“What if all the people in the world made a painting together?”
- Meredith, age 8

The Singing Trees - A Growing Forest

by Laurie Marshall
The Singing Trees –
A Growing Forest

Figure 1: The Maple Singing Tree, 12-feet high x 8-feet wide.

A Book of Stories, Curriculums and Instructions -
Sharing Values through Art

By Laurie Marshall

This publication was made possible by the
Children’s Museum of Pittsburgh
This book is dedicated to the visionary young people among us and the elders who help them grow.
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All photography is by Laurie Marshall unless otherwise noted.
The Seed and the Seedling - The Elm Tree

This book is designed to get you excited when you see the art of other kids. It will tell you the story that led to the first five Singing Trees - the Seedling and Pioneer Forest. It will show you how to grow your own Singing Tree or join with one that is already started. It will leave you with the possibility of a Climax Forest of Singing Trees, filled with birds that will help to bring unity between people. For teachers, it will suggest curriculum tie-ins for the classroom in geography, civics, life sciences, math and English. Take the ideas here and run!

The Fertile Soil: Let me introduce myself. I’m Laurie Marshall, a painter, writer and certified art teacher. I have two missions:

- To use art to honor the intelligence, humor and uniqueness within all people, and
- To make the world safer for children.

I am also the proud mother of two sons, Jeremy and Daniel, who were born in 1982 and 1986.

In 1999, I made a painting called “The Challenge of Beauty” with the children in a little public school called Hillsboro Elementary School in Hillsboro, Virginia. The whole school has only six classrooms, kindergarten through 5th grade, and a gym/cafeteria. About 130 students attend. Everyone in the school helped to make the 24-feet long by 4-feet high mural as part of their history lessons.

The Seed: When the painting was done, a second grader named Meredith said, “I wish the whole world could see our painting and then the whole world would be happy.” And then she asked, “What if the whole world made a painting together?” Now that’s a picture! -- different than the images we see on the news every night of conflict and war; different than a world where people are struggling for power and acting out of fear.

Meredith went on to say, “We had so much fun making our painting, I think all children should be able to have that much fun.” Right then and there, I decided to spread this vision, starting, of course, with children.
A true story in a book called *The Singing Tree* by Kate Seredy provided the seed for the murals:

*During a long and terrible night in the middle of World War I, soldiers crawled for hours on their bellies to escape the enemy. Everything in their path had been destroyed by the shells, bullets, and violence of war. They didn’t come across any evidence of life - not a house, person, squirrel, bird, tree or bush. When the dawn came, they saw that one tree was still alive.*

*Birds from hundreds of miles away, who don’t normally come together, were in the tree singing.*

I see our planet as the *Singing Tree* of our Solar System. For billions of miles, there is no life that we know of except the life on earth.

With this metaphor in mind, I drew a picture.

**The Goal** of *The Singing Trees* is to give you an opportunity to share an experience with young people around the world, while you express yourself as an individual. I also invite you to shape the big picture: *The distances between human beings are small compared to the distances between life on earth and life anywhere else.*

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**The project is based on the following ideas:**

1. That you, as a young person, are important to our troubled world.
2. That you are really learning when you are making a real product for a real audience.
3. That a more peaceful planet can be created as young people work together around the world, because connecting with each other builds caring.
4. That art is a way of saying “This is what is important to me.”
5. That a picture is worth a thousand words, especially when you don’t speak the same language.

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**The Seedling Grows into an Elm Tree:** In the spring of 2001, I made the first *Singing Tree* (the Elm) with 1,000 young people in Rappahannock County, Virginia, a county with a total population of 7,000 in the foothills of the Blue Ridge Mountains close to Washington, DC. Almost every young person from ages two to eighteen helped to make
the mural - kids from the daycare center, the private schools, the homeschoolers and public elementary and high school students. The teenagers in the Rappahannock County High School (RCHS) art classes which I taught helped to design the structure that is in outlined in Appendix I at the back of this book.

The day after Meredith told me her idea, I shared it with my classes. We puzzled over how to accomplish such a huge undertaking. Beth, a senior, handed me a computerized photo of the earth in a magazine she just found. The way it was divided into little rectangles provided part of the answer.

The algebra class figured out that if two billion kids each had a 2-inch x 3-inch section, the painting would be two miles long. That’s big. The idea emerged that our goal could be reached by creating a Forest of *Singing Trees* - not all the same painting, but using the same image of a tree on the earth in space. The trees would come from the region where the painting was made.

When I invited my public school art classes to take the lead in preparing the parts of the mural for the 1,200 children in Rappahannock, including Wakefield Country Day School, I heard a loud groan: “We don’t want to do anything with the preppies.”

I replied, “Instead of complaining about each other, in this project you’ll actually get to do something together.”

![Figure 6: Detail from Maple Tree](image-url)
Mayfest: Like many states, Virginia has adopted high stakes testing. Wisely, RCHS organizes a day called “Mayfest” to celebrate the completion of the Standards of Learning Tests. The whole student body (480 kids, grades 8-12) makes art and does team building exercises the day after testing is finished.

Mayfest 2001 included the Singing Tree. Working for the previous three weeks, the art students had painted the universe on four 8-foot by 4-foot boards; cut out 400 elm leaves from acid free paper; drawn, painted and numbered the tree trunk; sketched the continents on paper; painted the oceans; gridded the pieces that made up the back of the world with 2-inch by 3-inch rectangles; numbered each piece; gridded the drawing of the world on the boards with corresponding numbers and then cut the world apart.

Stars were also made to honor someone who was gone. Students from the day-care center and elementary schools made pictures on the leaves of what was important to them or a self-portrait - all collected ahead of time.

The students dove into making their part of the Singing Tree. Middle school kids made drawings on the trunk, and high school kids made a piece of the world. Some students helped by gluing leaves from the little kids onto the boards. Others spent their whole session putting the world in order, as the numbering was off in places. Getting the tree trunk back together was also a challenge, because I didn't think to grid and number the boards. We had to piece it back together by eye. Its imperfection is part of the beauty.

By the end of the day, the mural was halfway completed. As Ben Jones,
formerly “Cooter” of the 70’s television show *Dukes of Hazard*, delivered a speech for the closing ceremony in the gym, the students erected the painting in a corner. He spoke about the freedom and cooperation that is so precious in the United States and pointed to the kids putting up the painting as a demonstration of this essential collaboration. The *Singing Tree’s* idea of each person voicing his or her values while working together for a bigger purpose is part of what makes a democracy work.

The high-energy, school-wide creative project celebrated the completion of a year preparing for Virginia’s Standards of Learning tests.

The art students worked three more weeks gluing all the parts that came in from other schools and homeschoolers, the first *Singing Tree* was completed and displayed for graduation at Rappahannock County High School in 2001.

**Values:** Rocky, who painted the tree trunk, said, “Now when I look at a thing or look at a picture, I look at it for what it means.”

Stacey made a square that read “You don’t know the importance of life until death.” She said, “That was for my grandparents, I really miss them.”

Wendy said, “I drew the Blue Ridge Mountains with the sunset and the moon over the ocean. I love the mountains and the way they change everyday as the light shifts.”

Derek said, “At our school, you’ve got the country people, you’ve got the alternative people, and you’ve got the preps. Making the *Singing Tree*, we had everyone coming together doing one thing. It gave us something to say, like, ‘We all did this together in Rappahannock.’”

Figure 9: RCHS Students with halfway finished Elm Tree during Mayfest
As Gwen simply said, “Rappahannock is small, but we did such a great and big thing that we are bigger than what people might think.”

The seedling begins the forest.
The Pioneer Forest: The Apple, Linden, Maple & Gingko

In 2002-2003, four more Singing Trees were created in Pittsburgh, Pennsylvania, a city and region of about 1.5 million people in the western part of the state. These murals make up the Pioneer Forest, the young forest that comes before the woods are established. Art students from a city school (Peabody High School) and a suburban school (Mt. Lebanon High School) prepared the background and about 4,000 pieces for young people to draw on.

Figure 11: Students from Urabamba, Peru holding their Gingko leaves

More Fertile Ground: Here is the background for what underlies the growth of these trees - a view of earth’s neighborhood:

Figure 12: From the NASA online image gallery.
We often think that our block, our city, our country is the only neighborhood in town. Well, there's a bigger neighborhood. THERE ARE 3.9 TRILLION STARS FOR EVERY PERSON ON EARTH! And we haven't been able to find life in that big space after decades of looking. Even if life exists, we know that it is RARE.

Not only is SPACE very large, so is TIME. In order to get a better understanding, I would like you to make a timeline out of cloth that is 21 feet long. The first 16 feet stand for the period that dinosaurs lived on the earth, about 180 million years. The next four feet, ten inches represent when the big mammals dominated the planet - the mastodons and saber tooth tigers. The last two inches is the 200,000 years since human beings showed up. In other words, we think our dramas and problems are very important, but we are only a blip on the screen of time.

We are a young animal, and already we are endangered. Our population is on its way to growing so huge that the earth's resources can't take care of everyone. We are the only animal that pollutes its own nest and rampantly kills its own kind. The weapons stockpiled on the planet could wipe the human race out many times, and that doesn't include the biological and nuclear weapons we don't know about.

One of the reasons for the Singing Tree project is to add to the many thoughtful, creative efforts of our age so the timeline may grow another quarter of an inch. That would be huge.

**If we don't understand that our differences are not as important as what we have in common, there is very little hope of our surviving even for another quarter inch (about 50,000 years).**

![Timeline example](image13.png)

**Figure 13: Timeline example.**

![Antarctica from the Linden Tree](image14.jpg)

**Figure 14: Antarctica from the Linden Tree**
Stories from the Apple Tree

After presenting the timeline and pictures of the Elm tree to the Peabody art students, the dialogue about values began - answering the invitation of the Singing Trees for each individual to say what's important to him or her. The first question was: “Are you rich?” I replied saying, “In comparison to Bill Gates, no. In comparison to the billion people who don’t have enough to eat today, yes.” “Mercedes Benz rich?” Slim wanted to know. “A Mercedes is something I don’t want to own.” “Why not?” he asked. I replied, “It's not what’s important to me in using my resources.”

The 120 art students made a drawing of what they care about. Many students used this as a study for their final image on the mural.

Values: Jerry made a list: Shelter, Food, Clothes, Money, Friends, School, Family. Hatred, Racism, Terrorism, Ignorance. The first part of the list is needed by all, the second part of the list is feared by most all. He put his list on two squares pasted on Asia.
Marlon said, “These paintings aren’t going to cure cancer, cure AIDS, stop racism.” I reply, “You’re right. AND those are really important issues. How about putting them on the mural?” He decided not to. Halima picked up the ideas and added them to the painting. After his concerns were made visible, Marlon added a soaring comet to the background (see Table of Contents page).

Figure 18: Halima’s message off the coast of Africa.

Figure 19: Charles stated, “I created a little bird that is standing in the grass. The bird is a symbol of nature. It means that the world has recognized the importance of wildlife. When I look at the mural, I see that it is about each person’s happiness.

Figure 20: Vanessa put her sense of what is important on her part of the world, writing “Mi Familia” in front of a flag of the United States and beside a cross. Though commonly used symbols, she has combined them in a unique way as she incorporated the North American continent and its surrounding oceans.

The Apple Tree Disperses and Comes Back: After the boards had been painted and the leaves, apples, trunks and squares of the world were drawn, painted and cut out, the pieces went out to numerous schools and festivals. Either I sent instructions, leaves and colored pencils to a school or I worked directly with young people at the Children’s Museum of Pittsburgh, the Pittsburgh International Children’s Theater Festival or the University of Pittsburgh’s “Generations Together” Festival. I took the apples to the Children’s Institute of Pittsburgh, which serves children with physical and mental challenges. Though many of the students needed help carrying out their ideas, they brought imagination and extraordinary effort to their drawings.
Values:

Figure 21: This student from the Institute said he cared the most about the sun, books and happiness, so he put the word “Sun” inside a book with a bright yellow behind it.

Figure 22: The Sun Book Apple.

Figure 23: The theme of “Family” was repeated throughout all the trees.

Figure 24: Two students shared an apple creation.

Figure 25: Rappers and basketball players appear on the trunk, reflecting the importance of the current culture.

Figure 26: Making leaves at the Children's Museum of Pittsburgh.
The second phase of making *Singing Trees* in Pittsburgh took me to Mark Pelusi’s art classes at Mt. Lebanon High School, a suburban school. Again, the work to prepare two *Singing Trees* and their parts was completed in three weeks. After the classes chose the sugar maple and linden trees, a student named Andrea came up with the idea of drawing the earth as Pangea, when the continents were very close together about 160 million years ago, as a symbol of unity.
How the *Singing Tree* Grows: If an idea comes to someone, the project needs it. The idea may lead to another idea and may not be used in its original form, but it will always add to the growth. Since the Ginkgo tree is one of the oldest trees on the planet, having flourished in the dinosaur times, the students decided to put the Ginkgo tree, created by Peabody students, on the Pangea world, created by Mt. Lebanon students.

After the work of creating all the parts for the Linden Tree, the Maple leaves and the Gingko world, the students make their own visual statements. The rest of the pieces were then distributed.

**Values:** One student commented to another, “Look at all the crosses”. The other student replied, “Well, that’s because we were supposed to make pictures of what's important to us.” “Do you think there would be a lot of Stars of David if they made a *Singing Tree* in Israel or Crescent and Stars in Arab countries?” “Probably.”
Figure 31: Evan put Che Guevara on his square of the earth as well as on a star. Many young people looking at the painting have asked who Che is, learning about this controversial figure. Evan said “He cared nothing for himself and devoted his life to freeing the oppressed people of the world, which is something I value.”

Figure 32: D’ante, a 3rd grader at Lincoln Elementary School in the city of Pittsburgh, wrote “The most important thing to me is my niece.”

Figure 33: “The balloon that Daddy bought for me” was made by a child at the Children’s Museum of Pittsburgh.

Figure 34: Though I had asked the students to do their final drawing in color, Robyn’s image of a face was striking as a black and white pencil drawing. She found herself not wanting to put hair on the person. Finally, after surrounding the face with yellow, she understands what the message of the drawing and writes, “Cancer strikes without warning.”

Figure 35: Andrea, a native of Venezuela who attends Mt. Lebanon High School, expressed her love of art and the ocean in her square on western Africa.

A young man who came to the National Aviary for the International Children's Festival studied the images already on the Linden Tree. He sat down and added his message, which landed on France: “Black Fathers.”
Both the Sugar Maple and Gingko Singing Trees became combined efforts of Peabody and Mt. Lebanon High Schools, Peabody creating the Maple Tree’s world and Mt. Lebanon making Pangea for the Gingko Tree.

Values:

Figure 36: What excited this Peabody student was making a star for his grandfather, “Sam - Caring, loving, honest, friendly, gentle” - and knowing that his Grandfather’s star would be seen on the world-wide web.

Figure 37: A middle school student at the “Generations Together” Festival sponsored by the University of Pittsburgh tackled the difficult problem of making a waterfall on her leaf, expressing her care for the natural world.

Figure 38: According to Aaron of Peabody, his message - ‘If you have a positive attitude, your future will be great!! Words from God.” - means that the inner self is important.

Figure 39: “I got the whole world in my hands and I’m going to change it!” Sable
The last tree to be completed in the Pioneer Forest is still in progress at this writing: The Gingko Tree - the first international tree with pieces from children in other countries.

Dr. Maureen Porter took colored pencils, leaves and pieces of Pangea along with her service-learning participants of the University of Pittsburgh’s LINCS program (Learning Integrated with Needed Construction Service) to Urabamba, Peru in the summer of 2002. This Andean market community of 14,000 is about 9,000 feet high and two hours from Machu Pichu by train. LINCS built the first 1st – 5th grade school the community has ever had, relaxing from their hard labor to create the *Singing Tree* with some of the children and the teachers of the new school.

The day of the LINCS’ program’s departure, the children sang an original song and then wept. They didn’t want to let go of their new friends from Pittsburgh. Upon hearing this, Peabody student Halima said, “And to think we fussed about having to cut out all those leaves.”

I brought pictures back to Peabody of the Peruvian children drawing on the leaves cut by the art classes, telling them that the video we made couldn’t be shown because there was no electricity in Urabamba. Several students immediately responded with, “What can we do about that? What can we do to help?”
Ahmed Sheriff, President of the Cotton Tree Association of Sierra Leone, arranged for pieces of the Pangea world to go to Sierra Leone. Young people from four schools in Freetown, the capital of Sierra Leone which is about the size of the Pittsburgh area, drew many pictures. The images included homes, foods, and animals, as well as people whose hands had been cut off by the Revolutionary United Front in a bloody ten-year civil war, at the end of which, 10,000 children had their hands chopped off with machetes.

One Sierra Leone student made a picture of planes flying into the World Trade Center, expressing care for the suffering in the United States. Most all of the American students were unaware of the loss and violence in Sierra Leone.

Pieces of Pangea were carried by Philipp, an exchange student from Germany, back to his classmates. Only one of the twenty rectangles was written in German, the rest were in English. One student wrote: “LOVE - to find the girl I love,” a common search the world over.

One Sierra Leone student made a picture of planes flying into the World Trade Center, expressing care for the suffering in the United States. Most all of the American students were unaware of the loss and violence in Sierra Leone.
A Mt. Lebanon student named Jen described the connection between her image and Pangea in a way that summarizes the thought behind the Singing Tree: “I made a memorial to Brian Deneke, a punk kid from Amarillo, Texas, who was murdered for his choice of dress and music. I think it’s good that the drawing is on Pangea, because Brian was killed due to a lack of unity between people.”
The Birds and a Climax Forest

In the seedling stage, the students at Peabody and Mt. Lebanon wrote what came to mind when they first thought of making a painting with young people of different cultures. Some of their responses:

“Real messy.”
“Raining Peace on Pittsburgh.”
“People don’t come together on their own and by getting that chance, they would get to know things about each other.
“I feel that it is an awesome idea and I am glad to be a part of it.”
“The first thing that comes to mind is MUSIC.”
“The word that comes to mind is FAMILY.”

Now the Pioneer Forest is planted. The collection of the first five Singing Trees was shown at the U.S. Botanic Gardens in Washington, DC September 11, 2002. They exhibited the Singing Trees to fulfill the Garden’s mission to educate the public about the use of plants as cultural symbols of hope and abundance, as well a positive way to commemorate the terrorist attacks one year earlier.

The students who made the murals, summarized their experiences at the end of the project, knowing that people from all over the world had seen their art at the Botanic Gardens.

“It is great to know that the trees have traveled where we couldn’t - to spread a message of peace.” Ashley, Mt. Lebanon High School
“I feel comforted knowing there are many other young people who care about the earth, families and love.” Alicia, Mt. Lebanon High School
“It exceeded my expectations by expressing an extreme sense of unity and peace.” Charles, Peabody High School.
“It was big thing for everybody in the high school, because people were staying out of trouble. We showed that we can achieve something besides violence, that we can improve the environment and even make history.” Andrew, Peabody High School.

Figure 50: Paula, Meredith and Laurie at the Gardens.
Conclusion: With the first planting of the Forest of *Singing Trees*, the birds now have a place to come from hundreds of miles around, birds who aren’t usually together. Through your hope, heart and creativity, they will find more Trees in the desolation left by fear and hatred. A Climax Forest will grow, the Forest at its greatest height and fullness. I picture this Climax Forest with *Singing Trees* designed by teenagers in Peru who see the universe as filled with rainbows and Australian Aborigines teenagers who will shape their unique idea of a tree on the earth in space. I picture a *Singing Tree* made by Turkish and Greek children in Cyprus, made by Palestinian and Israeli children in Israel, and made by Hutu and Tutsi children in Rwanda.

Ashley of Mt. Lebanon set a clear goal for the destination of the Climax Forest: “Places that are suffering from not being united and not being free.” No one yet knows how to do this, just as none of us knows how to invent the future until we do it. We will figure it out, together.

You can play a leadership role in healing the violence between people. The *Singing Tree* is a joyous, large reminder that humans, who are alone together in space sharing a rare and precious planet, can create together instead of destroying each other.

The fact that a ten-year-old had the vision for this project is important. Without the lens of division worn by so many adults, Meredith saw that all people of the earth could work together, making something beautiful and alive. This is the root of peace.
“This project will grow like a tree, where the light shines.”

-- Sky Foerster, President, World Affairs Council, Pittsburgh, Pennsylvania
Appendix I - The National Standards & Curriculum Tie-ins

The following National Standards of Learning are addressed by the Singing Tree Project. Curriculum ideas are also included to stimulate the thinking of teachers and students about how the Singing Tree can be used to enrich the study of academic disciplines and/or to produce project spin-offs. Each Standard of Learning can be used as a springboard for the imagination of the students.

Geography National Standards

NSS-G.K-12.1 THE WORLD IN SPATIAL TERMS
- Understand how to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial viewpoint.
- Understand how to analyze the spatial organization of people, places, and environments on the Earth’s surface.

Drawing the continents helps students understand geographic representations and the spatial relationship between nations on the earth.

NSS-G.K-12.2 PLACES AND REGIONS
- Understand the physical and human characteristics of places.
- Understand that people create regions to interpret Earth’s complexity.
- Understand how culture and experience influence people’s perceptions of places and regions.

By connecting with sister countries, who are also contributing artwork to the Singing Tree, students can learn about the way culture and geography influences how people see and feel about their country.
NSS-G.K-12.4 HUMAN SYSTEMS
- Understand the characteristics, distribution and migration of human populations on the Earth’s surface.
- Understand the characteristics, distribution and complexity of Earth’s cultural mosaics.
- Understand the patterns and networks of economic interdependence on Earth’s surface.
- Understand the processes, patterns and functions of human settlement.
- Understand how the forces of cooperation and conflict among people influence the division and control of Earth’s surface.

Figure 56: Trader from Sierra Leone who is missing a hand from the ten-year civil war.

NSS-G.K-12.5 ENVIRONMENT AND SOCIETY
- Understand how human actions modify the physical environment.
- Understand how physical systems affect human systems.
- Understand the changes that occur in the meaning, use, distribution, and importance of resources.

NSS-G.K-12.6 THE USES OF GEOGRAPHY
- Understand how to apply geography to interpret the past.
- Understand how to apply geography to interpret the present and plan for the future.

The Singing Tree is a living manifestation of the cultural mosaic and interdependence of the Earth, and is a way for students to join in the forces of cooperation and witness the forces of conflict that divide and control the Earth’s surface.

Figure 57: Detail from Gingko Tree.

Being able to look at all the continents at once on the globe can be used as a springboard for discussion about the distribution of resources as well as geography’s role in interpreting the past and present. Young hearts and minds can begin now to help plan for a future world that works for everyone. (See the UN’s Universal Declaration of Human Rights)
**Civics National Standards**

**NSS-C.5-8.3 ROLES OF THE CITIZEN**
- How is the world organized politically?
- How has the United States influenced other nations and how have other nations influenced American politics and society?

**NSS-C.5-8.5 ROLES OF THE CITIZEN**
- What are the Roles of the Citizen in American Democracy?
- What is citizenship?
- What are the rights of citizens?
- What are the responsibilities of citizens?
- What dispositions or traits of character are important to the preservation and improvement of American constitutional democracy?
- How can citizens take part in civic life?

The structure of the Singing Tree models the idea of the rights and responsibilities of democratic life - expressing one’s values while working together to make something greater - in this case, a work of art; in the case of a democracy, a community, balancing individuality and society.

**Life Sciences Standards**

**Choosing a tree; researching the leaf shape and trunk patterns; and choosing and researching birds can all add to biological awareness.**

The ebb and flow of influence between nations can be discussed by looking at the world as well as by focusing on partner countries in the project. Comparisons can be made and future trends can be explored.

Choosing a tree; researching the leaf shape and trunk patterns; and choosing and researching birds can all add to biological awareness.

**Figure 59: Detail. Linden Tree.**

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NSS-LS.K-4 ORGANISMS AND THEIR ENVIRONMENTS

- Understand that all animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants.
- Understand that all organisms cause changes in the environment where they live. Some of these changes are detrimental to the organism or other organisms, whereas others are beneficial.
- Understand that humans depend on their natural and constructed environments. Humans change environments in ways that can be either beneficial or detrimental for themselves and other organisms.

As people portray what they care about, often food shows up, from pop-tarts to maize to apples to lobsters to cows - a vehicle to study the food chain in different regions.

Animals depend on plants for more than food. Part of the reason this project uses a tree as its central motif is that without trees, there would not be enough oxygen to support life on the planet.

All organisms change their environment - Set up a research project to determine how an environment can be changed by a Singing Tree Mural, interviewing people before and after; are the changes detrimental, beneficial or neutral?

NSS-LS.5-8 STRUCTURE AND FUNCTION IN LIVING SYSTEMS

- Understand that important levels of organization for structure and function include cells, organs, tissues, organ systems, whole organisms, and ecosystems.
- Understand that all organisms are composed of cells—the fundamental unit of life. Most organisms are single cells; other organisms, including humans, are multicellular.
- Understand that Disease is a breakdown in structures or functions of an organism. Some diseases are the result of intrinsic failures of the system. Others are the result of damage by infection by other organisms.

The structure of the Singing Tree mural can be compared to the cellular organization of organisms, with many parts working together to make a whole.

Disease is an issue that arises naturally when young people are asked to express their concerns. Research can be done ahead of time to gain more visual ideas or to be written about to share wider information as part of the display of the Singing Tree. Students in sister countries can discuss the experience and effect of various diseases in their country.
**NSS-LS.5-8 REPRODUCTION AND HEREDITY**
- Understand that reproduction is a characteristic of all living systems; because no individual organism lives forever.

![Figure 61: Star from the Maple Tree.](image)

*Reproduction of Singing Trees grows through this book, the website, the film and by word of mouth.

*The stars are a way to acknowledge that "no individual organism lives forever."

**NSS-LS.5-8 POPULATIONS AND ECOSYSTEMS**
- Understand that a population consists of all individuals of a species that occur together at a given place and time. All populations living together and the physical factors with which they interact compose an ecosystem.
- Populations of organisms can be categorized by the function they serve in an ecosystem. Plants and some micro-organisms are producers—they make their own food. All animals, including humans, are consumers, which obtain food by eating other organisms.

*Paying attention to the ecosystems we live in and how we consume food is essential for living on a highly populated planet where one-third of the people go to bed hungry each night. The project provides a basis for this discussion.*

**NSS-LS.9-12 THE INTERDEPENDENCE OF ORGANISMS**
- Understand that Living organisms have the capacity to produce populations of infinite size, but environments and resources are finite. This fundamental tension...
has profound effects on the interactions between organisms.

- Human beings live within the world’s ecosystems. Increasingly, humans modify ecosystems as a result of population growth, technology, and consumption. Human destruction of habitats through direct harvesting, pollution, atmospheric changes, and other factors is threatening current global stability, and if not addressed, ecosystems will be irreversibly affected.

The fundamental tension between living organisms and resources is the question our young people will be facing as they emerge into a global economy. Grasping the consequences of actions is never easy - and we constantly need information and feedback about how our behavior affects the environment and our neighbors. Openness to input is the way to reverse the trend of destroying irreplaceable habitats, as well as cultures.

The Visual Arts Standards

K-12.1 UNDERSTANDING AND APPLYING MEDIA, TECHNIQUES, AND PROCESSES

K-12.3 CHOOSING AND EVALUATING A RANGE OF SUBJECT MATTER, SYMBOLS, AND IDEAS

K-12.4 UNDERSTANDING THE VISUAL ARTS IN RELATION TO HISTORY AND CULTURES

K-12.6 MAKING CONNECTIONS BETWEEN VISUAL ARTS AND OTHER DISCIPLINES

5-12.2 USING KNOWLEDGE OF STRUCTURES AND FUNCTIONS

5-12.5 REFLECTING UPON AND ASSESSING THE CHARACTERISTICS AND MERITS OF THEIR WORK AND THE WORK OF OTHERS
Figure 64: Apple tree leaves.

**Number and Operations**  
**National Standards**

Figure 65: Daniel uses grid to glue bark on Apple Tree.

**Figure 66: Charles numbers the board of the Apple Tree.**

*Estimating the number of leaves and the length of each leaf is a challenge, as is measuring the circumference of globe, gridding the globe and trunk, and numbering the grids. This is practical application of mathematical thinking.*

NM-NUM.6-12.1 UNDERSTAND NUMBERS, WAYS OF REPRESENTING NUMBERS, RELATIONSHIPS AMONG NUMBERS, AND NUMBER SYSTEMS

NM-NUM.6-12.2 UNDERSTAND MEANINGS OF OPERATIONS AND HOW THEY RELATE TO ONE ANOTHER

NS-NUM.6-12.3 COMPUTE FLUENTLY & MAKE REASONABLE ESTIMATES
English National Standards

**A Singing Tree can be centered on a theme such as a book, using the characters, the settings, and the themes of the story as inspiration for the students' imaginations and expression of values.**

**Figure 67: Renona’s words on the Apple Tree.**

**Figure 68: Detail from Gingko Tree World.**

**NL-ENG.K-12.4 COMMUNICATION SKILLS**
Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

Responding to the demands of society, the workplace and personal fulfillment means understanding the philosophical, ethical and aesthetic of human experience in a multi-cultural world. With the brain being hard-wired to learn from story -- fiction and non-fiction -- the Singing Tree lends itself to connecting to great literature from the U.S. and sister countries.

**NL-ENG.K-12.1 READING FOR PERSPECTIVE**
Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.

**NL-ENG.K-12.2 UNDERSTANDING THE HUMAN EXPERIENCE**
Students read a wide range of literature from many periods in many genres to build an understanding of the many dimensions (e.g., philosophical, ethical, aesthetic) of human experience.

**NL-ENG.K-12.7 EVALUATING DATA**
Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and nonprint texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.
NL-ENG.K-12.8 DEVELOPING RESEARCH SKILLS
Students use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

NL-ENG.K-12.12 APPLYING LANGUAGE SKILLS
Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

Figure 69: Detail from Antarctica from the Apple Tree
Appendix II - One Way to Grow a Singing Tree

For an average class of 24 students.

A plan is a place to start from. Please grow this one with new ideas.

These instructions are for a 12-ft. high by 8-ft. wide mural. Many ceilings are 15 feet high, which means that 16 feet high murals are hard to display.

**MATERIALS:**

3 – 8-ft. x 4-ft. sheets of 1/4” luan (cheaper) or birch plywood, one cut in two (4’x4’) to make two sheets
6 – 4-in. paint brushes
1 – gallon latex or acrylic house paint (any color - buy leftovers from the paint store cheap)
1 – gallon black paint
1 – gallon acrylic gloss medium (for glue and final coat)
12 – tubes of acrylic paints
1 – roll 42-in. or wider acid free paper (pattern for world and tree trunk, leaves)
8 – sets of 24 Prismacolor colored pencils

1 – set of five (1/4-in. to 2-in.) brushes per three students
1 – box colored chalk
4 – yardsticks
3 – 12-ft. x 8-ft. drop cloths
1 – roll masking tape

(when looking for paint Utrecht, Dick Blick and Nasco have good prices)

**MATERIALS FOR DISPLAYING:**

7 – rolls 40-ft. 3-in. wide velcro, one of each side
100 – ¼-in. wood screws
6 – 12-ft. pine, 2-in. x 4-in. boards
1 – 12-ft. pine, 2-in. x 6-in. board

These materials are Museum Quality - They will last a long time and won't fade in the sun.

Figure 70: Making leaves at the Children’s Museum of Pittsburgh, who made the Singing Tree possible in Pittsburgh.

Figure 71: Jeff and John putting up Elm Tree in Rappahannock.
THE STEPS:

1. Preparing the Boards.

Paint EACH SIDE of the six boards with TWO coats of latex housepaint to seal the wood from moisture. Paint the first coat in the opposite direction as the wood grain. After the first coat dries, paint the second coat in the opposite direction of the first coat. Each 4’ x 4’ piece of board will go above an 8’ high x 4’ wide board, making a 12’ high x 8’ high mural.

Label the back of the boards so the order remains constant.

Be sure to give all the edges two coats.

2. Preparing the Galaxy Background.

Paint the front (the smoother) surfaces with black latex paint.

3. Using Jackson Pollack’s splatter and drip method, add layers of stars with thinned paint using a variety of colors. If the stars are too bright, put a thin wash of black to push them back a little, so the tree stands out from the background.
4. **Add details of galaxies and planets**, using realistic references from the Hubble Telescope, the NASA daily website (http://antwrp.gsfc.nasa.gov/apod/), books and National Geographic, as well as imaginary images (angels, UFO’s).

![Figure 76: Saturn on the Maple Tree.](image1)

![Figure 77: UFO on the Elm Tree.](image2)

5. **Making the Earth:** Using the acid-free paper, draw 2 semi-circles each with a 26-inch diameter to make the globe. This can be drawn with a pencil attached to a 26-inch long string that is held or tacked to a center point. Always draw lightly at first in case of mistakes.

![Figure 78: James drawing the earth for the Apple Tree.](image3)

6. **Drawing lightly is essential.** Draw all the continents, unless a new idea emerges, such as using Pangea. This is one of the most difficult challenges of project. Drawing lightly is essential. Making Xeroxes of the continents that can be followed is helpful. (There are obviously no realistic drawings of a globe with all the continents on one side, so it requires careful observation and imagination by the students.)
7. **After drawing the continents**, make loops of tape for putting on the back of the paper securely on a flat surface. Mix three values of blue acrylic paint, a light, middle tone and dark. Decide where the light source is, (the sun), and paint the waters of the earth progressing in shading from light to dark away from the sun.

![Image of a person painting a globe](image1)

**Figure 79: Liz painting Pangea for the Gingko Tree.**

8. **Making the Grid:** After the oceans have been painted, flip over each semi-circle of paper with the straight edges to the middle. In order to make 2 inch x 3 inch squares, start with the inside straight edge, beginning at the top and marking two inches down to the bottom. Using a right angle on the straight edge, draw the horizontal lines to the edge of circle. Then mark three inches all the way across the line. Skip down about six lines and mark that line in three inch increments. A yardstick is a good tool to then draw the vertical lines.

![Image of a numbered grid](image2)

**Figure 80: The Linden Tree World.**

9. **Number the squares** in light pencil that can be erased if a mistake is made. Start on the straight edge at the top, doing one hemisphere and then the next one. Start the second hemisphere with the next number after the last one on the first hemisphere. **Have TWO people check** the numbering because mistakes often happen.

![Numbered grid](image3)

**Figure 81: The numbering of the pieces of the world will look like this.**
10. **Lay the two semi-circular pieces** of paper of the earth on the boards about 1 foot from the bottom, evenly placed on both sides, and trace around the paper. Grid and number the board with a white or light Prismacolor colored pencil EXACTLY as they are on the paper. **Make sure you start** at the top and have the same numbers on the straight edge of the board that are on the straight edge of the painted earth. (Mistakes can be erased with a damp paper towel.) There will be about 300 pieces. Combine the pieces on the curved edge so they are not too small. Now, cut up the world and save it in a large envelope.

![Diagram of traced earth with grid](image)

**Figure 82:** The bottom of the earth should be 1-ft. from the bottom of the boards.

11. **Making the Tree:** After choosing the species of tree, research the overall shape of the tree, the shape and texture of the bark and the shape of the leaves. Laying down all four boards, face up, with the tracing of the earth at the bottom, draw the overall tree with chalk. The chalk can be erased with a damp cloth until the drawing is correct and before the final coat of acrylic gloss medium is put on.

12. **Making the Leaves:** Measure the square footage of the area for the leaves and estimate the size of each leaf (probably 3-4””) to make 300 to 400 leaves. Make 8 stencils out of cardboard based on the leaf of tree that has been selected, so 8 students can start tracing and 8 students can start cutting. (This is a good time for good conversation about any of the Standards of Learning in Appendix II or creating a “Culture of Wisdom” or exploring common values.)

![Images of students cutting leaves](images)

**Figure 83:** Meredith and Russell cut out leaves.

**Figure 84:** As do Anthony and Aaron.
13. Making the Trunk: Go over the outline of the tree trunk in dark chalk on the board. Lay the acid-free paper along the straight edge of each board on top of the chalk outline and rub hard to transfer the lines to the paper. Cut out the trunk using the lines on what will be the back. Using a loop of masking tape, tape the paper to a smooth surface. Mix a dark, middle tone and light value of acrylic paint for the trunk (gold for a brown trunk and silver for a gray trunk make fun highlights). Using the same light direction as you did for the globe, paint the trunk with its particular bark texture, again shading from dark to light.

14. Making the Grid for the Trunk: After the paint on the trunk is dry, flip the two pieces of paper over and draw a grid approximately 2-in. high and 3-in. wide rectangles starting at the bottom. The irregular shape of the trunk will make for irregular pieces, so use judgment to make sure the piece is big enough for someone to draw on. Number all the pieces, starting at the bottom where the trunk is widest and most regular. Then grid and number the board they will be attached to, duplicating the exact shapes of the gridding on the back of the painting. Number the board EXACTLY as you did the painting, having two people checking it. There will be approximately 200 pieces. CUT UP THE TRUNK and save it in an envelope.

15. The Stars: Make out of cardboard or buy five 3-in. to 4-in. stencils of stars. Then draw and cut about 50 stars, depending on the size of the tree. The stars are used to honor someone you love or admire who has died.
16. **Distribution of and Work on the Pieces:** Here are some ideas for distributing the 800 to 1000 parts of the mural:

- Have everyone in a school participate.
- Have the younger children make the leaves, the middle school children make the trunk, the high school students make the world.
- Have families work together.
- Take or send the pieces, some colored pencils and instructions to homeless shelters, hospitals, senior centers, prisons, a sister country, a sister neighborhood, a sister school, or
- Choose a more specific theme, such as visions of health or democracy or conflict resolution or grandparent survival stories (use your imagination).

![Figure 88: Making apple leaves at the Children’s Museum of Pittsburgh.](image)

17. **Share the Story** of the *Singing Tree* and the idea that the earth is the *Singing Tree* of the Solar System to everyone who participates. Then ask people to make a self-portrait or an image that expresses what is very important to them on this earth.
18. Making the Picture on the Leaf or Trunk or World: When making a leaf, it is important to fill up all the white space. The more layers of Prismacolor colored pencils, the more interesting, as they blend and mix in lovely ways. When making a piece of the trunk or world, IT IS VERY IMPORTANT TO DRAW THE PICTURE WITH THE NUMBER READING RIGHT SIDE UP ON THE BACK. (Many wonderful images have been made upside-down or sideways, which can be visually interesting but sometimes is not what the person had in mind.)

19. Gluing: THIS IS IMPORTANT. In order to make a durable work of art, the gluing must be done carefully and thoroughly. Be sure to figure out where the leaf, trunk piece or world piece is going to go ahead of time. Lay out the piece to be glued face down on a piece of scrap paper and cover the back generously with Gloss Medium. Place the glue-coated side of the artwork on the board. Put another piece of scrap paper over the artwork and rub hard with the side of your fist. Then check to make sure the corners are firmly glued. Keep checking all the pieces as you go along and keep adding glue when something doesn’t seem totally stuck to the board, especially corners.

20. Final Touches: After all the pieces are glued on, look for patterns that can be made clearer by adding color. The goal is to make the mural as unified as possible. Often, there are white areas that can be filled in or lightly colored areas that can be made stronger. This is a creative, fun process, especially good for advanced art students.

21. Final Coat: Cover the entire surface with acrylic gloss medium with strokes going in one direction. Let dry completely. Apply a second coat, going in the opposite direction to the first coat. This will protect the painting’s surface and make it very durable.
Figure 91: Krystal, Walter and Tyler adding unifying color to the Elm Tree.

INSTALLATION

**Velcro method:** Put the mural face down on a clean surface with all the pieces flush and tight with each other. Adhere three-inch strips of Velcro along each outer edge of the mural from top to bottom, using a block of wood to rub every square inch very hard and slowly to strengthen the bond (This is called “burnishing”.) Do the same for the strip down the middle and across the top section where the 8-ft. x 4-ft. boards meet the 4-ft. x 4-ft. boards. Next put Velcro on the outside edge of the 12-ft. x 2-in. x 4-in., down the middle of the 12-ft. x 2-in. x 6-in. and the middle of the middle cross braces which will be 41-in. long. Burnish.

Figure 92: Back of Mural.
**Screw Method:** Using black screws, lay the mural on the 8’ vertical supports and 41” cross supports and put a screw in approximately every 8 inches.

The mural can then be raised with three people on each side and leaned against a wall. More permanent installation will require the help of a professional for the particular site.

![Image](image-url)

*Figure 93: Nathan and other Rappahannock students put up Elm Tree.*

Installation design and technical help provided by Bob Johnson of [www.fineearthhandling.com](http://www.fineearthhandling.com).

For further assistance, email lmarshall5@earthlink.net or call (412) 654-7214. Forms for preparatory studies and student evaluations are available on the website, [www.thesingingtree.org](http://www.thesingingtree.org).
Appendix III - Connecting to the Project

- Go to the *Singing Tree website* - www.thesingingtree.org – and join in with a Tree that is already in progress.
- *Start your own mural* and tell us about it. We’ll add your stories and pictures to the website.
- Collaborate with *Sister Countries* through Iearn - www.iearn.org
- Learn more about *Conflict Management* for young people at www.peacelinks.us

![Figure 94: Jason, Tyrell and Mondale paint the background.](image)

- See the *8-minute video*, available through the website.
- See the *30-minute documentary* of *The Singing Trees – A Growing Forest* by student Ken Presutti of the Robert Morris University’s Documentary Center in Pittsburgh, Pennsylvania, available through the website. It has student interviews, lots of images and original music.

![Figure 95: Ken and Rocky filming at RCHS.](image)
Read good books and discuss!

Social Science:

The Singing Tree by Kate Seredy - about a family in Hungary’s experience during World War I.

Joan of Arc by Mark Twain - the story of an outstanding 17 year-old leader who did what no adult had done for 600 years - free France from England.

The Last Hours of Ancient Sunlight by Thom Hartman - about the importance of trees and the fact that earth’s oil won’t last forever.

Science:

The Immense Journey by Loren Eisley - the story of life on earth by a bone hunter/poet who discovered dinosaurs in the Dakotas.

Silent Spring by Rachel Carson – Story about the complex consequences of using pesticides.

Lives of a Cell by Lewis Thomas - about the miracle of how life works on the cellular level.

Cultural Diversity:

Mutant Message Down Under by Marlow Morgan - about the wisdom of Australian aborigines who find abundance in the desert, while acting with faith and cooperation.

Seven Arrows by Hyeheyohsts Storm - Shares the wisdom of the Plains Indians with beautiful illustrations and a fictionalized history woven through.

Maniac McGee by Jerry Spinelli - a fiction story of a homeless white boy with sensitive treatment of racial issues.

The Invisible Man by Ralph Ellison - Story about the experience of being African-American in the United States.
“Rappahannock’s Singing Tree mural towers above our student commons area. Students stop daily to relate to friends the role they played in adding to the Tree. The project has taught our students that art is very much alive and is a means of communication as well as a source of visual pleasure. Many students desperately desire to be part of something larger than themselves; thanks to The Singing Tree, for some of the students in Rappahannock that ‘thing’ was a beautiful art project.”
-- Roger Mello, Principal, Rappahannock County High School, Washington, Virginia, U.S.A.

“The Singing Tree was a wonderful experience for my art classes. Students of all ages and abilities found a way to contribute a meaningful message and image to the tree. It was so successful that we incorporated The Singing Tree’s construction methods into the next year’s project - a mural dedicated to Mr. Rogers that was featured at his memorial service.”
-- Kathrine Borland, Art Teacher, Peabody High School, Pittsburgh, Pa., USA

“Working on The Singing Tree was an exciting experience for my students. I could tell by the look in their eyes. It kept my students’ interest. They learned a different way of interpreting and thinking.”
-- Mark Pelusi, Art Teacher, Mt. Lebanon High School, Pittsburgh, Pennsylvania, U.S.A.

“The children in Sierra Leone felt special that someone was interested to know what they had gone through in ten years of terrifying civil war. For them, The Singing Tree provided an outlet to express how they felt “through art” and to heal psychologically. The whole project was a delight for them. Now I hope someone will see the pictures they have made and “learn” never to let children experience such brutality again. Most importantly, Sierra Leone children will have played a role in promoting peace in the world.”
-- Ahmed Sheriff, President, The Cotton Tree Association of Sierra Leone