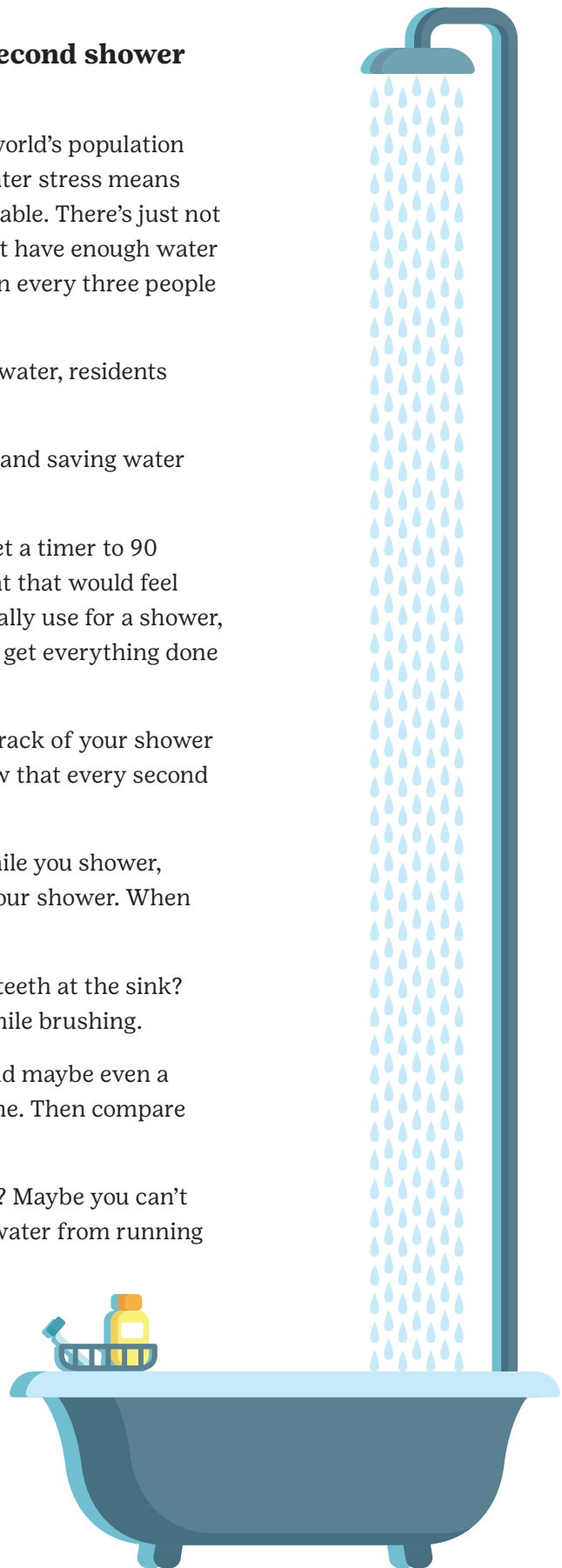
At home, challenge yourself by using a timer to keep track of your shower time without skipping important washing steps. Know that every second counts!

Place a plastic bucket or basin inside your shower. While you shower, let the bucket collect some of the falling water from your shower. When you're done, use the bucket to water plants.

Do you turn off the water while you're brushing your teeth at the sink? Time that too! And make sure to turn off the water while brushing.

Try taking a 90-second shower for a couple of days and maybe even a week! Challenge your family and friends to do the same. Then compare notes.

- ▶ Do you feel like you can shorten your shower times? Maybe you can't always finish in 90 seconds, but anytime you stop water from running you are helping the environment!
- ▶ Do you have any tips to share with each other about taking shorter showers?
- ▶ How did you save water with your hair routine?
- ▶ How else might you use the water you collected in your bucket?



## Choice 2: Visit a recycling center.

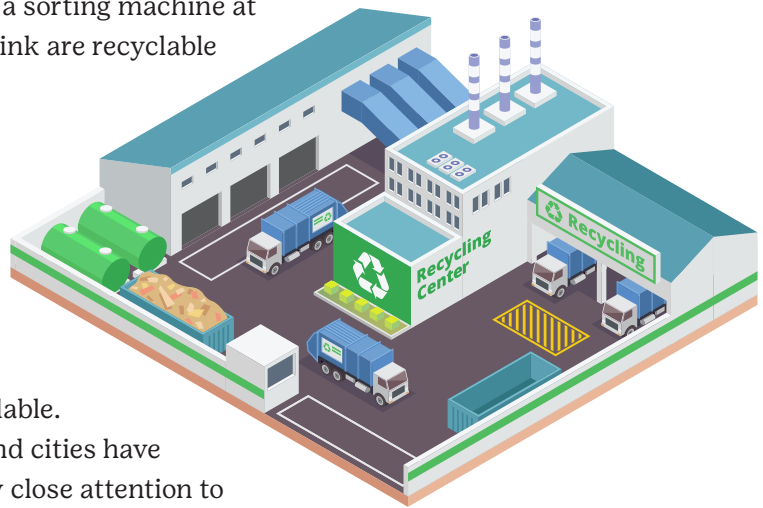
Whatever you put in a recycling bin usually ends up in a sorting machine at a recycling facility. A lot of times we put in items we think are recyclable but are not. What happens to those items?

In this activity, you'll find out the best practices for recycling by visiting a recycling facility and talking to an expert. You can also invite an expert from a recycling facility to come talk to your troop. Or, with an adult's help, go online to your local recycling facility and find out what their requirements are.

Find out if everything with a recycling symbol is recyclable. You might be surprised to learn that different towns and cities have different requirements for their recycling facilities! Pay close attention to what is recyclable in your neighborhood.

After your field trip or research, write or draw a list of things you can recycle with tips on how to do it. Should you remove caps from the bottles? Should your plastic containers be rinsed beforehand?

Then with your friends, draw the recycling symbol on a paper in whatever color you want, and cut and paste all your symbols together on a poster board. Hang it in your meeting place to remember to look for those symbols the next time you want to recycle something.



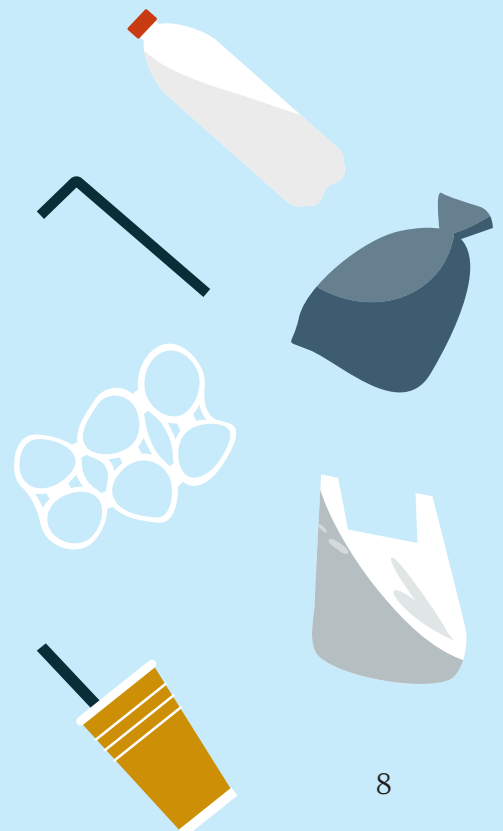
## Choice 3: Explore ocean waste and make a difference.

What are some things you can find floating in the oceans?

- ▶ Plastic bottles
- ▶ Plastic bags
- ▶ Plastic straws
- ▶ Food wrappers
- ▶ Fishing nets
- ▶ Microplastics (very small pieces of plastic, less than 0.2 inches long!) that take thousands of years to degrade

Most of us use plastic that's used once and thrown away—like the containers for toys or batteries and wrappers around food in the grocery store. This is called “single-use plastic.”

Plastic thrown on the ground often blows into creeks, lakes, and rivers, and eventually ends up in the ocean. Plastic trash doesn't decompose back into nature the way a banana peel or piece of paper might. If it ends up in the ocean, it stays there forever. Fishing nets and the plastic six-pack rings used to attach cans entangle animals, leaving them trapped.





With an adult's help, watch the video: [How Plastic Hurts the World.](#)<sup>3</sup>

In this activity, you'll make a pledge to do one or more of the things below to help. Draw a picture of what you plan to do. Then spread the word to your family and friends.

I will...

- ▶ use reusable or paper straws instead of plastic straws.
- ▶ reuse my plastic zip bags for my snacks and lunches.
- ▶ try to choose snacks that don't come in snack packs or plastic bags.
- ▶ go for a cone instead of a cup for my yogurt or ice cream.
- ▶ use bar soap that comes in a cardboard box rather than liquid soap in a plastic bottle.
- ▶ check my toothpaste and face wash to see if it contains microbeads. If so, find one that doesn't. (These plastic beads end up in rivers, lakes, and oceans, where marine creatures mistake them for food—it can be deadly for them.)
- ▶ join a beach, lake, river, or creek cleanup. I'll make sure to go with an adult and watch out for anything sharp or dangerous.



### STEP 3: Explore the Link Between the Environment, Peace, and Security

You've just learned about problems facing the environment and how changing our habits can help solve some of them. Now you'll explore how finding better ways to manage our natural resources can help prevent and reduce conflict and build lasting peace.

Why does not having peace and security cause even more harm to the environment?

Think about what happens when large forests or reserves that protect wildlife are destroyed by military activity.

Imagine when factories, buildings, and homes are demolished, releasing pollutants and toxic waste on our planet. What happens to our air? Our water?

Find out more about nature and peace and how the environment suffers when the world has a conflict.

<sup>3</sup> Credit: Responsibility in Fashion, <https://www.responsibilityinfashion.org/>

## Choice 1: Visualize water scarcity in the world.

Water scarcity is when there is not enough water for people who need it to live.

Most of us are used to the idea that we have clean water to drink, take baths, or wash dishes. One in every three people on our planet do not have access to clean, safe drinking water. This problem becomes even worse when climate change causes droughts that force people to move from their communities to find water to survive. Farmers need water to grow food. Families need it to live.

With war or invasions, sometimes water systems get polluted or access to water is disrupted. When water becomes scarce, this also creates conflict among people fighting over what's available. Everyone needs to share the fresh water we have and protect and not waste it.

But how much fresh water is available? Look at the map **[at the end of this document]** and color in water and land. Is there more water or more land on the map? It's hard to imagine that water is scarce when it covers most of Earth, right?

Let's consider those water sources:

- ▶ Oceans
- ▶ Groundwater (water that's underground)
- ▶ Lakes
- ▶ Ice
- ▶ Swamps
- ▶ Rivers

Water basically breaks down into two types:

- ▶ **Saltwater:** found in the ocean and contains salt
- ▶ **Freshwater:** found in glaciers (frozen water), groundwater, and surface water (lakes, streams, ponds, rivers, and swamps).

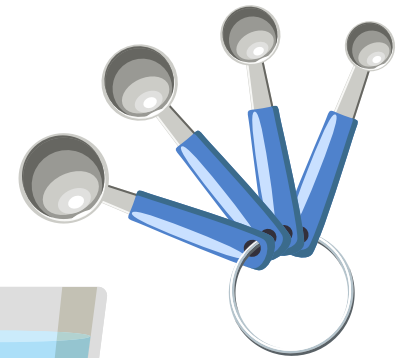
Now, think about this fact: Most of Earth's water (that's 97%) is found in the ocean. That means that only a very tiny amount (3%) of the Earth's water is freshwater—possibly drinkable and useable for humans.



Do this activity to see what that looks like and why it matters:

**What you'll need:**

- ▶ 1 one-liter bottle (could be an empty plastic soda bottle)
  - ▶ 3 cups (that each hold one cup of liquid)
  - ▶ 1 teaspoon
  - ▶ 1 tablespoon water
  - ▶ Food coloring (optional)
1. Fill an empty one-liter bottle with four cups of water. Add food coloring for fun. This bottle represents all the water on Earth.
  2. Remove two tablespoons of water from the bottle and place it in a cup. This cup represents all the freshwater on Earth. What's left in the bottle is saltwater, which people can't drink.
  3. Take two teaspoons of water from the cup and put it into a second cup. This is freshwater on Earth that isn't frozen.
  4. Take one teaspoon from the second cup and put it into a third cup. The second cup is all the clean freshwater on Earth that is directly available for our use. The third cup is freshwater trapped underground and water that is frozen or polluted.



Are you surprised by how little water is available for human use?

Why do you think it's important to protect and share water?

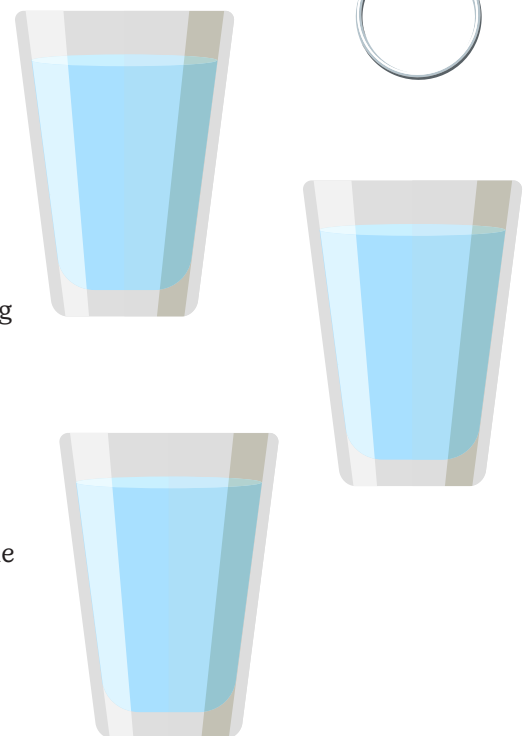
How can having enough safe, clean water help keep peace and make the world more secure?

**Choice 2: Go on a peace and nature scavenger hunt.**

Earth gives us nature, free of charge. Water helps keep us alive. We get medicines and herbs from some plants. We get food from crops. We get shade from trees. We get joy out of stargazing, looking at clouds, and being around wildlife. What else do you like about nature?

When we take care of nature, we take care of ourselves and our future. Knowing that nature is at risk makes us want to protect and appreciate it even more.

In Japan, some people practice "forest bathing," which means taking in the forest atmosphere through seeing, hearing, taste, smell, and touch. Some people believe that opening their senses to the forest helps connect them to nature.



For this activity, you'll do a version of forest bathing. It can be anywhere there is nature—at a park, your backyard, or somewhere there is a patch of greenery or a tree in your neighborhood. Try to find somewhere that's peaceful and quiet.

With an adult, head outside to go on a peace and nature scavenger hunt. Make a list of all the things you want to find. Use some of these ideas for your hunt:

- ▶ Listen for a bird call.
- ▶ Find the biggest tree.
- ▶ Look for something in nature that makes you smile.
- ▶ Find a plant with berries.
- ▶ Find evidence of animal or insect tracks.
- ▶ Look for all the things in nature that are your favorite color.
- ▶ Smell something with a fragrance you like.
- ▶ Touch a fallen leaf. (But make sure to leave it where you find it.)

While you're outside, notice how your body and mind feel.

Are you more relaxed surrounded by nature than you are indoors or in a classroom?

Were you able to focus on things you wanted to find or experience?

Was there anything special about what you discovered that you'd share with a family member or friend?

## STEP 4: Investigate Ways to Protect Communities and Ecosystems

Now that you know that peace and security are connected to the environment, how can you help protect it?

### **Choice 1: Become a citizen scientist and learn how to collect data.**

Since there are not enough scientists or environmentalists to travel to every place in the world with a problem, it's often the people living in communities who contribute information. They are called citizen scientists, and they do things like observe, record, and collect data to recommend changes or help where needed.

You can be a citizen scientist too! Part of being a citizen scientist is seeing what's going on in the immediate world around you. That's what you'll be doing in this activity.





Share your observations with your family, friends, troop, or school.

If you like the idea of being a citizen scientist, check out the website called [CitizenScience.gov](https://www.citizen-science.gov) where you can explore projects, submit your observations, and even create your own project!

## **Choice 2: Learn about Trees of Peace and the Girl Scout Tree Promise.**

One of the biggest ways that the environment is affected by conflict is through deforestation, which means when trees are cut down, not replanted, and forests are destroyed. Trees help keep the land, soil, and water healthy. Trees also create habitats for wildlife and provide homes, food, and shade. Once people cut down and remove trees, it takes years to replace them.

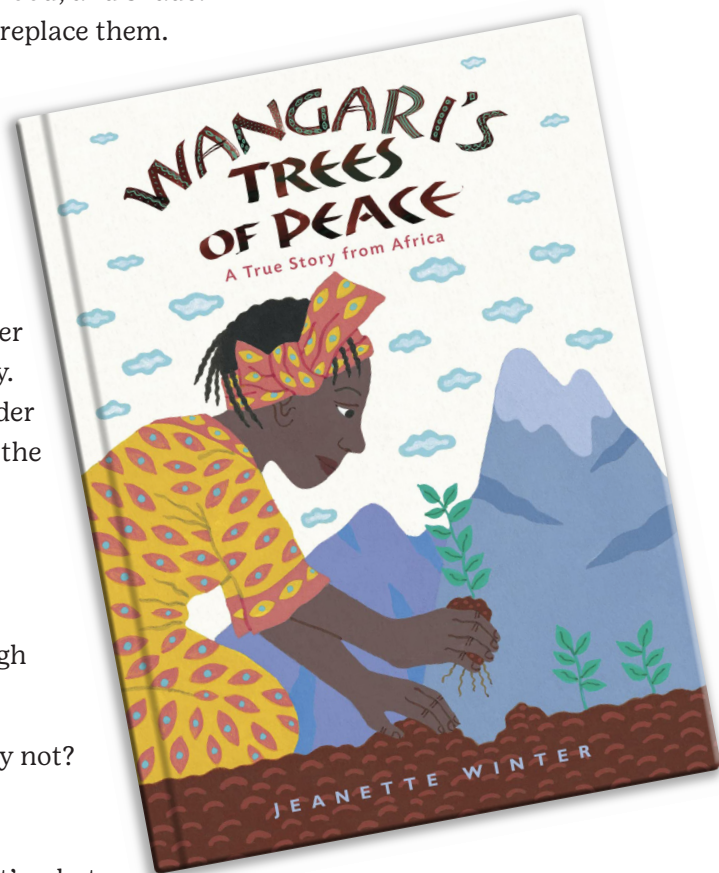
Tree planting is an important part of rebuilding. That's something Wangari Maathai discovered after her community in Kenya lost their trees to ranching, agriculture, and even firewood cutting for homes. Wangari was a social, environmental, and political activist from Kenya and the first African woman to win the Nobel Peace Prize. When deforestation happened in her community, she did something about it. Find out her story. Borrow the book *Wangari's Trees of Peace* by Jeanette Wilder from your local library to read out loud, or you can watch the [Wangari's Trees of Peace](#) video online.<sup>4</sup>

After you have heard Wangari's story, talk about these questions with your Girl Scout friends or family:

- ▶ What happens in communities when there aren't enough trees?
- ▶ Do you think Wangari was a brave woman? Why or why not?
- ▶ What do you think "trees of peace" are?
- ▶ Wangari said, "It's the little things that citizens do. That's what will make the difference." What do you think she meant?
- ▶ How do you think trees made a better life for people in Kenya and can make positive change in the world?

Watch the [Girl Scout Tree Promise video](#), and then the [International Day of Forests 2021: Forest restoration – a path to recovery and well-being](#).<sup>5</sup>

By protecting trees, we can limit the number of trees cut down, restrict use of hazardous pesticides, and protect wildlife habitats. What are some of the things we can do to protect trees? Make a list.



4 Credit: Ms. Meyer Art Teacher, <https://www.youtube.com/c/KendraYao>

5 Credit: Food and Agricultural Organization of the United Nations, <https://www.fao.org/>

Notice the illustration at the top of **“The Power of One Tree”** handout in this activity packet—it shows why trees are important to us. Look at the **“Our World, Our Equal Future”** and the **“Girl Scout Tree Promise”** handouts at the end of this packet.

Read the Girl Scout Tree Promise out loud with your Girl Scout troop and then sign it

## STEP 5: Commit to a Better Future for the Environment, Peace, and Security

In this activity, you and your troop will make a commitment to how you’ll help create a better future for the environment, peace, and security.

Think about what you learned in the activities. What message would you write to tell others about how they can help protect the environment and promote peace and security? For example, you might create a message about planting trees or protecting wildlife and say how important these resources are during times of conflict.

Or you can create a message about:

- ▶ How important it is to preserve and protect clean water
- ▶ How citizens can make a difference in caring for their community and protecting their natural resources
- ▶ What you discovered about the ways nature creates peace
- ▶ What you learned about recycling, ocean waste, and how plastic hurts the world

You can each write your message on a poster board or large piece of paper. It could be your personal message or something the group comes up with that you all sign.

What are some ways your message might make a difference?

When you are done with all five steps, make sure you celebrate! By earning your World Thinking Day award, you’ve helped make the world a better place by learning about the environment, peace, and security.





# Glossary

**Citizen Scientist:** Someone who helps support a project by collecting and analyzing data, usually as part of a collaboration with professional scientists

**Climate:** The average pattern of weather conditions over a long period, which is different from weather because weather changes daily

**Climate change:** A change in the average conditions—such as temperature and rainfall—in a region over a long period

**Conflict:** A fight, battle, or war

**Conserve or conservation:** What we do to protect our natural resources, such as soil, water, or forests, from loss, pollution, or waste

**Conservationist:** Someone who helps protect our natural resources, such as wildlife, plants, and habitats

**Data:** Facts, figures, or other pieces of information that can be used in different ways

**Deforestation:** When trees are cut and not replanted, and forests are destroyed

**Drought:** Continuous period of dry weather when an area gets little rain or no rain at all

**Environment:** The air, water, and land in or on which people, animals, and plants live

**Fresh water:** Water that has no or a very small amount of salt, unlike saltwater in the oceans

**Glaciers:** A large body of ice, usually found in mountain areas and at the North Pole and South Pole

**Light pollution:** When there is too much human-created light in the night sky, including lights from buildings, cars, and other sources

**Marine life:** Plants and animals that live in the sea

**Microplastics:** Tiny plastic particles that result from the breakdown of larger plastics and that have been found in marine organisms from plankton to whales, in commercial seafood, and even in drinking water

**Pesticides:** Chemicals—many of which are poisonous and harm humans and destroy the environment—that are used to kill unwanted insects or small animals

**Pollution:** Poisons, wastes, or other materials that harm the environment

**Poverty:** Being poor or a lack of money

**Preserve:** To protect from being harmed

**Reserve or reservation:** Land set aside for a specific purpose

**Rural areas:** Usually farms or countryside where people might live in small villages and the opposite of urban areas where many people live close together in towns and cities

**Salt water:** Found in the ocean and contains salt

**Scarcity:** Not having enough of something to meet needs

**Single-use plastic:** Plastic that is used once and thrown away, such as plastic straws, grocery bags, and snack wrappers

**War:** Armed fighting or struggle between people or countries

**WAGGGS:** World Association of Girl Guides and Girl Scouts

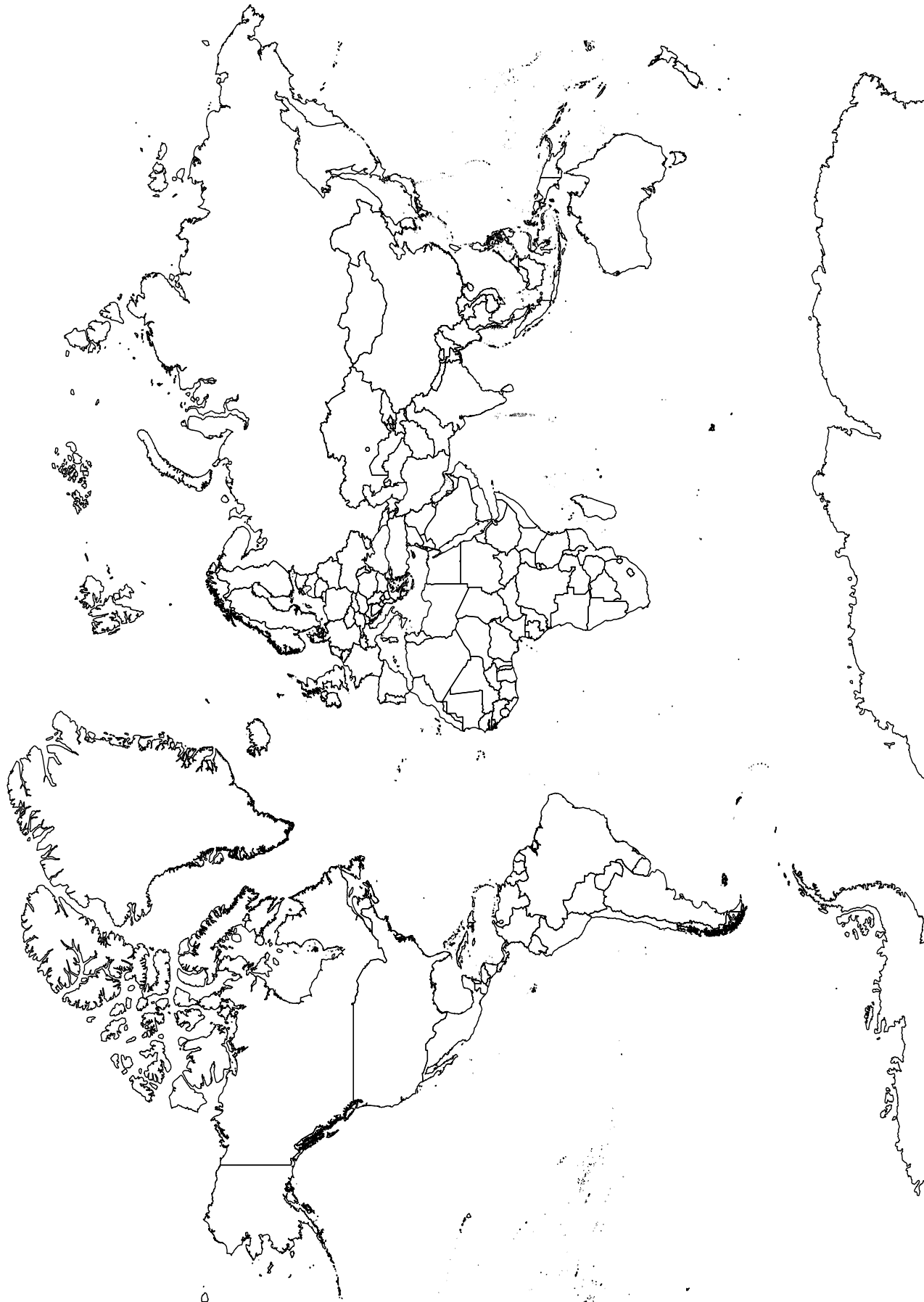
**Water stress:** When the demand for water is greater than what's available

**Wildlife:** Wild animals that live free from humans





**Color in the water and land. Is there more water or more land on the map?**





# Our World, Our Equal Future, and the Girl Scout Tree Promise

## **There is a climate crisis.**

The past 10 years have been the warmest in centuries. Because of climate change, we have more natural disasters like wildfires, droughts, hurricanes and floods.



## **The climate crisis has a larger impact on girls and women.**

In general, women spend more time acquiring food, fuel and water, or struggling to grow crops.

## **Trees are one solution to climate change.**

Carbon dioxide is a greenhouse gas that traps heat in the atmosphere. Trees help stop climate change by removing carbon dioxide from the air and storing it in the trees and soil.



## **Girl Scouts are taking the lead in protecting our planet by taking the Tree Promise.**

Our Goal? To plant 5 million trees in five years and to protect and honor new and existing trees. This will help reduce climate change and benefit our communities. Girl Scouts everywhere are being called to action to plant, protect, and honor trees in their backyards, camps, communities, and states—across the country and even across the world.



# Make the Girl Scout Tree Promise

## The Girl Scout Tree Promise

I promise to be a friend to every tree,  
just like they're a friend to me .

I will plant and protect them through and through  
with the help  
of my loyal Girl Scout crew .

Besides being beautiful, there's more to see; or climate change, they hold a key.

They fill our lungs with cleaner air; it's our responsibility to care .

That's why I'll advocate for every tree .  
Because I need them, and they need me!

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(Girl Scout's Name) (Date)

**Did you know trees are Mother Nature's superheroes?** Yep, think of trees as superheroes with powers unlike any other living thing on the planet!

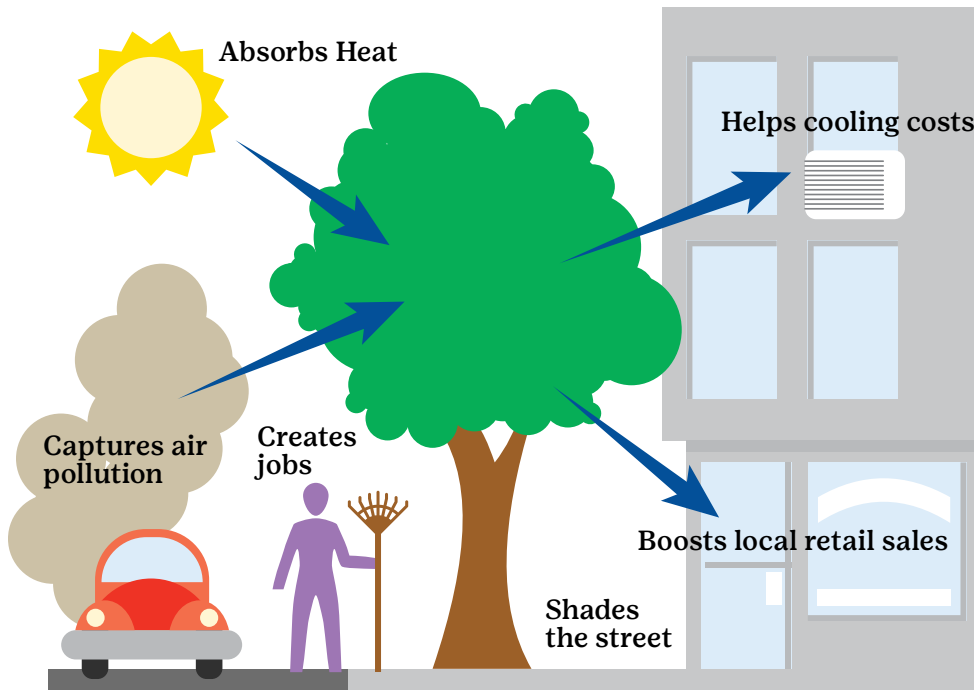
**What type of superpowers are we talking about? Well, just to name a few, trees help to:**

- ▶ Take out pollution from the air we breathe and fill our lungs with oxygen
- ▶ Remove carbon from the atmosphere, helping slow global warming and climate change
- ▶ Lower our stress, making us happier
- ▶ Act like a strainer, keeping our drinking water cleaner
- ▶ Relieve us from the heat with their shady canopies
- ▶ Protect our homes from the heat and cold, saving us energy
- ▶ Create space for wildlife to live, eat, and play
- ▶ Protect the soil from the effects of heavy rain, preventing erosion
- ▶ Give us jobs so we can provide for our families
- ▶ Provide fruit and nuts for us to eat and support threatened pollinators like bees and hummingbirds

So instead of wondering "Why trees?", we should be asking "Why not trees?!" The more we plant, the more superheroes our planet will have!



# The Power of One Tree



## Water

- ▶ A tree can capture 10–40% of the rainfall it comes into contact with, depending on species, time of year, and amount of rain that falls in the storm.<sup>1</sup>
- ▶ Over the course of 20 years, a single red maple tree can intercept 27,000 gallons of rainwater, avoiding 4,800 gallons of runoff.<sup>2</sup>

## Climate

- ▶ A large tree absorbs 40–50 pounds of carbon dioxide—a greenhouse gas that causes global warming—per year.<sup>3</sup>
- ▶ Over the course of its life, a single tree can capture and store one ton of carbon dioxide.<sup>4</sup>

## Forest Products

- ▶ According to estimates calculated by the University of Maine, one tree can produce around 8,333 sheets of paper.<sup>5</sup> The average office worker uses 10,000 sheets of copy paper each year.<sup>6</sup>
- ▶ “An apple tree can yield up to 15–20 bushels of fruit per year and can be planted on the tiniest urban lot.”<sup>7</sup>

## People

- ▶ A single tree can capture 3.5 pounds of air pollutants—like ozone, dust and particulate matter— per year.<sup>8</sup> Air pollutants like fine particulate matter are a major cause of asthma and other respiratory problems.
- ▶ A mature tree can reduce peak summer temperatures by 2°–9°F.<sup>9</sup>
- ▶ “The net cooling effect of a young, healthy tree is equivalent to 10 room-size air conditioners operating 20 hours per day.”<sup>10</sup>
- ▶ “Trees absorb and block noise and reduce glare. A well-placed tree can reduce noise by as much as 40 percent.”<sup>11</sup>
- ▶ A single large tree can produce approximately 260 pounds of oxygen per year.<sup>12</sup>
- ▶ While lifespan varies by species and growing environment, trees generally live to be 50 to 300 years old.
- ▶ The tallest tree in the world is a Coast Redwood named Hyperion, growing in Northern California’s Redwood National Park. It’s 380 feet tall!<sup>13</sup>

## More general facts/facts about more than one tree:

- ▶ In one year, an acre of forest can absorb up to twice the carbon dioxide produced by the average car’s annual mileage.<sup>14</sup>
- ▶ Trees properly placed around buildings can reduce air conditioning costs by 50%.<sup>15</sup>
- ▶ Trees increase property value of your home by 10–20% and attract new home buyers.<sup>16</sup>
- ▶ Trees can reduce crime and improve perceptions of business districts.<sup>17</sup>
- ▶ One study showed that hospital patients whose rooms had a view of trees recovered more quickly and were less depressed than those looking out at a brick wall.<sup>18</sup>
- ▶ Students with trees outside school windows have higher test scores and graduation rates after controlling for other factors. High school students with more natural features like trees outside classroom and cafeteria windows showed higher standardized test scores, graduation rates, and intention to attend college, after controlling for socioeconomic status and other factors.<sup>19</sup>
- ▶ After a walk in the park or playing in green spaces, children with ADD displayed fewer symptoms.<sup>20</sup>

- ▶ Eight in ten species found on land—that’s over five million and counting—live in forests.<sup>21</sup>
- ▶ More than half of U.S. drinking water originates in forests. Over 180 million Americans in over 68,000 communities rely on forests to capture and filter their drinking water.<sup>22</sup>

*This content was provided by American Forests as a resource for the Girl Scout Tree Promise.*

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