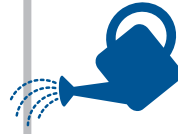




A PROGRAM OF NEW YORK RESTORATION PROJECT
Activity Guide for All Ages

Designed for Boy Scout Leaders and Girl Scout Volunteers of Greater New York



Scouts for MillionTreesNYC Activity Guide

was developed from EARTHNEXT's Trees for the 21st Century Patch Program and Tree Kit, a guide developed in 2008, and materials from New York Restoration Project's 15 for Trees Lesson Plans. It includes new materials created for the MillionTreesNYC initiative, which is a movement to plant and care for one million new trees throughout New York City's five boroughs by 2017. New York guide is designed to be used by the Girl Scouts and Boy Scouts around New York City.

This revised guide and related project initiatives are funded through MillionTreesNYC Community Grant Program, which was underwritten by The Home Depot Foundation. For more information about Scouts for MillionTreesNYC, go to: www.milliontreesnyc.org/scouts

Contributors

Amanda Benner, Program Director, EARTHNEXT

Darin Johnson, Vice President for Strategic Initiatives, Marketing and Public Affairs, New York Restoration Project

Janet Milkman, President, EARTHNEXT

Harriet Mosatche, Ph.D., President, The Mosatche Group

Akiima Price, Chief, Education and Programs, New York Restoration Project

Omari Washington, MillionTreesNYC Education Manager, New York Restoration Project

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milliontreesNYC
A PLANYC INITIATIVE WITH NYC PARKS AND NEW YORK RESTORATION PROJECT

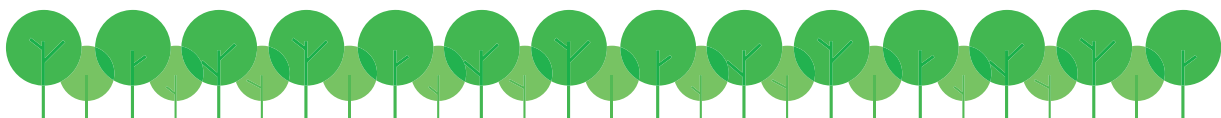
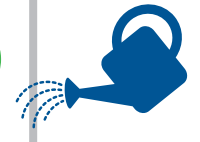
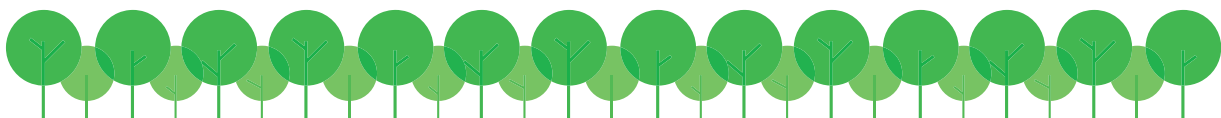


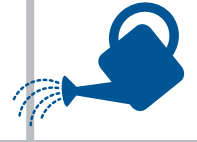
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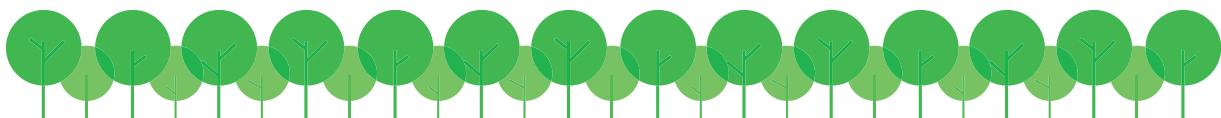
Introduction



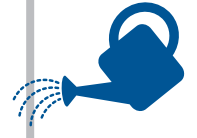
Trees are a beautiful part of the natural environment and amazingly efficient machines – constantly working to make Earth a healthier planet. Trees help slow global climate change, improve air and water quality, create habitat for animals and plants, and provide products we use every day. In cities, trees are even more important because they provide shade, temper the summer “heat island” effect, lower energy costs, and even reduce stress and crime.

This guide provides a series of introductory activities to help children and adult leaders learn about and take care of trees in New York City. It was developed for use by **the Girl Scout Council of Greater New York and the Greater New York Councils – Boy Scouts of America** as part of **Scouts for MillionTreesNYC**, a program of **New York Restoration Project**. The program provides educational activities, community service, and stewardship opportunities for tree planting and care in New York City. Together, the thousands of Scouts in New York City can make a huge difference to their environment and their community!

This program allows Scouts to earn three separate patches and meet many of the requirements toward achieving badges and other community and service awards.



Introduction



HOW TO USE THIS GUIDE

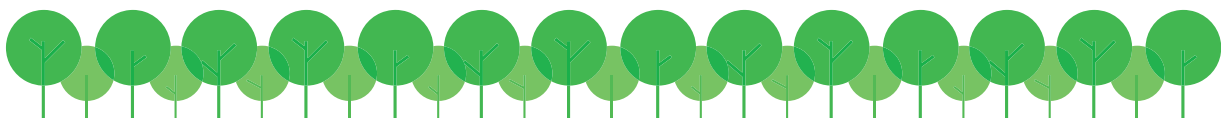
This guide provides **six activities** designed for a Scout troop and is written for the adult leader or volunteer. The age group targeted is grades K-5, but the activities could be adapted for 6th to 8th graders.



Participation patch

A **Scouts for MillionTreesNYC** participation patch can be earned after completing the initial pre-activity **Survey** and 2-3 other activities in this guide.

- **Objectives** are outlined for each activity so that both adults and children can quickly understand some of the key learning points.
- **Location** is indicated, with the preference to get you and your group outside!
- **The time** listed for each activity is estimated. Some groups move quickly through an activity, while others might enjoy longer discussions, have more questions, or need more help following directions. The focus should be on learning, working with others, and having fun, rather than on the amount of time the activity takes.
- **The materials** listed for each activity will help you prepare for a session. Whenever possible, let the participants take on the responsibility for gathering supplies. Learning to plan, delegate, and work as a team are objectives of each activity.
- **The activities** are preceded by **background information**, which will provide you with details that you might need to answer questions or guide the **discussion**.
- **Suggestions** for **extension activities** are provided for each activity; this gives you ways to take advantage of your group's enthusiasm for a particular topic or project. Also, if you experience inclement weather and cannot go outside for the main activity, the extension activities can be substituted.



Introduction



Services project patch

GETTING STARTED

Before you launch into any of the activities, please take your group through the **Scout Survey and collect the completed forms.**

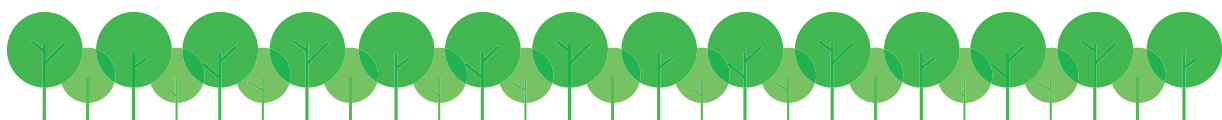
This will help your group to think about trees in your community and assess their relationship with trees and the outdoors. This brief survey will provide context for all the other activities and help project partners collect important data.



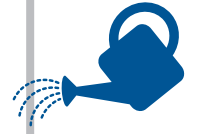
Adopt-A-Tree project patch

HOW TO DO MORE

When you have completed these activities, your group will be ready to take on the next two phases of the program and can earn two more participation patches! To find out about **Service Opportunities and the Adopt-A-Tree Stewardship program,** go to www.milliontreesnyc.org/scouts or contact your Council.



Activities at a Glance



● **Meet a Tree:**

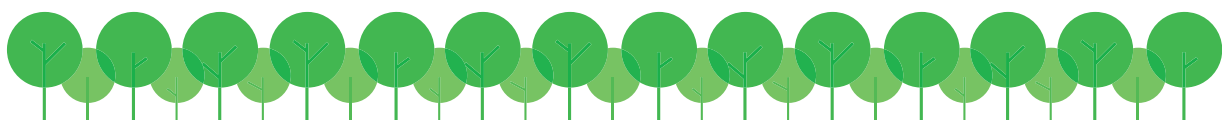
Scouts get up close and personal with a tree! First, only using three senses – hearing, touching, smelling – Scouts get to know a tree in their area, learning about the shape of the tree, its inhabitants, the feel of the bark, the sound of birds and insects, and the size and color of leaves. They will then become reacquainted with the tree, using their sense of sight. Leaf and bark rubbings conclude the activity, “leaving” the group with beautiful reminders of their tree.

● **Be a Tree Hero:**

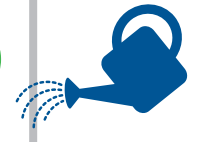
What does it mean to be a hero? Scouts learn about Wangari Maathai and Bette Midler, two women who are heroes in their communities (Kenya and New York City), because of their large scale tree planting projects. Scouts develop and share their own action plans for becoming a tree hero in New York City.

● **My Life as a NYC Tree:**

What does a tree need to thrive and survive in the city? In this activity, Scouts imagine they are a tree and compete to get water, sunlight and other things trees need to grow. Through a game, Scouts experience the challenges of being a tree in the city and discuss how people can help care for trees. [CONTINUED→](#)



Activities at a Glance



- **Tree Detective:**

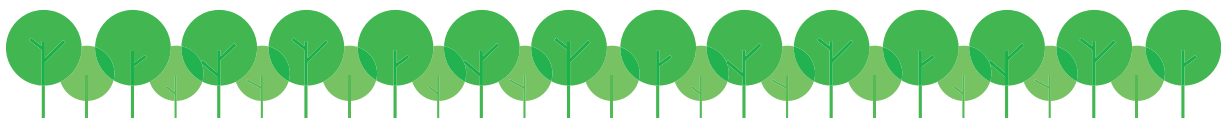
In this neighborhood activity, Scouts learn how to identify trees by their leaves, size, shape, and other attributes. A fun scavenger hunt takes the Scouts on a tour of local trees, looking for specific shapes, colors, etc. Scouts use a guide to trees in New York City to identify different species and learn observational skills.

- **Money Grows on Trees:**

Even if you never noticed trees before they are amazingly efficient machines—constantly working to make Earth a healthier planet. In this activity, Scouts learn about the many benefits of trees (shade, clean air, beauty, etc.), and then vote on what they value most.

- **Mapping Trees in My Community:**

What's in your neighborhood and why does it matter? Scouts focus on the details of their immediate neighborhood by observing and recording trees, buildings, gardens, sidewalks, etc. in a one-block area. By mapping their surroundings, Scouts understand the value of trees and green spaces and begin to think about what makes a healthy, livable neighborhood.



Dear Scout Troop Leader(s) and Troop:



After a few successful years of working towards our goal of planting one million trees throughout NYC, I am thrilled to welcome you to the MillionTreesNYC team! When Mayor Bloomberg and I originally had this idea to improve the air quality and overall health and beauty of the Big "Green" Apple, I never imagined how quickly the tree-planting spirit would spread across all five boroughs. With the help of many New Yorkers, we planted 250,000 trees just in our first two years!

All of the citizens that have volunteered their time to plant trees have been great assets in reaching our goal, but our new partnership with the Scouts is an exciting new prospect! The Scouts have a strong history of providing community service, especially in regards to caring for NYC's natural environment – from trail maintenance in our parks to planting flowers on hospital grounds. I even heard about a Scout who organized a beach clean-up to protect the home of the largest horseshoe crab population in the New York area!

All of these efforts make me confident that the Scouts will also be great stewards of the new trees in our city. This Scouts for MillionTreesNYC patch program will serve as your introduction to engaging in our mission of planting, watering and caring for 1,000,000 new trees in your community!

A handwritten signature in black ink that reads "Bette Kiddle". The signature is fluid and cursive.

Bette



Meet a Tree



Objectives

- Strengthen observation skills using various senses
- Create awareness of the local urban forest
- Recognize the other creatures that use trees as habitats

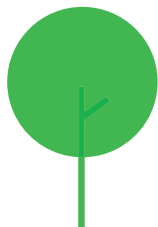
LOCATION:

Outside, in an area with several trees

TIME: 1 hour

MATERIALS:

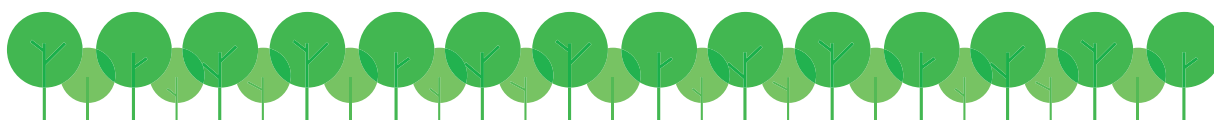
- Whiteboard or chart paper
- Markers
- Blindfolds
- White paper
- Colored pencils or crayon
- Tree Identification Guide, if available



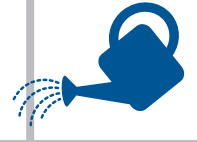
BACKGROUND

Living in a city, many of us may think of forests as large areas with lots of trees, far away from where people live. But city dwellers do live in a forest, known as the urban forest. Urban forests are made up of street trees (along sidewalks), trees in parks, schoolyards, playgrounds, community gardens, in front or back yards, along highways and even in vacant lots. All of these trees combine to benefit New York City and improve the quality of life.

It is important to become familiar with and aware of your neighborhood trees. It is also important to understand that trees provide a habitat or home for many living beings. Think about trees as a source of food, water and shelter for animals. Trees provide food, such as leaves, fruit, nuts and flowers. Some animals, which live in the canopy



Meet a Tree



of the trees, rely on the water trapped by large branches. Many animals spend their nights, or days, sleeping in a protective urban forest home. We all need to share resources and recognize the needs of others in our urban habitat.

DISCUSSION



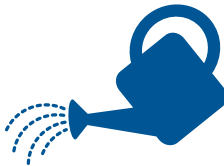
Start by asking the following questions:

→ What senses do you typically use when you are learning about something?

→ How does using more than one sense give you a richer and more informative experience?

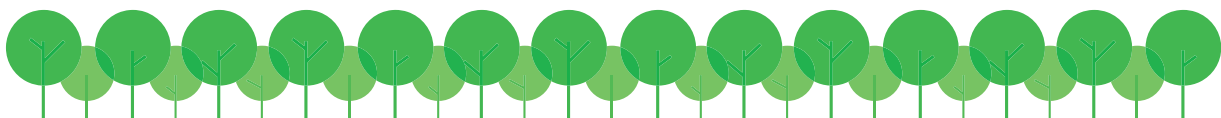
Tell your group that they will have an opportunity today to experience trees in multiple ways. Before they actually get to the activity, tell the participants not to touch or move any droppings or disturb any habitats they might come across.

ACTIVITY

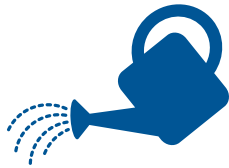
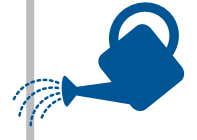


1. DIVIDE THE GROUP into pairs, giving each pair one blindfold. Those who are not blindfolded will guide their partner to a tree. Remind them to ensure that their partners do not trip over fallen tree roots or other obstacles. Once the blindfolded partner has been led to the chosen tree, the guiding partner will instruct their blindfolded friend to use their remaining senses to interpret the tree. They should touch the bark, branches, leaves and roots, smell any fragrances

CONTINUED →



Meet a Tree



around the tree and listen to the sounds around him/her. Meanwhile, his/her partner will make observations, including looking and listening for any creatures that are living or hiding in those trees.

2. THE BLINDFOLDED PARTNER is then led away from the tree, the blindfold is removed, and they are asked to try to figure out which tree they just “met.” Once they have found their tree, their partner shows them any creatures or evidence of insects or animals they found living in the tree.

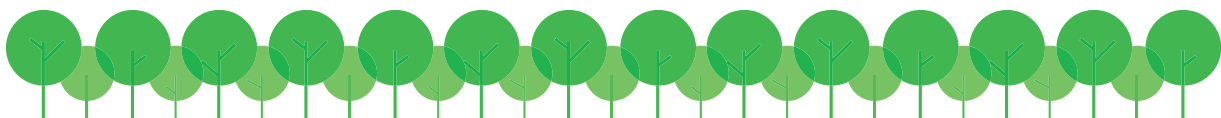
3. AFTER EXAMINING the area around the tree, have the pair reverse roles and find another tree to explore.

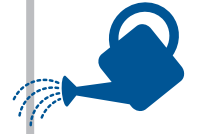
4. WHEN THE WHOLE GROUP is back together, ask them to share their observations. List them on the board. These might include:

- Shape of the tree
- Insects or worms
- Feel of the bark
- Sounds of birds, squirrels, insects
- Nests or signs of other animals
- Size, shape, and color of leaves

If a tree identification guide is available, help them to use it to identify the kinds of trees they have just observed.

5. ASK EACH CHILD to pick up a fallen leaf to do a leaf rubbing: Lay a leaf on a flat surface (you might have to go inside to do this part) with the leaf veins on the top. Then put a sheet of white paper over the leaf and gently rub over the leaf with a colored pencil or crayon turned on its side. As they present their leaf rubbings to the group, the others can try to figure out from which type of tree the leaf came. You can do the same exercise with tree bark, which will reveal beautiful designs.

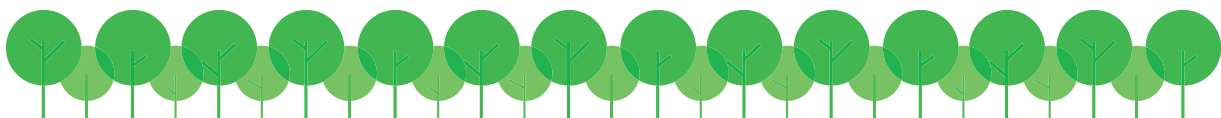




EXTENSION ACTIVITIES

• **SHAKE AND SAMPLE:** Place a white sheet of material under a tree you want to investigate to discover what may be using it as a habitat. Use a pole or other long object to gently shake the lower branches of a tree or shrub. You can also gently tap the trunk so small insects fall onto the white sheet. Observe the insects, caterpillars, etc. that fall from the tree. Repeat with other trees and record what you find so you can compare them. Be sure to release all living creatures and fallen material to the area under each tree from which they came.

• **FIELD TRIP:** Take a trip to a New York City park, such as Swindler Cove Park, or a nature center, arboretum, or wildlife sanctuary. Secure permission from the institution in advance and repeat the activities above and compare to the initial effort. You could learn more by taking a guided tour, workshop, or by following interpretive trails or signage, if offered.



Be a Tree Hero



Objectives

- Recognize what it takes to become a hero
- Learn about the actions of Wangari Maathai and Bette Midler that have made them heroes to those who care about trees and the environment
- Identify ways to become a tree hero

LOCATION:

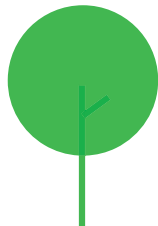
Outside preferred for inspiration, but not necessary

TIME:

1 hour

MATERIALS:

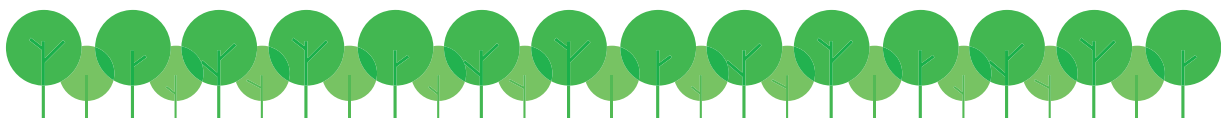
- Whiteboard or chart paper
- Markers



BACKGROUND

Wangari Maathai was awarded the Nobel Peace Prize in 2004 for her work inspiring women and children in Kenya to plant millions of trees during a time when the country was suffering from extreme drought and forests were being destroyed. She was born in Kenya, Africa, and in 1940, she left to study biology in the United States. Wangari knew she had to return to Africa to help the people and land. In the 1970's she started an organization called the **Green Belt Movement** to save the environment and give people jobs – all at the same time. Her nickname became “Tree Woman” or “Tree Mother of Africa” because she was able to stop the destruction of many forests in Kenya, and to help her people learn to plant millions of new trees.

CONTINUED →



Be A Tree Hero



In another part of the world, **Bette Midler**, well-known for her singing and acting career, founded the **New York Restoration Project** (NYRP) in 1995 to spearhead a city-wide initiative to make the city greener. Seeing many parks and open spaces in dire need of cleanup and restoration, Ms. Midler created NYRP to be the “conservancy of forgotten places,” particularly in New York City’s underserved communities. She has attracted corporations and individuals like Target, Toyota and entertainer 50 Cent to sponsor the restoration of gardens in these neighborhoods. Ms. Midler’s leadership has helped plant over 250,000 trees in the city, removed over 2,000 tons of garbage, reclaimed more than 400 acres of rundown parkland, rescued scores of community gardens from commercial development and served over 10,000 urban youngsters with free environmental education programs.

What do these women have in common? Both understood how planting trees could have a dramatic effect on the physical environment and its people. These stories show how one person’s vision and actions can make a difference by initiating wide-spread efforts.



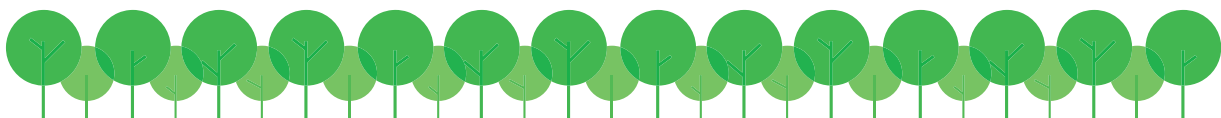
DISCUSSION

Since this session focuses on heroes for the earth and trees, start with these questions to help participants distinguish

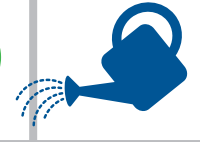
between heroes and celebrities or idols:

→ **Who are your heroes?** List their responses, which will probably range from athletes to the president.

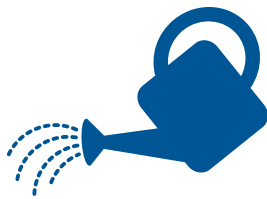
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Be A Tree Hero



→ What qualities or actions make someone a hero? Their responses might include concepts such as kindness, courage, integrity, selflessness, advocacy, empathy, compassion, hard work, and risk-taking. Make it clear that fame, talent, and hard work alone do not equal heroism.



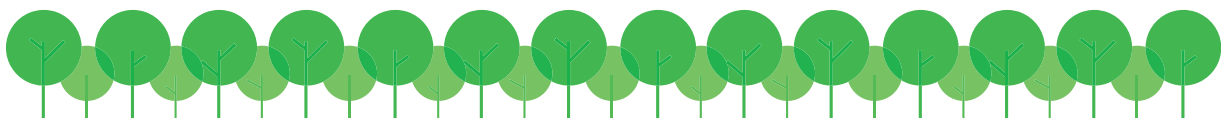
ACTIVITY

1. ASK THE GROUP TO IDENTIFY specific people who are heroes for the Earth and trees, too. List these names on the board. They might mention Rachel Carson, Al Gore, Jane Goodall, Johnny Apple seed and others. (See page **18** for examples). What have these individuals done to be considered heroes? If no one has mentioned Wangari Maathai or Bette Midler, use the background information to talk about their actions that continue to inspire people to plant trees.

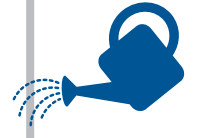
2. DIVIDE THE PARTICIPANTS into pairs so they can come up with their own action plan for becoming a tree hero. Allow them about 10 minutes for planning. If you are outside, ask the group to look around to be inspired by their surroundings. Remind them to be creative in their planning. They should consider the following:

- The impact on trees
- Who will be involved
- The timeframe for carrying out the plan
- Supplies that might be needed
- Barriers to overcome
- Skills they will use

CONTINUED →



Be A Tree Hero



3. HAVE EACH PAIR SHARE THEIR IDEAS. Encourage the rest of the group to ask questions and add their ideas.

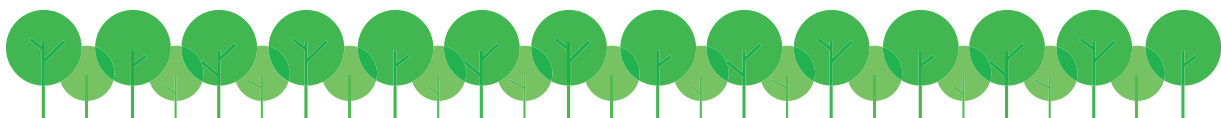
4. CLOSE THE SESSION BY TELLING the group that their ideas represent different forms of stewardship, which is a way of taking care of something, in this case, trees. Ask why being a tree steward is so important. Why are trees such a vital part of the environment?

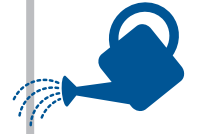
EXTENSION ACTIVITIES

• **POSTER.** Using poster board and markers, have participants create a Be A Tree Hero Poster. Ask the group how these posters might be used to convey messages about taking care of trees.

• **COMIC BOOK CHARACTER.** Some young people might want to create a New York City Tree Hero comic book character that has adventures in various neighborhoods and parks.

• **READ ABOUT IT.** To inspire your group further, read excerpts from the works of famous naturalists, such as Henry David Thoreau (*Walden*), Aldo Leopold (*A Sand County Almanac* and *Sketches Here and There*), and Rachel Carson (*Under the Sea-Wind*, *The Sea around Us*, and *The Sense of Wonder*), or ask your group to share their favorites.





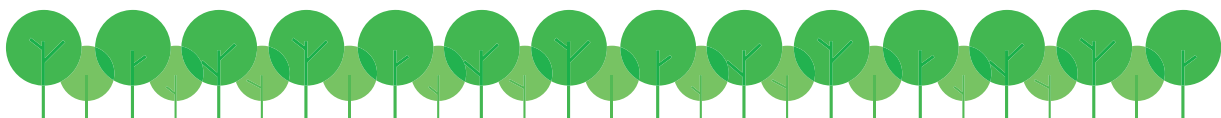
Examples of Heroes of the Earth

RACHEL CARSON (1907 – 1964) was an American marine biologist and nature writer whose writings are credited with advancing the global environmental movement. After World War II, Carson wrote about conservation and the environmental problems caused by synthetic pesticides. The result was **Silent Spring** (1962), which brought environmental concerns to an unprecedented portion of the American public. *Silent Spring* spurred a reversal in national pesticide policy—leading to a nationwide ban on DDT and other pesticides—and the grassroots environmental movement the book inspired led to the creation of the Environmental Protection Agency.

AL GORE is the author of **An Inconvenient Truth**, a best-selling book on the threat of and solutions to global warming, and the subject of a documentary of the same title, which won two Academy Awards in 2007. Since his days in the U. S. Congress 30 years ago and as Vice President in the Clinton administration, Gore has been a leading advocate for confronting the threat of global warming. He is currently the founder and chair of **Alliance for Climate Protection**, which aims to persuade people of the importance, urgency and feasibility of adopting and implementing effective and comprehensive solutions for the climate crisis.

JANE GOODALL is the world's foremost authority on chimpanzees, having closely observed their behavior for the past quarter century in the jungles of Africa. Goodall is recognized for helping millions of people understand the importance of wildlife conservation to life on this planet. Today, the **Jane Goodall Institute** works to protect chimpanzees and other endangered wildlife. In 1991, Dr. Goodall and a group of Tanzanian students founded the **Roots & Shoots** network. Connecting tens of thousands of young people in 110 countries, the network helps them identify problems in their communities and take action.

JOHNNY APPLESEED'S (1775-1847) real name was John Chapman. He spent 50 years of his life in the American wilderness planting apple seeds. He brought apple seeds from Pennsylvania and planted them across the Midwest. It is said that he would travel hundreds of miles to prune his orchards, which were scattered through the wilderness. After 200 years, some of those trees still bear apples. Johnny Appleseed's dream was for a land where blossoming apple trees were everywhere and no one was hungry. His story has become a popular American folktale.



My Life as a New York City Tree



Objectives

- Understand the needs and challenges of city trees
- Become familiar with nearby trees

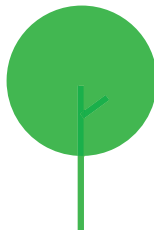
LOCATION:

Outside and inside

TIME: 1 hour

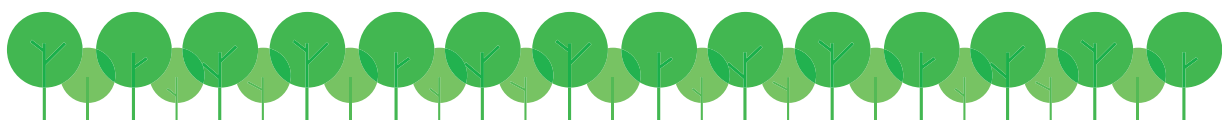
MATERIALS:

- Whiteboard or chart paper
- Markers
- 3" x 3" squares of blue, yellow, and green construction paper (two squares of each color for each Scout)
- **Optional:** Use poker chips to play instead of paper



BACKGROUND

Trees need water, sunlight, nutrients in the soil, carbon dioxide in the air, and space to grow. City trees often face special challenges, such as limited space, nutrient-poor and compacted soil, drought, wind and ice storms, air pollution, trash, animal waste, and damage from cars, bikes and people."





DISCUSSION

Focus this opening discussion on the needs and challenges of being a city tree. Ask the following:

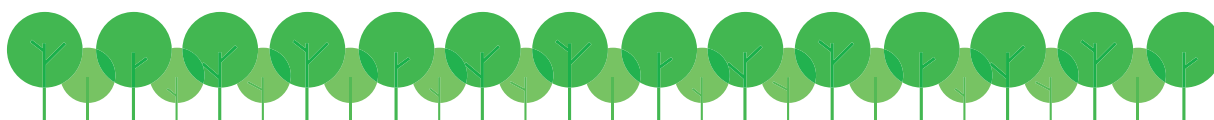
- What are the natural needs trees require to survive? List the answers on the whiteboard under the heading **Tree Needs**. Be sure that water, sunlight, and nutrients (from soil and air), are included.
- What specific challenges do urban trees face? List these under the heading **City Challenges**. To get the group to come up with the challenges listed in the Background section, use other questions (for example, “Do you see dog-walkers let their dogs use trees as their bathrooms?” (*Answer: animal waste*) “Do you see bikes locked to trees, or things leaning up against trees? What about car doors bumping trees, or kids pulling branches off trees?” (*Answer: tree damage due to vandalism and carelessness*)
- What can people do for trees to make sure they thrive? (To encourage answers, refer to the Tree Needs and City Challenges lists and expand, for example, “Since trees need water, how can people help?” “Can people make a small sidewalk tree pit larger?”)



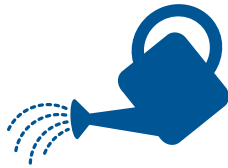
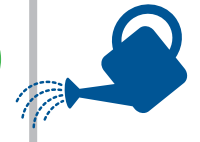
ACTIVITY

1. **HAVE STUDENTS STAND** about three feet apart and imagine that they are trees in the city. Distribute the colored paper squares on the floor around each child so that the squares are one to two feet apart. Explain that the squares represent the things that trees need to live;

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My Life as a New York City Tree



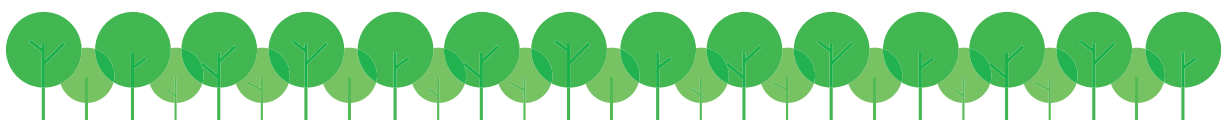
the blue squares represent water, the yellow squares represent sunlight, and the green squares represent nutrients from the soil and air.

2. EXPLAIN THAT THE OBJECT is for the “trees” to gather as many squares as possible, keeping one “root” (foot) planted at all times. Participants may step out with one root and reach out with their “branches” (arms and hands). On “go,” have students collect the squares for 15-30 seconds, then discuss: Did every tree get some water, sunlight, and nutrients? What could happen to real trees that don’t get enough requirements? (*Answer: They might not survive.*)

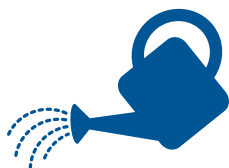
3. ASK ANY CHILD THAT DIDN’T GET at least one of each colored square to hand in their colored squares and act as your helper. Gather all the squares off the floor; these will be used in the next round. Redistribute the squares from the floor around the remaining “trees.” Ask everyone to think about the fact that city trees are often bordered by sidewalks and streets (concrete and asphalt) and the soil around them is often compacted (or pressed down) from foot traffic; rain that hits compacted soils runs off instead of soaking in. How do the roots of city trees find enough water?

4. IN THIS ROUND, the object is for the children, acting as trees, to gather as much water as possible, keeping both “roots” (feet) planted at all times because the roots have very limited space to grow; participants may only reach out with their “branches” (arms and hands). On “go,” ask the trees to collect the squares for 15-30 seconds then discuss: Did every tree get some water? What was the effect of having your roots stuck in one spot? What could happen to real trees that don’t get enough water? (*Answer: They might not survive—trees must have water. Additionally, when a tree’s roots cannot grow down and*

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My Life as a New York City Tree



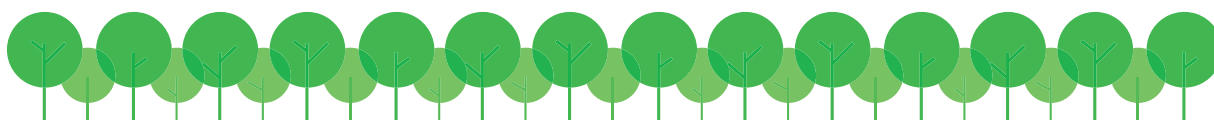
outward, they often grow near the soil's surface; trees with shallow root systems can fall over with strong winds.)

5. ASK ANYONE THAT DIDN'T GET at least one blue square to hand in their squares and act as your helper. Gather all the squares off the floor; these will be used in the next round. Remove about half of the green nutrient squares, and then redistribute the squares around the remaining students. Ask students to think about the fact that city trees often grow in poor soils with few nutrients. How and where do city trees get enough nutrients to grow and survive?

6. THE OBJECT IS FOR THE TREES to gather as many nutrients as possible, keeping both roots planted at all times because the roots have nowhere to grow; the "trees" may only reach out with their branches. On "go," have everyone collect the squares for 15-30 seconds then discuss: Did every tree get some nutrients? What was the effect of having your roots stuck in one spot? What could happen to real trees that don't get enough nutrients? (*Answer: They might not survive. Trees without proper nutrients get weak and are susceptible to disease and pest infestations. Weak trees also break easily from wind and from the weight of snow and ice.*)

7. ASK ANY STUDENT THAT DIDN'T get at least one green square to hand in their squares and step to the side. Are there any trees left? Congratulate these trees!

8. NOW GO OUTSIDE to check the trees in a nearby area, and see which challenges they are facing now or have faced. Look for broken branches, scraped bark, very dry and compacted soil, trash, weeds, or other problems.

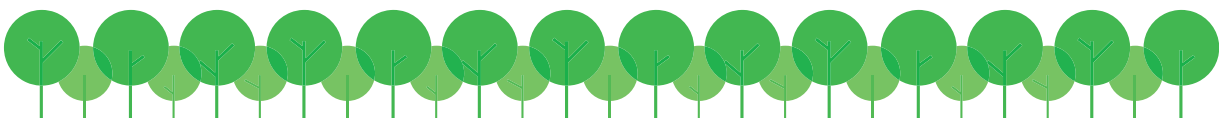




EXTENSION ACTIVITIES

• **BRING THE MESSAGE INSIDE.** Split the participants into groups of three or four with each team assigned one or two of the city challenges from the list. Allow about 10 minutes for each team to come up with a TV commercial related to those challenges and possibly some actions that can eliminate or reduce them. Ask each team to present to the whole group. Encourage questions and comments.

• **SUBWAY OR BUS AD.** With nothing to do while riding on subways and buses in New York City, people often spend time looking at the ads. Small teams can create ads with messages about trees how to help them survive in the city that they think would inspire others. For example, draw a picture of a bike locked to a tree with a red “no” circle-symbol on it.



Tree Detective



Objectives

- Enhance observational skills
- Learn how distinctive leaf details allow people to identify tree species
- Practice using an identification guide
- Discover the species and size of trees planted in NYC

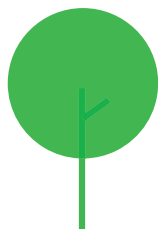
LOCATION:

Outside

TIME: 1 hour

MATERIALS:

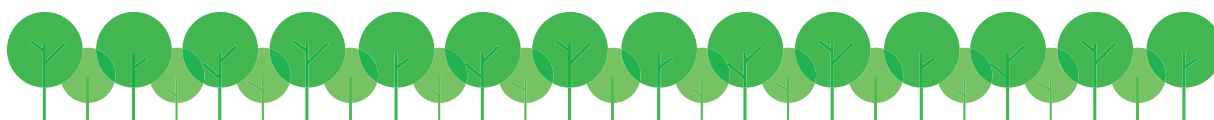
- Pens or pencils
- Guide to Trees in New York City handout
- Scavenger Hunt handout (see worksheet)
- Clipboards or cardboard as a surface for writing

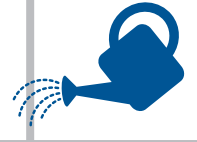


BACKGROUND

To identify a tree species, the distinctive shape, size, and color of leaves provide the best clues. It takes practice to become an effective observer. Most people walk by trees and barely notice them. However, when we take the time to observe, we learn a great deal about a vital part of nature.

CONTINUED →





DISCUSSION

Start the session by distributing the Guide to Trees in New York City handout. Ask participants:

- What information is new to you?
- Which leaves have you seen?
- Which leaves have you never seen?
- How would you use this guide?

Let the participants know that they will be using the handout in the scavenger hunt they are about to do.

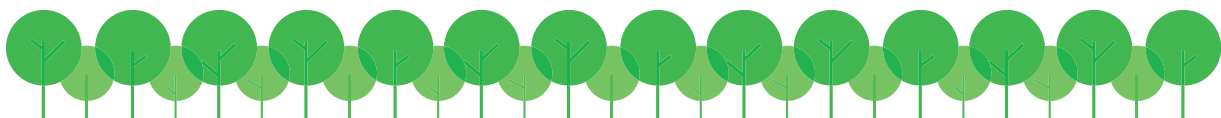
ACTIVITY

1. DIVIDE THE GROUP INTO PAIRS, and assign each pair to a specific and limited area outside. Then distribute a copy of the Scavenger Hunt handout to each pair. Give them about a half-hour to check off as many of the items on the list as possible. Encourage them to add information about the location or an interesting fact about the item, sketch their observations, or take digital photographs.

2. BRING THE WHOLE GROUP BACK TOGETHER and go through the list, asking the following questions:

- Which item was the easiest to find?
- Were there items you could not find? Why do you think that was?
- Which item was the hardest to locate? Why?
- How did the scavenger list help you to observe trees and their surroundings?
- What information did you discover?
- What other kinds of scavenger hunts can you do?

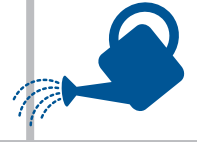
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Scavenger Hunt Worksheet

This activity is about observing, not about disturbing, nature. **After you find an item, check the box.** Write a comment or draw a quick sketch next to the item indicating where you found it and anything else important about that item. If you have a cell phone with a camera or a digital camera, use it to take photos. Stay in the area where you have been assigned. Have fun!

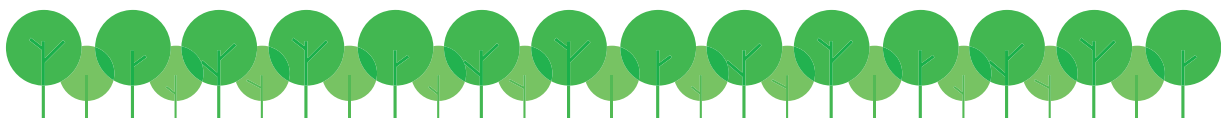
- A leaf that is oval in shape
- A leaf that has multiple points
- Two leaves that differ in color
- Two trees that differ in shape
- Two trees that significantly differ in height
- A tree that has dead limbs or branches
- One tree with needles
- Two different kinds of insects
- A decaying tree
- A healthy tree
- A tree covered with vines
- Twigs
- A bird in a tree
- A bird flying over a tree
- Two objects that are made from trees
- Action by a person or animal that hurt a tree



EXTENSION ACTIVITIES

• **IT'S ART!** Extra leaves can be used for art projects by making leaf prints on construction paper or colored T-shirts. The leaves are placed on flattened T-shirts or colored construction paper by the scouts and then the leader sprays a solution of diluted bleach in a spray bottle over the surface. After drying in the sun, the background will fade and the leaf design remains dark.

• **IT'S ART, TOO!** Another leaf art project is to place the leaves in between two sheets of wax paper that an adult presses together using a heated clothes iron. Put the shiny side of the wax paper next to the leaves. It also helps to remove the small "stem" of the leaf, so that it lies flat. Children can make frames for their leaves using colored construction paper or sturdy paper from their recycling bin. Cut the frame slightly larger than the wax paper, fold in half and cut out a shape that allows the leaf to show through. Tape or glue the wax paper onto the frame. For a window hanging, make two identical sized frames at the same time and make a sandwich with the wax paper in-between. Include a loop of string.



Money Grows on Trees



Objectives

- Learn about the benefits of trees
- Understand that trees have value

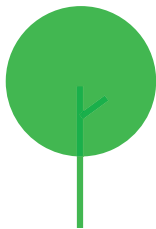
LOCATION:

Inside or outside

TIME: 30 minutes - 1 hour

MATERIALS:

- Chart paper
- Markers
- Stickers – any colors or styles; three for each Scout



BACKGROUND

Trees are a truly beautiful part of the natural environment, but they are also amazingly efficient machines—constantly working to make Earth a healthier planet. Here are 10 proven ways that trees provide benefits:

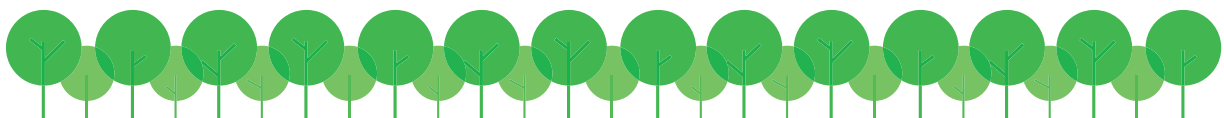
1. Trees improve air quality and help people breathe easier.

Trees are sometimes called the lungs of the Earth because they absorb pollutants through their leaves, trapping and filtering contaminants in the air.

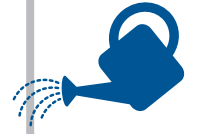
2. Trees improve water quality, reduce flooding and erosion.

A tree's leafy canopy catches precipitation before it reaches the ground, allowing some of it to gently drip and the rest to evaporate. Tree roots hold soil in place, reducing erosion. In these ways, trees lessen the force of storms and reduce the amount of runoff into sewers,

CONTINUED →



Money Grows on Trees



streams and rivers, improving water quality. One hundred mature trees can intercept about 100,000 gallons of rainfall per year.

3. Trees temper climate, making for a more comfortable place to live.

Trees lower air temperatures and humidity; they can also influence wind speed. Evaporation of water from trees has a cooling effect. Cities develop “heat islands” because dark roofs and pavement absorb solar energy and radiate it back. Trees in parking lots have been shown to reduce asphalt temperatures by 36 degrees Fahrenheit and car interiors by 47 degrees Fahrenheit.

4. Trees conserve energy.

Three or more large trees strategically placed on sunny sides of a building shade it from the hot summer sun, reducing air-conditioning costs by as much as 30 percent. Deciduous trees are best for this use because they lose their leaves in winter, exposing the house to the warming winter sun, which lowers the energy needed to heat the house. Coniferous trees, because they retain their needles year-round, serve to reduce wind when placed on the north and northwest sides of a building, resulting in significantly lower winter heating costs.

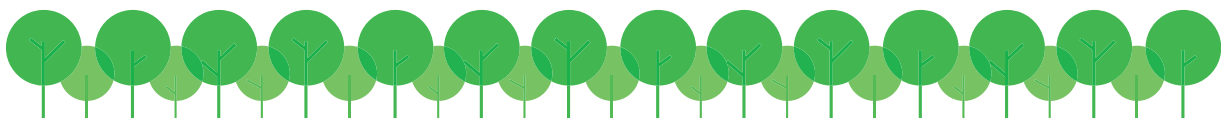
5. Trees are good for the economy.

Economic analyses have found that the value of homes near trees is 9 to 15 percent higher than homes without. Research shows that shoppers linger longer along a shaded avenue than one barren of trees and are even willing to pay more for goods and services.

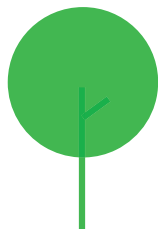
6. Trees create habitat for plants and animals.

Wherever trees are established, wildlife and other plants are sure to follow, ensuring a healthier ecosystem. Trees provide shelter and food for a variety of birds and small animals.

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Money Grows on Trees



7. Trees improve health.

Research demonstrates that exposure to trees has a relaxing effect on humans, reducing stress and imparting a sense of well-being. Hospital patients with a window view of trees recover faster than those without. Children with Attention Deficit Disorder are better able to concentrate after time spent in outdoor green settings.

8. Trees reduce crime.

Data show that apartment buildings with high levels of greenery had significantly fewer crimes than those without any trees.

9. Trees reduce noise pollution and can serve as screens.

A belt of trees 100 feet wide and 50 feet tall can reduce highway noise by up to 10 decibels, reducing the sound volume by half. Densely planted trees can also block unsightly views.

10. Trees promote community.

Trees can enhance a community's sense of pride, and ownership. Active involvement in tree planting programs leads to a stronger sense of community and the promotion of environmental responsibility and ethics. Planting programs also project a visible sign of change and provide the impetus for other community renewal and action programs.

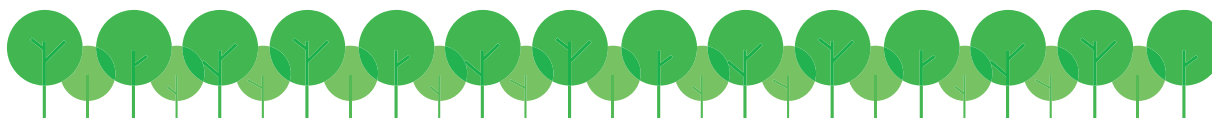


DISCUSSION

Begin session by asking if your group:

→ Does money grow on trees? Explain the meaning of **benefits** (something that is advantageous or promotes or enhances well-being); and **value** (what something is worth, either in monetary or material terms, or its importance).

CONTINUED →



Money Grows on Trees



ACTIVITY

1. ASK THE SCOUTS TO THINK ABOUT what trees do for people, animals and the planet. List answers on the chart paper under the heading **Benefits**. See what results you get. (Look for: provide shade, clean the air, provide homes for animals and insects, etc.) Refer to the Background information above. Ask questions to help stimulate other answers and thinking such as:

- Really big bushy evergreen trees can block a lot of things. If it is really noisy along a highway near where people live, how might evergreen trees help? (*Answer: Trees can reduce noise pollution.*) What about if there is a junkyard next to a playground, how might these same trees help? (*Answer: Trees can block unsightly views.*)
- How does being near trees make you feel? (*Answer: I feel relaxed, calm, etc.*)

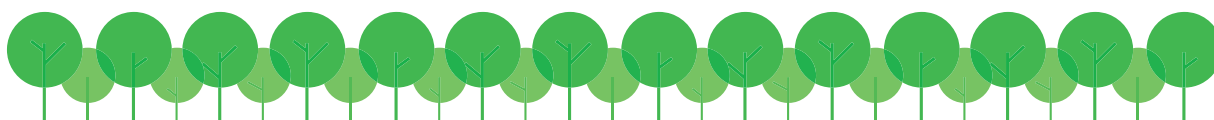
2. TRY TO CONSOLIDATE ANY DUPLICATE ANSWERS.

When you feel there are enough answers covering most of the topics, talk about how these benefits have value and would cost money to buy. For example, buildings are often cooled by air conditioners or fans. These run on electricity. Does anyone know if their parents pay a bill for their electricity?

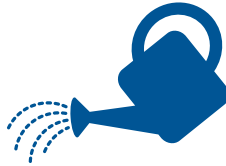
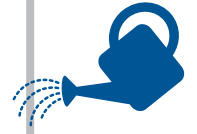
3. HAND OUT THREE STICKERS to each Scout and tell them they all have \$300 to spend. Explain each sticker is worth \$100 and is also worth a vote. Write the word "**Value**" next to the column of Benefits.

4. ASK EACH SCOUT TO PUT A STICKER next to the benefits they think are most important. Explain that they can put all the stickers on one benefit, or on different benefits.

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Money Grows on Trees



5. AFTER EVERYONE HAS VOTED, have the group help you tally up the dollar values for each item. Put a star next to the top three choices. Discuss why the top choices seem more important than the choices with the fewest stickers.

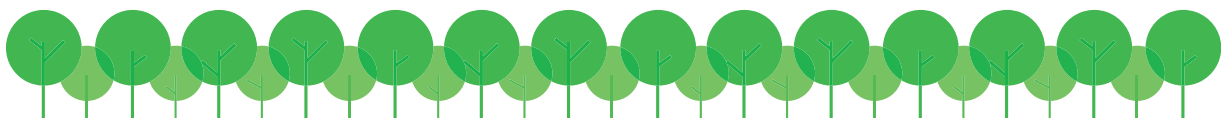
6. CONNECT THE DOLLAR VALUES BACK TO TREES. Do trees charge money to provide these benefits? Since the trees are not getting paid, what does that mean? (*One answer is that trees have value and are worth a lot of money.*)

7. TALK ABOUT HOW SPENDING MONEY is like voting – that by buying one thing over another, you are showing what has more value to you.

8. YOU CAN ALSO ASK HOW some of these benefits might be more important to different people; for example, how saving money on air conditioning costs might be more important to parents since they pay the bills, while keeping the playground cool with shade might be more important to kids.

9. TALK ABOUT HOW IT TAKES MANY years for a tree to grow large enough to give back many of the benefits discussed. Smaller and younger trees do not provide as many benefits as large trees.

Remind your group that existing trees are living things that will not last forever, so it is critical that we continue to replenish the urban forest and plant new ones in our communities. Young trees need our care and stewardship to grow strong—ensuring a healthy future for our planet and all its inhabitants.



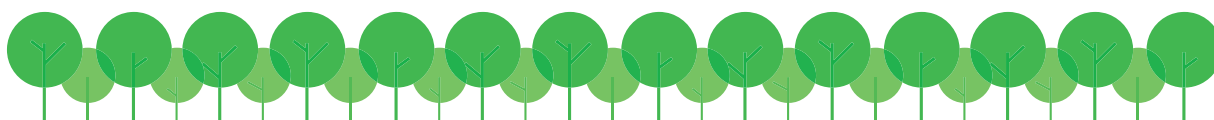
Money Grows on Trees



EXTENSION ACTIVITIES

• **MONEY TREE.** Pick a tree near your troop meeting place that is highly visible to other people and with branches that can be reached or with a wide trunk. Gather craft materials such as green construction paper, green cloth, markers, paint, yarn, string, gold and silver foil, etc. and design dollars and coins to make a **Money Tree**.

With or on your money include messages such as: "This tree is a free air conditioner." "This tree provides free shade." "This tree cleans our water for free." "This tree increases real estate value." Think up other slogans. Pick a day when a lot of people will see the tree, and decorate the tree. Tie string or yarn around the wide trunk and hang the messages and money from it at eye level, or hanging down from branches. Be sure to remove the decorations - especially before it rains so they do not become litter.



Mapping Trees in My Community



Objectives

- Learn about community mapping
- Recognize the importance of trees in neighborhoods
- Develop recommendations for improving the community

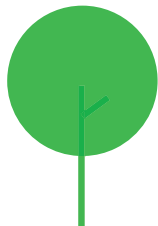
LOCATION:

Outside

TIME: 1 hour

MATERIALS:

- Whiteboard or chart paper and markers
- Graph paper
- Pencils
- Colored pencils



BACKGROUND

Community mapping is a technique that involves recording every relevant object in a specified area of the community. The map presents a pictorial representation. Once people see what exists, they can more easily figure out what they need to add to their community. MillionTreesNYC is undertaking a massive effort to map every tree in New York City.

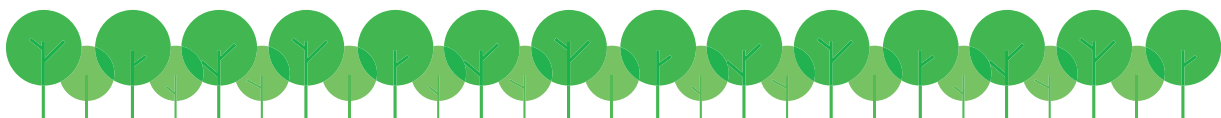


DISCUSSION

Mapping can be a simple or very complicated endeavor.

Use these questions to introduce the idea of mapping to your group:

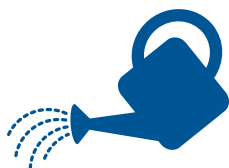
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Mapping Trees in My Community



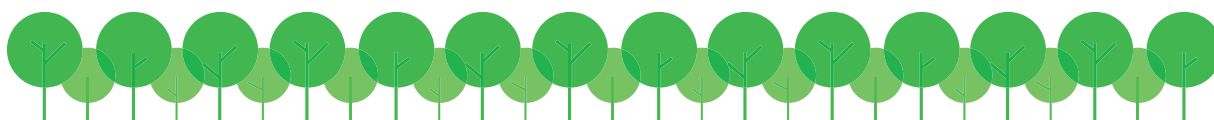
- Have you ever used a map? What made the map helpful?
- What types of maps have you seen or used? They might mention a map that shows major highways across the United States or a street map of New York City or one of its boroughs. They might have created product maps in school or downloaded a map they found online.
- Have you ever created your own map? What did you map?
- How can a detailed map of a community help you understand what the area has and what it needs?



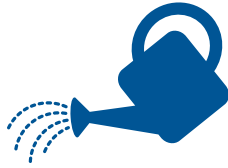
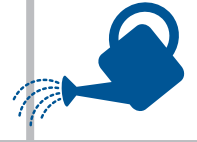
ACTIVITY

- 1. DECIDE WITH YOUR GROUP** how large an area could be mapped in a half-hour. A small square city block would work with four teams working simultaneously. Divide the group into smaller work teams.
- 2. USE GRAPH PAPER**, which makes it easier to list and draw items. Older participants might decide to scale their map (for example, ½ inch = 1 yard).
- 3. ASK THE GROUP** to come up with symbols that can be used to represent trees, like small circles for small trees, and large circles for large trees, rectangles for benches, vacant lots, community gardens, apartment buildings, storefronts, etc. For reference, list those on the board as the teams work, and talk about what you will want them to present to the group; (see #5). Participants might want to make a small key of their symbols on their map.

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Mapping Trees in My Community



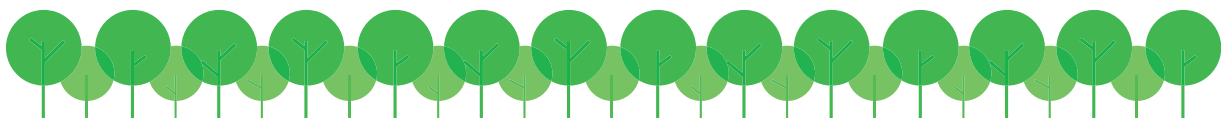
4. ALLOW ENOUGH TIME for each team to gather the information and write or draw it on their maps. Remind participants to include a description of the area they mapped (for example, South side of West 34th Street between Seventh and Eighth Avenues).

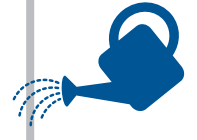
5. WHEN THE MAPS HAVE BEEN COMPLETED, ask each team to present the following:

- Number of different types of trees
- Number of trees
- Spacing of trees
- Size and condition of trees
- Where benches are located
- Location of vacant lots and their surface (concrete, dirt, etc.)
- Location of community gardens
- Presence and condition of sidewalks
- Storefronts or offices
- Types of residential housing
- Grassy areas for play and relaxation

6. AFTER EACH TEAM HAS SHOWN THEIR MAPS, ASK THE GROUP THE FOLLOWING QUESTIONS:

- What are the benefits of the trees in the area mapped?
- Could the area use more trees? Where would be good spots?
- How do trees help make a neighborhood more attractive and healthier?
- What would you like to see added to the area you mapped?
- What would you, your community, or New York City need to do to make that happen?

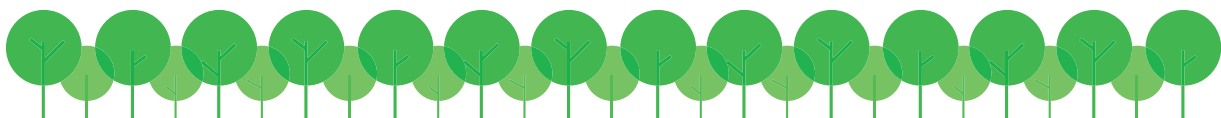




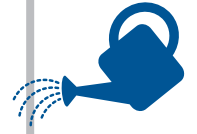
EXTENSION ACTIVITIES

• **THREE-DIMENSIONAL COMMUNITY MODELS.** Girl Scouts and Boy Scouts can use a variety of materials (for example, clay, paper, and wooden craft sticks) to develop scaled three-dimensional models of what they would like their street, local park, or neighborhood to look like. That could be the starting point for a broader effort to plant trees, clean up litter, and add benches. Troops could even use these models in advocacy efforts.

• **SHARING MAPS.** Share large fold-out maps of NYC with your troop and help them see where you are located. Look at nearby blue and green areas to find where there may be parks and water in relation to where your troop meets. If you have a neighborhood-scale map, help them find your meeting location and the area that they mapped. Talk about areas or neighborhoods that the Scouts particularly like, and why, and what your troop could do to improve your area.



Program Partners



MillionTreesNYC - A key initiative of Mayor Michael R. Bloomberg's PlaNYC, MillionTreesNYC is a movement to plant and care for one million new trees throughout New York City's five boroughs by 2017. MillionTreesNYC is a public-private partnership led by the New York City Department of Parks & Recreation and New York Restoration Project (NYRP). To achieve the initiative's tree planting and stewardship goals, the initiative also engages community, non-profit, government and corporate partners throughout the City to plant and care for trees, as well as educates New Yorkers about the environmental, health and economic benefits trees provide residents. Mayor Bloomberg and NYRP Founder Bette Midler officially launched MillionTreesNYC on October 9, 2007, and the initiative has since successfully surpassed the yearly planting goals, reaching the 250,000 mark in just two years. www.milliontreesnyc.org



New York Restoration Project (NYRP) is a non-profit organization dedicated to reclaiming and restoring New York City parks, community gardens and open space. In partnership with the City of New York, NYRP is also leading MillionTreesNYC – an initiative to plant one million new trees throughout New York City's five boroughs by 2017.



ERTH NXT is a national non-profit organization working to protect the future of life on Earth for all species through programs that: educate children ages 6–18 years old with a curriculum of scientifically-based environmental knowledge; encourage young people to take actions that will help advance our mission; and ensure that these actions/activities can be repeated and expanded as participants grow in knowledge and capacity. For more information, visit www.earthnext.org.



The Greater New York Councils-Boy Scouts of America engage over 100,000 young people aged 6-20 and 6,000 adult volunteers in the five boroughs of New York City. The mission of the Greater New York Councils, Boy Scouts of America is to serve society by helping to instill values in young people and, in other ways to prepare them to make ethical choices during their lifetime and to achieve their full potential. The values we strive to instill are based on those found in the Scout Oath and Law. For more information, go to www.bsa-gnyc.org.



The Girl Scout Council of Greater New York engages over 21,000 girls ages 5 to 17 and 7,300 adult volunteers in all five boroughs of New York City. This is New York City's largest girls-only youth and leadership development program where girls learn to lead with courage, confidence and character. The Girl Scout Leadership Experience engages girls in discovering self, connecting with others, and taking action to make their communities and the world a better place. The Girl Scout program is based on a model of shared leadership that is both inclusive and empowering. For more information, go to www.girlscoutsnyc.com.

