girl scouts

Activity Guide for Daisies, Brownies, and Juniors

World Thinking Day—Daisies, Brownies, Juniors

In Girl Scouts, you are part of a special group of girls 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 girls all over the world by doing the same activities around a shared theme.

The 2022 World Thinking Day theme is **"Our World, Our Equal Future: The Environment and Gender Equality."**

To earn your World Thinking Day award, you will explore how girls and women are disproportionately affected by climate change, and make the Girl Scout Tree Promise!

World Thinking Day Award Activities

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

1. Explore World Thinking Day.
2. Find out what climate change is.
3. Explore climate change issues.
4. Investigate why trees need protection.
5. Commit to a better future with the Girl Scout Tree Promise.

The first four steps have choices that will help you explore climate change and the connection between climate change and trees. In step five, you'll join our mission to protect the planet from the effects of climate change by taking the Girl Scout Tree Promise.

Let's get started!

STEP 1: Explore World Thinking Day

Choice 1: Design your own Girl Guide and Girl Scout symbol.

Do you know what the Girl Scout trefoil looks like? Did you know there is also a trefoil used on the World Trefoil pin? That pin is the unifying symbol of the World Association of Girl Guides and Girl Scouts (WAGGGS), and every part of its design has a meaning. In this activity you'll color the World Trefoil pin and create your own Girl Scout symbol.

First, using the **World Trefoil Pin Fact Sheet and Coloring Page** printout, color the World Trefoil pin. The background in the circle is **blue** to show the color of the sky above us. The outer ring is a **gold band** that shows the sun shining on children all over the world. The inside **gold leaves** (there are six pieces) stand for the three parts of the Girl Scout promise. There are two **gold stars**. The one on the left stands for the Girl Scout Promise. The star on the right stands for the Girl Scout Law. The **gold compass needle** in the center is the safeguard between the Promise and Law. The **gold base** underneath the compass needle is the flame of international friendship.

On the opposite side of your World Trefoil, draw a symbol that you think could represent the Girl Scouts. When you're done, share it with your Girl Scout friends or family, and let them know what your symbol represents.

Choice 2: Create a live performance of The World Song.

Singing songs is one of the many fun Girl Scouts traditions. You can sing while you're hiking, at meetings, at ceremonies and around a campfire!

First, listen to the WAGGGS's "The World Song," sung by Melinda Caroll, which connects Girl Guides and Girl Scouts around the world.[1] With your Girl Scout troop, form small groups. You may also choose to complete this activity individually.

Using The World Song video and **The World Song** handout, read or listen to the lyrics, and find a way to put on a live performance of this song. If you want, you can even create props, like a flag to hold while singing or

1 Credit: Melinda Carrol Music, https://www.melindacarollmusic.com/

a ribbon to tie around your group to show unity. You can also take turns singing each line, use hand movements to pantomime words, or come up with a drumbeat or claps for the rhythm.

You may want to add some ideas about what climate action is into your performance, too!

Share your live performance with your Girl Scout friends or family. Then, talk about these questions together:

- How did you make your performance of The World Song stand out?
- Did you add any extra lyrics to the song?
- What did some of the other girls do that you liked?
- Would you want to perform this song live and if so, where?

Choice 3: Make a World Thinking Day story collage.

For this activity, you'll need at least two friends to help you with the World Thinking Day story. If you are earning your World Thinking Day award with your troop or group, you can split into three smaller groups.

Each person or group will work on a collage for one part of the **World Thinking Day story**, found in the handouts at the end of this activity packet. First read the story together, then create a poster or illustration of your part of the story. You can use any art supplies that you have: markers, paper, stickers, magazines, flags, or other craft supplies.

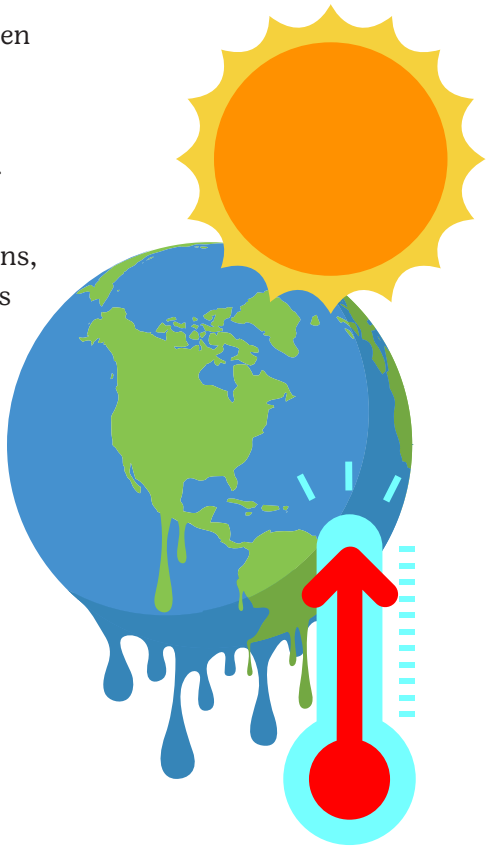
When you are done making your collage, show it to the rest of the group, read your section of the World Thinking Day story, and explain how you illustrated it.

With your Girl Scout friends or family, talk about these questions:

- What words or images did you use and why?
- World Thinking Day is a day of international friendship. What are some ways you showed that in your collage?
- How did you show this year's World Thinking Day theme of the environment and gender equality?
- Who could you share this collage with?

STEP 2: Find Out What Climate Change Is

Twenty thousand years ago, much of the United States was covered in glaciers. A glacier is a large area of ice that covers land and remains frozen for many years. Can you imagine our country being mostly ice? Well, it was.



But because of climate change, we have a warmer climate and far fewer glaciers. That might seem okay, but our entire planet is heating up too much and too fast. This creates problems for plants, animals, and humans, and it makes our weather more extreme. For example, our seasons highs and lows are more intense than we're used to, and we also have more hurricanes and floods.

Many things we do as humans create greenhouse gases that warm the Earth. This is mainly caused by activities like using gas to drive cars, burning forests to farm on or to build cities, and burning coal for electricity. All that burning creates gases that trap heat from the sun.

We can start to help only if we make changes to the way we live. Some of these helpful changes might include refilling water from a tap into a reusable cup instead of drinking from disposable water bottles, turning off lights when you are not using them, walking or riding a bike instead of driving, reducing your food waste, and using fewer plastic and paper products.

Let's choose an activity to learn more!

Choice 1: Create a climate change superhero.

In this activity, you'll create a climate change superhero. Imagine this is a new character in a comic universe that fights climate change. You'll want to show everything you can about your superhero.

As you design your superhero, think about:

- Where did your superhero come from and why are they fighting climate change?
- What would your hero's superpowers be?
- What kind of devices would they use?
- What would their first mission be?

When you are done, share your work with your Girl Scout friends or family. Then talk about these questions together:

- What superhero did you find most impressive and why?
- How do you think all the superheroes could work as a team to make a difference?
- What do you think is the most important thing a climate change superhero can do?
- What personal power do you use to help with climate change?

Choice 2: Find out about melting glaciers.

In the introduction to this step, you learned what glaciers are and how they are affected by climate change. Scientists tell us that we're seeing a rise in the temperature of the ocean's surface that's caused by more heat trapped in Earth's atmosphere. As Earth's average temperature increases, the ice in the North and South Poles begins to melt. In this activity, you will explore that phenomenon.

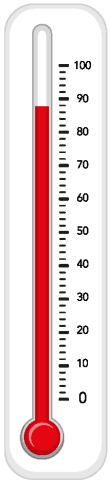
For this activity, you'll need at least one friend to help you learn about melting glaciers. If you are earning your World Thinking Day award with your troop or group, you can split into two smaller groups. You'll need clay, a measuring cup, a butter knife, two clear plastic or glass containers (approximately 2¼ cups in size), colored tape, tap water, and ice cubes.

Group 1: You'll create a model of the South Pole with your container. Place one cup of clay in the container. The clay represents the continent of Antarctica. Leave space around the clay so you can pour water in later. Use the butter knife to smooth out the top of the clay. Carefully add ¼ cup of water. The water is the ocean. Place two ice cubes on top of the clay and press down lightly. The ice cubes represent the polar ice sheets. Right away, mark the water level on the side of the container with the colored tape.

Group 2: You'll create a model of the North Pole. Fill your container to about one-third to one-half with water. That water is the ocean. Add two ice cubes to the container. The cubes are the floating polar ice cap. Mark the water level on the side of the container with the colored tape.

Both groups should then wait for the ice to melt. Then measure the difference in either container. With both groups, or with your friends or family, talk about these questions:

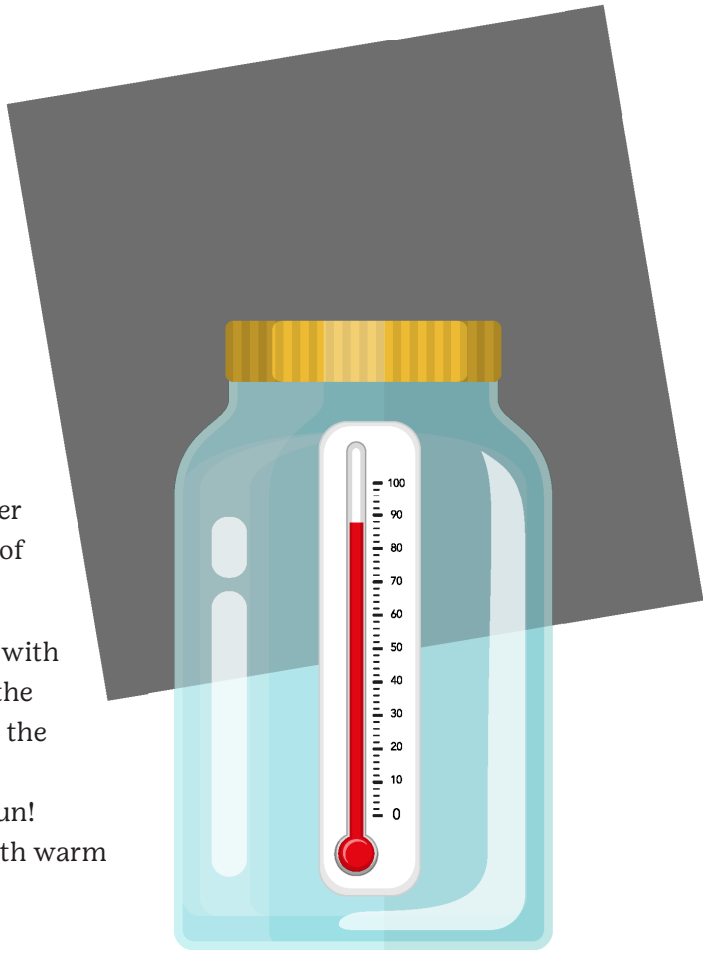
- Has the water level risen in either container?
- What do you think happened to the land—Antarctica in the South Pole—and the polar ice cap in the North Pole?
- In the North Pole, as floating ice melts, the water level should not increase because the ice absorbs into the water. In the South Pole, when an ice sheet is on a landmass, the water level should rise. Even the smallest rise in sea levels could cause flooding in our coastal areas. How do you think melting ice might affect the area where you live (or not)?



Choice 3: Test the temperature.

For this activity, you'll do a hands-on activity with thermometers to learn about global warming and the greenhouse effect. You'll need two thermometers, one glass jar (that will fit the thermometer), plastic or dark material to cover the jar, a timer, some paper, and a pen. You'll also need to find a sunny spot inside or outside.

In the introduction to this step, you learned a little about the greenhouse effect. During the day, the sun shines on us and creates energy. At night, most of that energy escapes back into space. But some of the heat is trapped to keep our temperature stable and protect us from the chill of space. In this activity, you will explore the greenhouse effect more.



First, write down the temperature of each thermometer (they should be the same). Then, in your sunny spot, put one thermometer inside the glass container and cover it with plastic or dark material. Place the other thermometer next to the jar, uncovered. Write down the temperatures of both thermometers every 5 minutes.

After finishing the activity, what do you think happened with each thermometer? Solar energy from the sun goes into the glass and turns into thermal energy that can't escape. So the glass container gets warmer as more solar energy enters. Imagine the temperature inside a parked car under the sun! The second thermometer is exposed to air, so it mixes with warm and cool air that's not trapped.

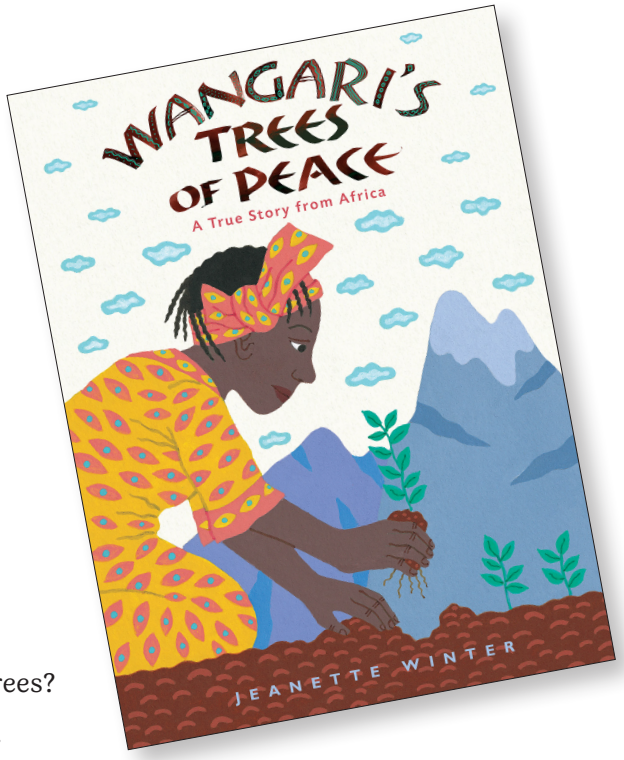
Think about these questions:

- When the sun's energy is trapped in Earth's atmosphere, that's the greenhouse gas effect. Which thermometer was trapping the sun's energy?
- If the greenhouse gas effect is supposed to be good and keep our temperature balanced, why are greenhouse gases a problem?

Human activities, such as using gas to drive cars, burning forests to farm on or to build cities, and burning coal for electricity, are creating too much heat, which upsets the energy balance on Earth. Too many greenhouse gases cause weather problems and sea levels to rise because the arctic ice is starting to melt.

STEP 3: Explore Climate Change Issues

Choice 1: Get to know Wangari Maathai and Trees of Peace.



For this activity, you will learn about activist Wangari Maathai and talk about her story. You can borrow the book *Wangari's Trees of Peace* by Jeanette Winter from your local library to read aloud, or you can watch the "Wangari's Trees of Peace" video online.[2]

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

- How did Wangari make a difference for her homeland? For the world?
- Why were the trees in her village cut down?
- Why do we cut down trees?
- Why do you think Wangari asked other women to help plant trees?
- Why is it harder for women when there are no nearby trees for firewood or plants for food?
- Why do you think some men laughed and said, "Women can't do this"?
- Why did Wangari go to prison?
- What words would you use to describe Wangari?
- In what ways do Wangari and her story inspire you?

2 Credit: Kendra Yao

Choice 2: Find out what it's like to collect and carry water.

What do you and your family use water for in your everyday life? You probably use water to wash dishes, do laundry, take showers, mop floors, clean the house, water the garden, and wash the car. Now imagine the girls and women who live in areas where there is no running water. Every day, they have to walk to get water from a water source, like a river, creek, or lake, and carry it back to their homes.

When temperatures rise due to climate change, we end up with drought. This is a long period of dry weather caused by lack of rain. This means water sources dry up. Have you ever seen a dried-up river or creek that once had flowing water? When a drought happens in certain places, it means girls and women in certain parts of the world have to travel farther to collect water.

In this activity you will experience what it's like to collect and carry water. You'll need one full-gallon water jug, one empty gallon water jug, and rope or something to secure the jug behind your back.

Look at these images of women carrying water.

Then, you can break into groups with your Girl Scout troop or friends, or work individually to find out what it feels like. First, simply carry the full water jug from point A to point B to experience carrying the weight.

What you've carried is just a very small amount of what women carry every day for long trips. In many rural areas, girls and women carry five times the amount of what you carried and need to walk at least 30 minutes each way. This can mean they spend one hour every day collecting water, and they usually make more than one trip.

Now use the empty jug to play around with different methods of carrying water. Try putting it on your head or shoulder, or use the rope to tie it around your back.

Your jug was empty, but you can get an idea of how hard it might be to find a way to carry water. Water is very heavy. Carrying it on the head, which is one of the most common ways, causes neck and back injuries. Rolling it in a wheelbarrow causes back pain and body stress. Water containers tied to people's backs causes shoulder and back injuries. Girls and women also get injuries just by twisting and lifting the barrels of water.

What other dangers do girls and women experience collecting water? They carry water on busy highways and other unsafe areas where violence might be a problem. The roads are often uneven and steep and not easy to walk on. Pregnant women worry that carrying water will risk their pregnancy.

Droughts are expected to keep worsening, and they can last months and years. What things can you do to make every drop of water count? Some things you can do might be to turn off the water while you brush your teeth, tell an adult if you see a faucet leak, or take shorter showers.

Choice 3: Draw your carbon footprint.

Do you know your carbon footprint? That's the amount of carbon dioxide, a greenhouse gas, that gets released into the environment. Greenhouse gases, like carbon dioxide, are one of the main reasons that the climate is changing. The bigger the carbon footprint, the more greenhouse gases are being released into the atmosphere.

For this activity, you'll need an adult with a computer or smartphone to help you go online to use a carbon footprint calculator to see how big your carbon footprint is. You will also need a piece of paper and art supplies, like markers, crayons, or colored pencils.

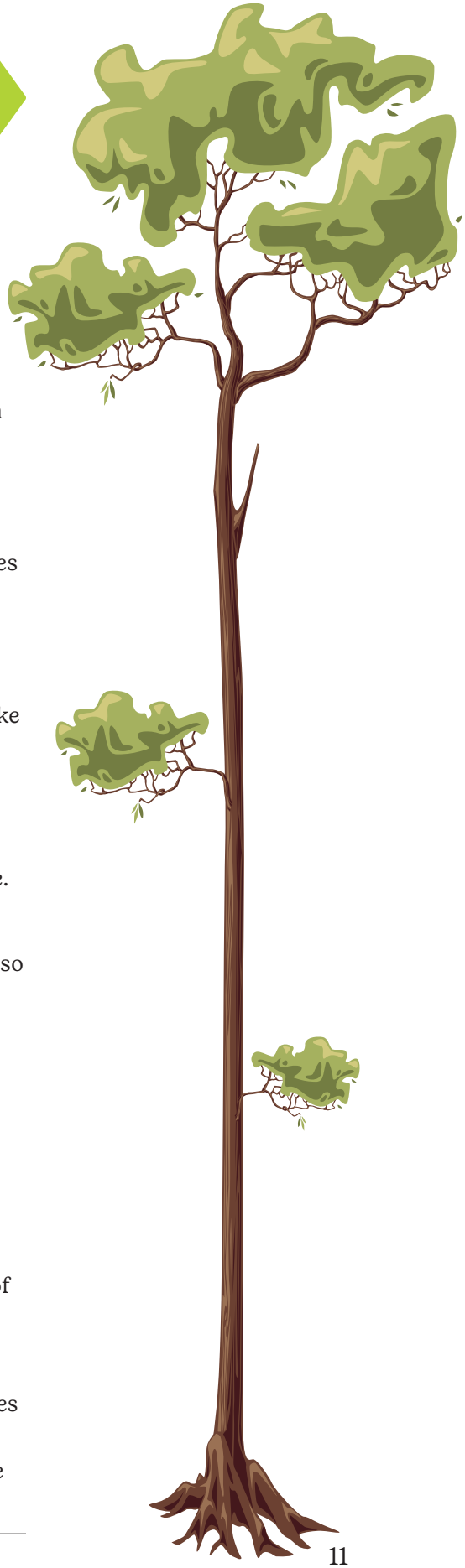
There are many carbon footprint calculators on the internet, but you might try this simple one from Lehigh University.[3] Or go deeper with calculators from the United States Environmental Protection Agency or Conservation International.[4, 5] A parent or another family member can help you fill in some of the information to find your carbon footprint.

After you've calculated your carbon footprint, talk with your friends or family about what you found. Did your carbon footprint surprise you? What are some ways you might reduce it?

After you've talked about it, draw an outline of your foot on your paper. Then, inside your foot outline, draw pictures or write what you will do to make your carbon footprint smaller.

3 Credit: Lehigh University, lehigh.edu
4 Credit: United States Environmental Protection Agency, epa.gov
5 Credit: Conservation International, conservation.org

STEP 4: Investigate Why Trees Need Protection



Let's take a look at how important trees are to climate change and equality. Did you know that trees are one of our most powerful tools to help fight climate change?

As Earth's temperature rises due to climate change, you've found out how our weather is becoming more extreme and unpredictable, causing big changes worldwide—polar ice caps melting, wildfires, hurricanes, droughts, and extreme heat and cold. A big reduction in carbon pollution will help prevent even worse climate change.

Planting trees is one of the ways to reduce carbon pollution. We need to plant trees because all over the world, climate change is damaging the ability of forests to grow back on their own. Planting millions of new trees will not only help existing trees and forests, but it will also clean the air and reduce greenhouse gases and pollution.

In cities, trees help cool communities and provide shade. They provide places for wildlife to live. Trees are environmental magic! What do you like about trees?

Choice 1: Let a tree tell you about climate change.

In this activity, you will study tree rings to find out about climate change.

When communities suffer from the lack of trees or their destruction, people suffer, too. Planting and protecting trees helps the Earth! Trees also offer us a way to learn what the climate in an area was once like.

Remember that weather is a specific event, like a storm or a hot day. Climate refers to the average weather in a given place over a long period.

Did you know that trees live for hundreds and sometimes thousands of years? Have you ever seen a tree stump? It has rings that tell us how old the tree is and what the weather was like each year of the tree's life. One ring equals one year of tree growth.

Watch "Life as a Tree!" and look at the **Tree Rings Diagram** at the end of this packet.[6] If possible, go outside and observe a tree stump.

But you don't have to cut trees to learn their history! You can collect a sample using an instrument called an increment borer. The borer removes a very thin strip of wood that goes all the way to the center of the tree. When you pull the strip out, you can count the rings on the strip, and the tree is still as healthy as can be!

6 Credit: SciShow Kids, scishow.com

Now, draw your own version of a tree ring, adding in dates and what the weather conditions were like for your tree.

Talk with your Girl Scout friends or family about your tree. What kind of life did it have? What weather and changes did it see?

Next, if you did not learn about Wangari Maathai in the previous step, either borrow the book *Wangari's Trees of Peace* by Jeanette Winter from your local library to read aloud or watch the "Wangari's Trees of Peace" video online.

Once you have heard the story, you can talk about these questions:

- Why do you think it's harder for women when there are no nearby trees for firewood or plants for food?
- What happens where there aren't enough trees?

Choice 2: Investigate how to protect trees.

First, watch the Tree Promise video.

Planting trees is one step to helping avert climate change, but we also need to learn how to protect trees, too.

For this activity, visit a nursery with your Girl Scout troop or family, and talk to an expert about what they do to protect trees. Here are some things you might consider asking the expert more about:

- Find out what insects are the biggest threats to trees. What do these insects looks like, and what do they do to the tree?
- Find out how high winds and weather can damage trees. Could a lightning storm set a tree on fire? Why would heavy rains be a problem?
- Find out how drought and not enough water can affect trees.
- Find out what types of diseases trees can get.

Next, if you did not learn about Wangari Maathai in the previous step, either borrow the book *Wangari's Trees of Peace* by Jeanette Winter from your local library to read aloud or watch the "Wangari's Trees of Peace" video online.

Lastly, talk about these questions with your Girl Scout friends or family:

- What was most surprising or interesting that you learned from our guest speaker?
- After watching the "Trees of Peace" video, why do you think it's harder for women when there are no nearby trees for firewood or plants for food?
- What happens where there aren't enough trees?

Choice 3: Draw a "Save Our Forests" poster.

In this activity, you'll make a list of ways to repopulate forests and create a poster. You'll need poster board, and you can use any other art supplies that you have: markers, stickers, magazines, scissors, glue, or other craft supplies.

First, watch the Tree Promise video. Then watch International Day of Forests 2021: Forest restoration – a path to recovery and well-being.[7] If you did not learn about Wangari Maathai in the previous step, you can also either borrow the book by Jeanette Winter from your local library to read aloud or watch the "Wangari's Trees of Peace" video online.

You just watched a video about how to build back forests. What are some of the things we can do to protect trees? To protect trees, we might limit the number of trees cut down, restrict use of hazardous pesticides, and protect wildlife habitats.

You also found out about Wangari Maathai and Trees of Peace. Why do you think it's harder for women when there are no nearby trees for firewood or plants for food?

North America, where we live, is one of the largest producers of wood and paper products. Because of this, we also import a lot of wood from other countries. Make a poster that will send a message about using less paper and wood to help slow down deforestation.

When you are done, share your posters with your Girl Scout friends or family, and talk about these questions:

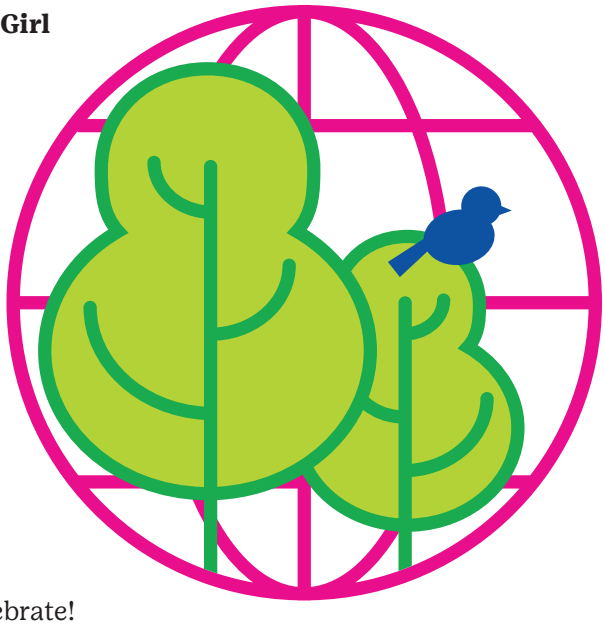
- What messages did you like that you saw from other girls?
- What are some ways you can share your message?

7 Credit: Food and Agriculture Organization of the United Nations, fao.org

STEP 5: Commit to a Better Future with the Girl Scout Tree Promise

In this activity, you'll make the Girl Scout Tree Promise and commit to building a better future with trees.

First, look at the **Our World, Our Equal Future and the Girl Scout Tree Promise** handout at the end of this packet.



Then read the **Girl Scout Tree Promise** out loud with your Girl Scout troop and sign it.

Look at the illustration on top of **The Power of One Tree** handout. This handout shows all the ways trees are important to us.

There are many ways you can continue participating in the Girl Scout Tree Promise to plant, protect, or honor trees.

With your Girl Scout troop, decide if you want to do more for trees.

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 why climate change matters and making the Girl Scout Tree Promise!

Glossary

Antarctica: Earth's southernmost continent and its coldest one.

Carbon dioxide: A gas released by burning coal, natural gas, oil, and wood that traps heat in the atmosphere.

Carbon footprint: The amount of carbon dioxide humans release into the environment.

Carbon pollution: When we burn oil, gas, and coal, the carbon becomes carbon dioxide and goes into the air as smoke or pollution.

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

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

Collage: Artwork made by gluing pieces of different materials to a flat surface.

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

Deforestation: When trees are cut and not replanted, this destroys forests.

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.

Gender equality: A belief that men and women should be treated equally.

Glacier: Huge, thick masses of ice that form when lots of snow falls in one location for many years. As new snow falls, the snow on the bottom gets packed down and becomes ice that forms a glacier.

Global warming: An increase in Earth's average temperature that causes ice to melt and sea levels to rise.

Greenhouse gases: The emissions of carbon dioxide or other gases that contribute to the greenhouse effect.

North Pole: The point farthest north on Earth. It's in the Arctic Ocean.

Pesticides: Chemicals used to kill unwanted insects or small animals. Many pesticides are poisonous, harming humans and destroying the environment.

Rural areas: Areas that are usually farms or the countryside where people might live in small villages. It's the opposite of urban, which are towns and cities with many people living close together.

Solar energy: Energy that is transformed from the sun's heat.

South Pole: on Antarctica, this is the southernmost point on the Earth's surface, directly opposite from the North Pole.

Tree rings: Rings on a tree stump that reveal how old the tree is and what the weather was like each year of the tree's life. One ring equals one year of tree growth.

WAGGGS: Stands for World Association of Girl Guides and Girl Scouts.

Weather: Weather is a specific event—like a rainstorm or hot day—that happens over a few hours, days, or weeks.

Wildfires: A general term that includes forest fires, grassland fires, and brush fires. Wildfires can be started by humans or naturally, such as by a lightning spark.

World Trefoil Pin

Fact Sheet and Coloring Page

The colors—blue and golden yellow—of the background and elements represent the sun shining down on all the children of the world.

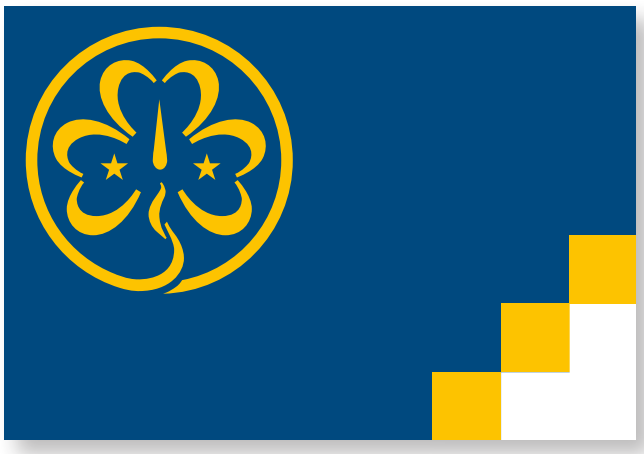
The vein is a compass needle pointing the way.

Two stars represent the Promise and Law, a philosophy shared by all members.

The flame symbolizes the eternal love of humanity.

The three trefoil leaves represent the three-fold promise: to serve God and my country, to help people at all times, and live by the Girl Scout Law.

The flowing border shows we are a worldwide and growing Movement.



The World Flag

The three golden/orange squares on the flag represent our threefold Promise.

The white blaze in the corner is a symbol of world-wide peace that all Guides and Girl Scouts work for in their families, communities, and the wider world.

The World Trefoil Pin

Match the symbols of the World Trefoil Pin to their meaning

The Gold Color	Represents the three parts of the promise
Three Leaves	The compass needle showing us the way
This Pin	Represents the Promise and Law
Base of the Stalk	Sun shining over the children of the world
Two stars	Symbolizes our membership in WAGGGS
Vein in the center	Means World Association of Girl Guides and Girl Scouts
WAGGGS	Stands for flames of international fellowship

World Thinking Day Song

Singing songs is one of many fun Girl Scout traditions. You can sing while you are hiking, at meetings, at ceremonies, and around a campfire! Songs help bring us all together.

One song that connects all Girl Scouts and Girl Guides around the world is The World Song.

The World Song[1]

Our way is clear as we march on,
And see! Our flag on high,
Is never furled throughout the world,
For hope shall never die!
We must unite for what is right,
In friendship true and strong,
Until the earth,
In its rebirth,
Shall sing our song!
Shall sing our song!
All those who loved the true and good,
Whose promises were kept,
With humble mind, whose acts were kind,
whose honor never slept;
These were the free!
And we must be,
Prepared like them to live,
To give to all,
Both great and small,
All we can give.

1 GSUSA acknowledges the World Association of Girl Guides and Girl Scouts.
For more, https://www.wagggs.org/en/terms-conditions/ (accessed May 7, 2019)

World Thinking Day History in Three Parts

Part 1

A Special Day

In 1926, Girl Scouts and Girl Guides from around the world met in the United States for the 4th World Conference. At the meeting, they created a special day where Girl Scouts and Girl Guides think of each other and express their thanks for their sisters around the world. They called it Thinking Day. They chose February 22 because it was the birthday of both Lord Baden-Powell, the founder of the Boy Scouts, and his wife Olave Baden-Powell, who founded the Girl Guides.

Lord Baden-Powell

Part 2

A Birthday Gift

In 1932, at the 7th World Conference in Bucze, Poland, a delegate from Belgium pointed out that since a birthday usually involves gifts, girls could show their appreciation on Thinking Day by offering gifts to support Girl Scouts and Girl Guides around the world. Olive Baden-Powell wrote a letter asking girls to "Send a penny with their thoughts" on Thinking Day.

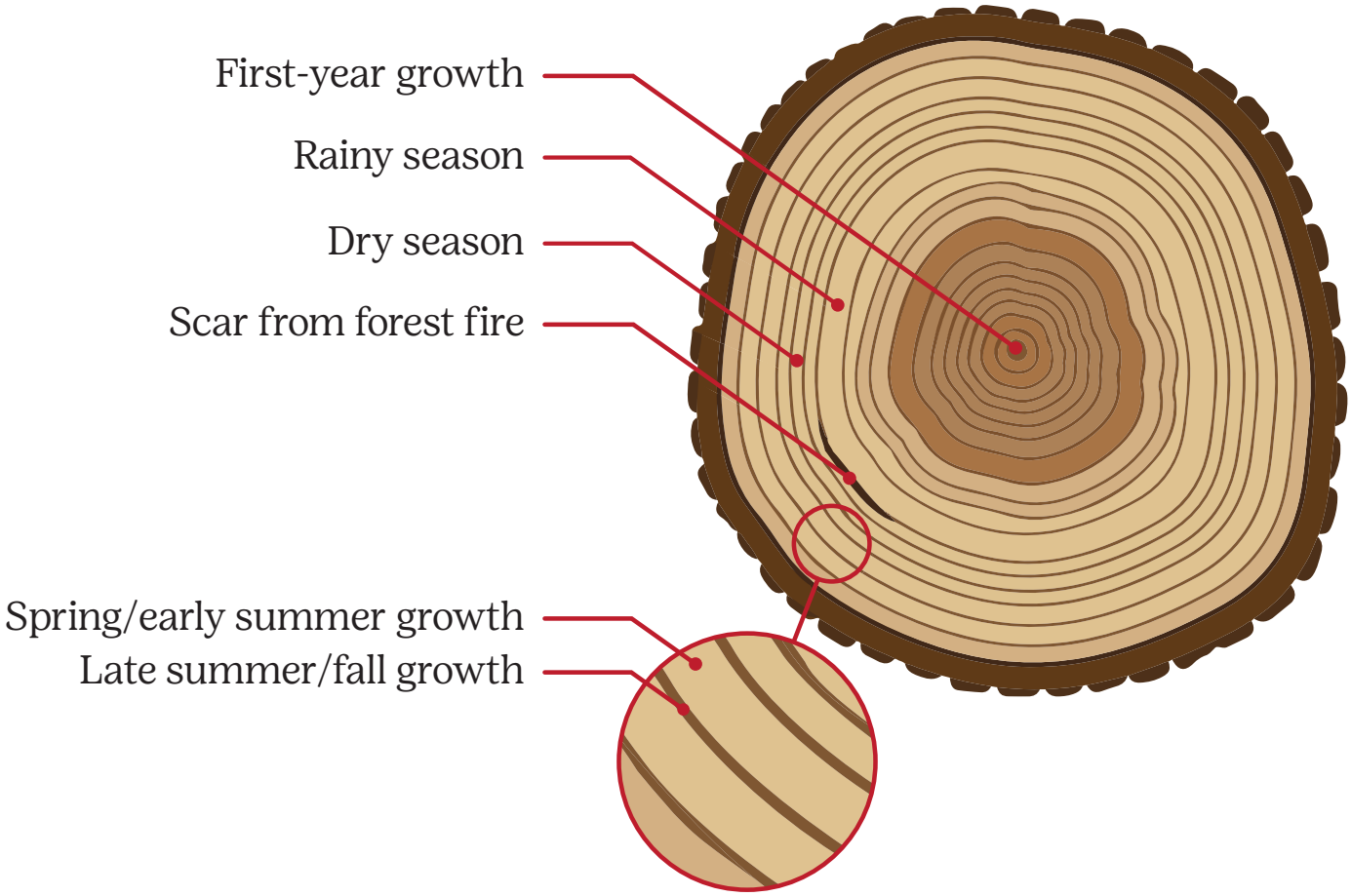
Part 3

World Thinking Day

In 1999, at the 30th World Conference in Dublin, Ireland, they changed the name from Thinking Day to World Thinking Day. Over the years, World Thinking Day has become a way for girls to learn about issues that affect other girls and young women all over the world. Every year, World Thinking Day has a different theme that Girl Scouts and Girl Guides around the world can learn about and take action on. For 2022, the theme is "Our World, Our Equal Future: The environment and gender equality." This means you'll explore how climate change is harder for girls and women.

Olave Baden-Powell

Tree Rings Diagram



Credit: NASA, https://climatekids.nasa.gov/tree-rings/

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

There is a climate crisis.

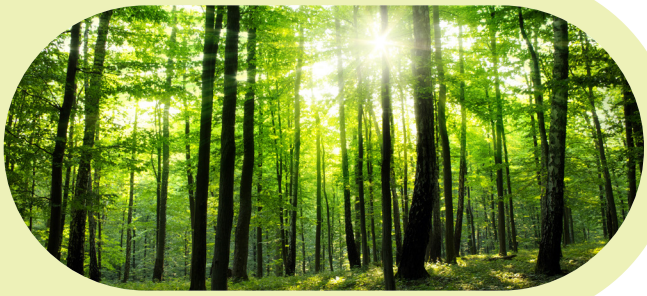
The past 10 years have been the warmest in centuries. Because of climate change, we have more natural disasters like wildfires, droughts, hurricanes and floods.

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.

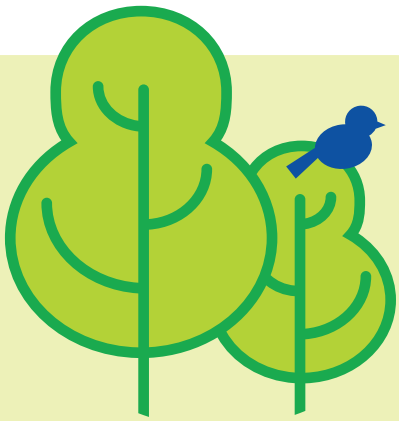
Carbon dioxide is a greenhouse gas that traps heat in the atmosphere. Trees help stop climate change by removing carbon dioxide from the air and storing it in the trees and soil.



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!

_____ _____

(Girl Scout's Name) (Date)

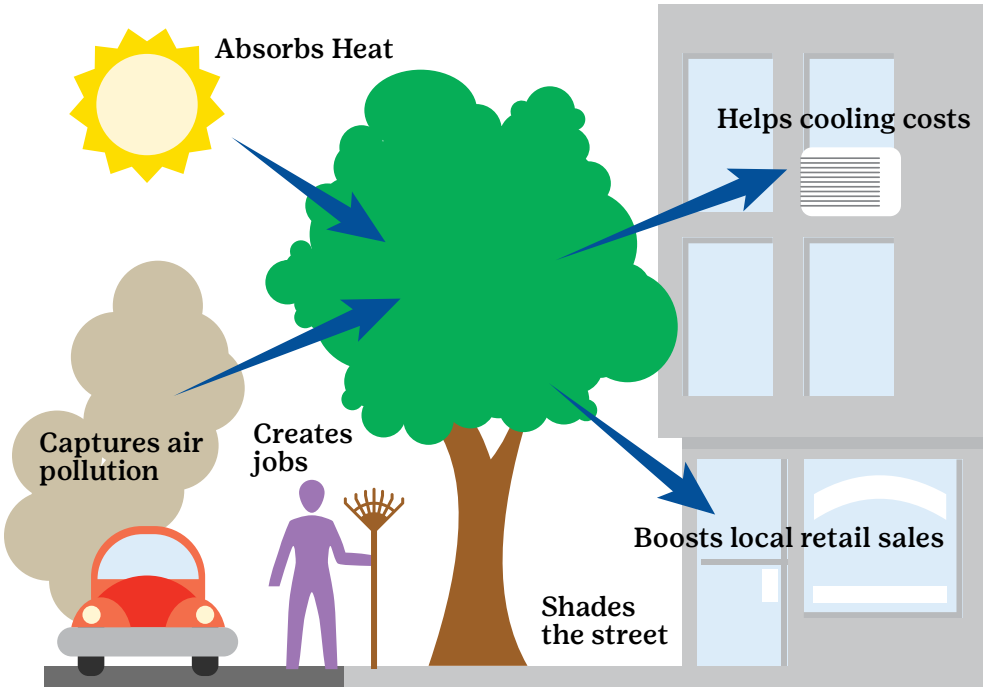
Did you know trees are Mother Nature's superheroes? Yep, think of trees as superheroes with powers unlike any other living thing on the planet!

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.[1]
- Over the course of 20 years, a single red maple tree can intercept 27,000 gallons of rainwater, avoiding 4,800 gallons of runoff.[2]

Climate

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

Forest Products

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

People

- A single tree can capture 3.5 pounds of air pollutants—like ozone, dust and particulate matter— per year.[8] 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.[9]
- "The net cooling effect of a young, healthy tree is equivalent to 10 room-size air conditioners operating 20 hours per day."[10]
- "Trees absorb and block noise and reduce glare. A well-placed tree can reduce noise by as much as 40 percent."[11]
- A single large tree can produce approximately 260 pounds of oxygen per year.[12]
- 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![13]

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.[14]
- Trees properly placed around buildings can reduce air conditioning costs by 50%.[15]
- Trees increase property value of your home by 10–20% and attract new home buyers.[16]
- Trees can reduce crime and improve perceptions of business districts.[17]
- 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.[18]
- 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.[19]
- After a walk in the park or playing in green spaces, children with ADD displayed fewer symptoms.[20]

- Eight in ten species found on land—that's over five million and counting—live in forests.[21]
- 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.[22]

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

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1 https://extension.psu.edu/the-role-of-trees-and-forests-in-healthy-watersheds 2https://www.itreetools.org/
3 https://www.itreetools.org/
4 https://www.itreetools.org/
5 http://conservatree.org/learn/EnviroIssues/TreeStats.shtml
6 https://www.pca.state.mn.us/quick-links/office-paper
7 https://www.treepeople.org/tree-benefits
8 https://www.nrpa.org/globalassets/research/nowak-heisler-research-paper.pdf
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10 https://www.fs.usda.gov/detail/r9/home/?cid=STELPRD3832558
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