



# Building Bridges

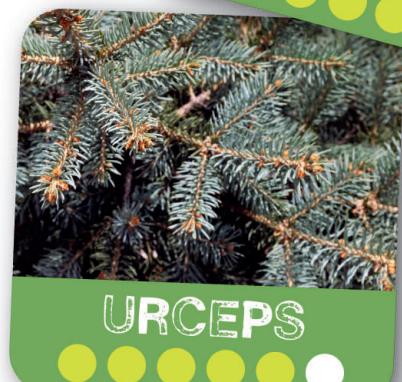
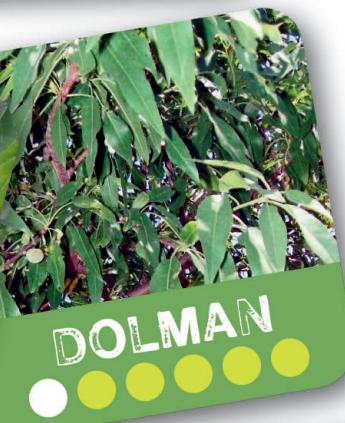
Connecting Diaspora Armenian Students with their Environmental Heritage





## CRACK THE CODE!

The photos below are close-up views of some of the trees that ATP plants in Armenia. Unscramble the letters beneath each photo. Rearrange the letters in the white circles to discover the name of the mystery tree.

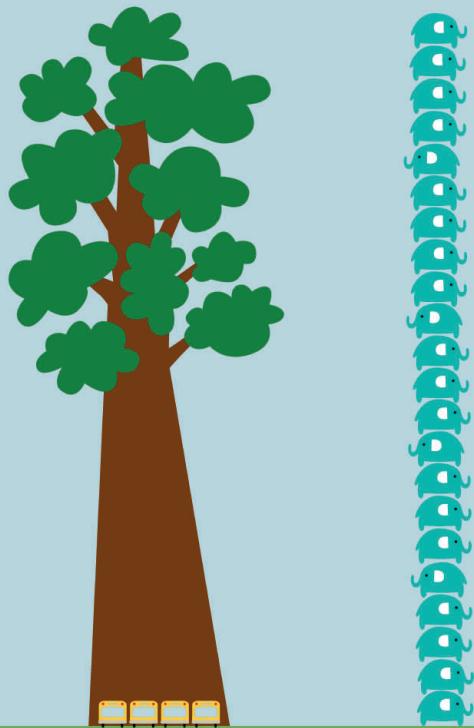


If you need help with this, or any other activity in this newsletter, go to [www.armeniatree.org/buildingbridges](http://www.armeniatree.org/buildingbridges) to download the answer key.





The Taiga Forest is the largest forest in the world and can be found in Canada and Russia. This forest makes more oxygen for the world than any other forest!



The General Sherman, a giant sequoia in California, is the biggest AND tallest tree in the world. At **275 feet tall**, it's taller than 22 male African elephants standing on top of one another and at **30 feet wide**, it's wider than 4 school buses!



It takes about two trees to make enough oxygen for one person to live every year.



The fruit trees that ATP plants produce over  
**400,000**  
pounds of fruit annually.



The bark of the Cinchona tree provides quinine which helps fight malaria and high fevers from mosquito bites.



Only a handful of critically endangered Caucasian Leopards live in the Shikahogh Forest Reserve in Armenia.

Of the approximately  
**3,600**  
plant species in Armenia,  
**123**  
are found  
nowhere else on earth.



Armenian tradition says that there are **365** seeds in one pomegranate representing every day of the year.

1. I am an old tree and I will tell you The Story of Forests.

I have lived here for many years with my friends. Together, we made forests and we covered most of the land.



2. People came here to pick our fruit and hunt for animals.

They rested in our shade and sheltered from wind and rain.

3. One day, they realized they could keep warm by cutting and burning our wood.

6. There were more and more people in the world who needed homes so they cut down more forests to build more cities.



7. Forests were cut down to make railroads to connect people living in different cities. Roads were built in place of forests.

4. Later, people started to farm the land. They needed more land to plant crops and graze their animals, so they cut us down to make room.



8. Forests were being cut down faster than they were growing. This made me sad because there were very few of us left. Many of our animal friends lost their homes and the air became less clean. This was bad for our home, our Earth.



9. Eventually people realized how important we are for the environment, and they began to preserve forests by cutting down fewer of us and planting new friends around us.

10. Armenia Tree Project helps the environment by planting trees and teaching people why they are important.

I have lost many friends, but now I have found new ones.

# The Tree Cookie Game

A cross section of a tree is called a tree cookie and the rings within it tell how old the tree is and what it has lived through. A ring is formed each year the tree is alive and sometimes it will have markings from a fire or even a drought it went through that year. Gather your friends and play the tree cookie game to see how good you are at reading a tree!

## You Will Need:

- a playing piece for each player (such as a pebble)
- 4 small pieces of paper with 1 through 4 written on them
- a hat/bag in which to put the pieces of paper

## How to Play:

1. Begin by placing your playing pieces in the middle of the tree cookie. The youngest player goes first, then the game continues clockwise.
2. Pull out a piece of paper from the hat or bag. Move your playing piece outward as many rings as the number on the paper.
3. Watch out! If you land on a tree marking, use the legend below to find out if you have to move backward or forward.
4. Remember to place the piece of paper in the hat or bag before the next player's turn.
5. First player to reach the bark wins!

A narrow ring is formed during a period of drought because of slow growth. **Move backward 1 ring.**

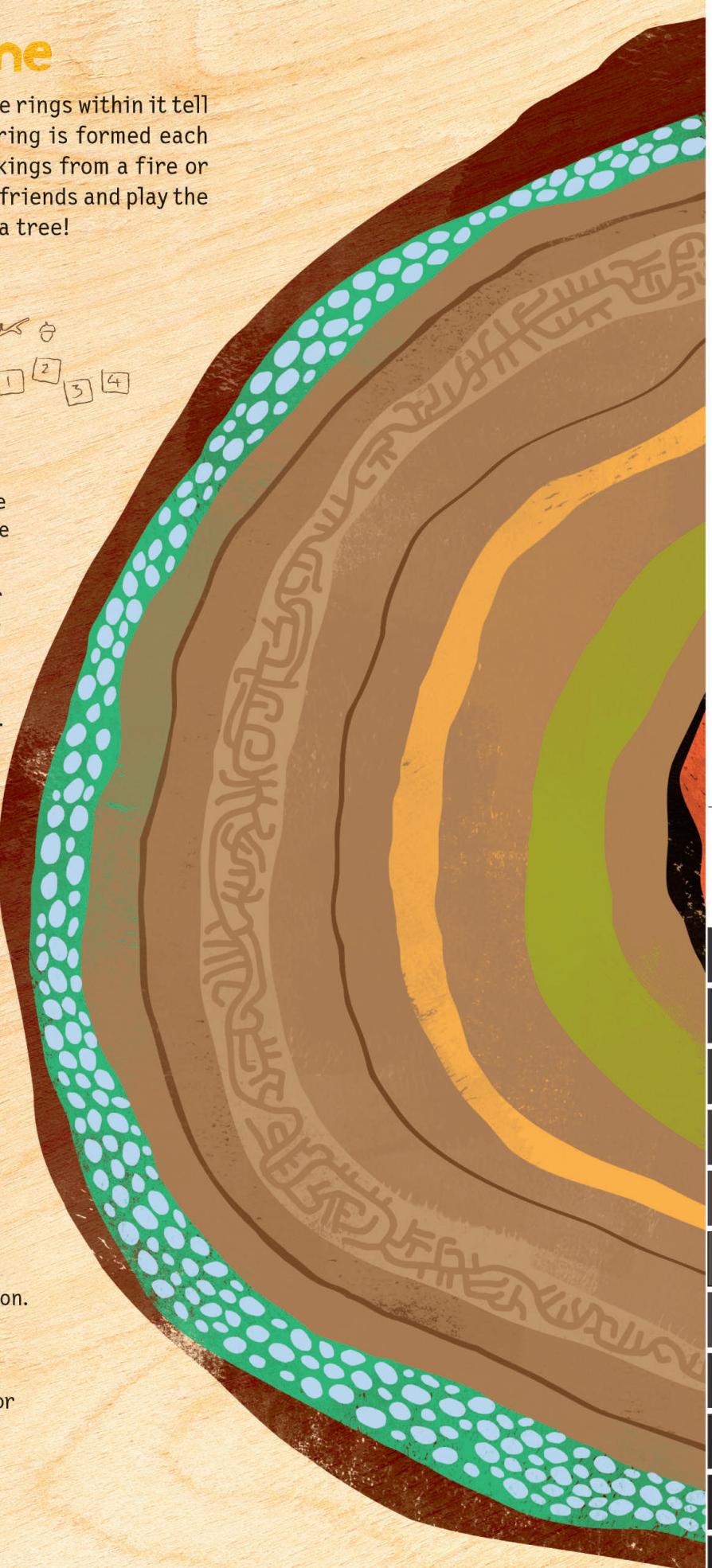
This is a scar left by a forest fire. **Lose a turn.**

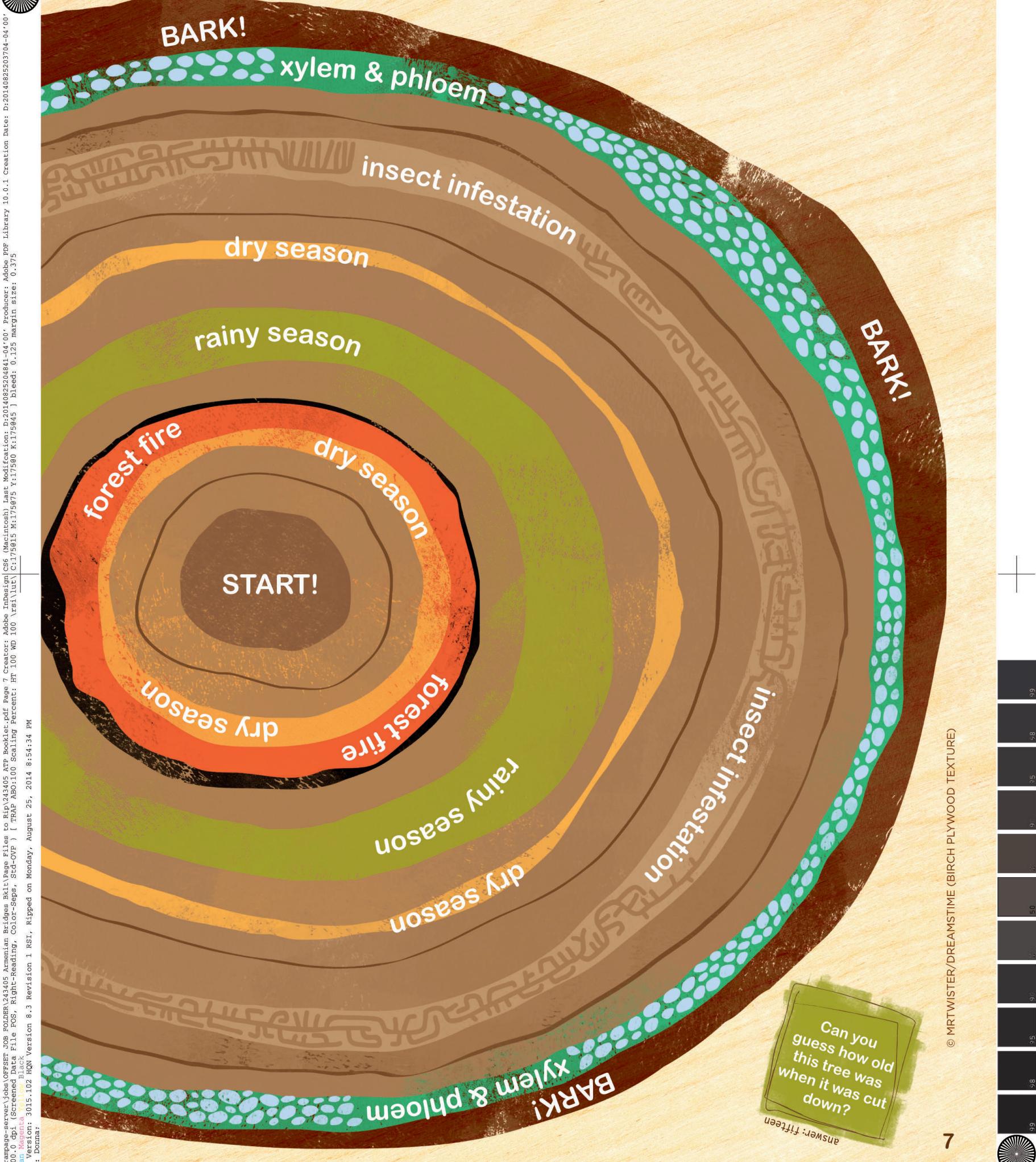
A wide ring is formed during a rainy season period because of rapid growth. **Move outward 1 ring.**

These tunnels are caused by wood-boring insects and are a sign of insect infestation. **Move backward 2 rings.**

Xylem and phloem are a tree's pathways for water and food. **Move 1 ring outward.**

This is the tree bark. **You win!**





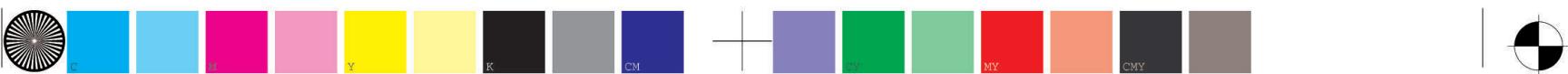
© MRTVISTER/DREAMTIME (BIRCH PLYWOOD TEXTURE)



## SPOT THE DIFFERENCE!

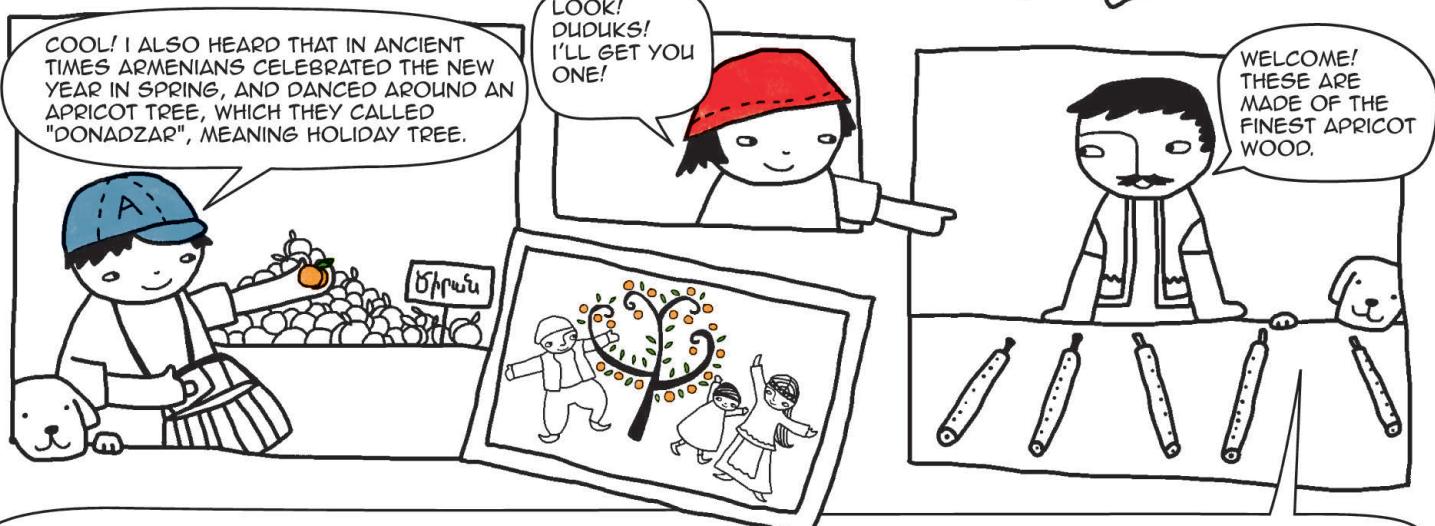
Do you know what chewing gum, ping pong balls, and crayons all have in common? They are all things you might find in your home that are made from trees! Look below and you will see some more examples of things that are made from trees. Try to spot the 11 differences between the two photos. Ready, set, go!

- rubber gloves**
- chocolate bar**
- fireworks**
- chewing gum**
- egg carton**
- nail polish**
- buttons**
- paddle ball**
- pencils**
- ping pong balls**
- wooden blocks**
- shoe polish**
- crayons**
- book**
- vanilla extract**
- vanilla bean**
- cutting board**
- cork board**



# gram and maral

ARAM AND MARAL ARE AT THE MARKET SHOPPING FOR A PICNIC.



LET ME TELL YOU A STORY. LEGEND HAS IT THAT WIND FELL IN LOVE WITH AN APRICOT TREE AND DEFENDED IT AGAINST HURRICANE. HURRICANE AGREED TO SPARE THE TREE IF WIND WOULD STAY ON LAND FOREVER, OTHERWISE THE APRICOT TREE WOULD DIE. WHEN AUTUMN CAME AND THE LEAVES FELL, WIND HAD NOTHING TO PLAY WITH AND FLEW AWAY TO JOIN HIS FRIENDS. SO THE APRICOT TREE DIED AND ONLY ONE SMALL BRANCH SURVIVED. YEARS LATER, A BOY FOUND THE BRANCH AND USED IT TO CARVE A DUDUK. AS HE BROUGHT IT CLOSE TO HIS LIPS, THE DUDUK PLAYED A SAD MELODY ALL BY ITSELF.



# WE NEED TREES!

Trees provide many resources to animals and people - you can discover some of these in this picture. For example, many animals live and eat in the tree below. They are part of a food web which shows how they depend on each other for food. Using the arrows for help, place the stickers inside the dashed circles to fill in this tree's food web. Hint: Start with the sun, it's the source of energy!

Leaves catch energy from the sun and make their own food by combining it with the carbon dioxide in the air and the water absorbed by the tree's roots. This is called photosynthesis.

Trees provide a habitat for many living things.

Trees bear delicious fruits.

Leaves absorb carbon dioxide from the air and release clean oxygen for us to breathe.

Trees make shade, cooling the air around them. This gives us a place where we can rest when it's too hot.

Mushrooms are decomposers that break down dead plants and animals into particles called nutrients. Trees can then absorb these nutrients to help them grow.

The roots of a tree hold the soil together and prevent erosion. This way, the soil stays in place when strong winds blow and heavy rain falls.

# Lights, Camera, Environmental ACTION!

## Dear Building Bridges Readers!

ATP is inviting your class to participate in our first ever environmental contest! If you are an Armenian student in grades 3-5th, please create **a 2-3 minute video** with your class that shows how ATP has inspired you to make a difference in your community or in Armenia. Did you raise money to plant trees in Armenia? Did you start a recycling program at your school? **Your video should show us what your class was inspired to do and how you accomplished your goal.**

# FIRST EVER ATP ENVIRONMENTAL CONTEST!

# How to enter

Go to [armeniatree.org/environmentalcontest](http://armeniatree.org/environmentalcontest) by **January 31st, 2015** to upload your video and fill out an online form. You will be asked to write an explanation of how your entry relates to the theme. We will choose one winning class from each grade.

**The winners will be announced  
on Earth Day, April 22nd, 2015.**

## Cool prizes!

**Each winning class will receive:**

- ✓ an iPad loaded with science and nature themed apps.
  - ✓ a year-long subscription to National Geographic Kids magazine.
  - ✓ a grove of ten trees planted in your school's name in Armenia.
  - ✓ your school name and class picture will also appear in the next edition of our Building Bridges newsletter.

## **Contest Terms and Conditions:**

Each entry will be judged on **four** criteria: creativity of environmental action, quality of video, involvement of students in the video-making process, and overall impression.

Only one submission per class will be accepted. If two or more classes reside within the same grade at your school, each class can submit a separate entry. Entries by individual students will not be accepted.

ATP reserves the right to reuse and distribute the entries on its website or via any other medium.

Entries will not be returned.

Contest results are determined by ATP and decisions are final.



Building Bridges is an ATP program that helps students learn more about Armenia's environment. Be sure to visit our website to explore more fun ways to learn about Armenia's environment and check out the previous [Building Bridges newsletters](http://www.armeniatree.org/buildingbridges) at [www.armeniatree.org/buildingbridges](http://www.armeniatree.org/buildingbridges).

## COOL FACT!

ATP has a horse named Nishan.  
He helps prepare the soil for planting trees!



## GLOSSARY

Deforestation- the removal of trees, often as a result of human activities



Reforestation- the planting of trees where forests once existed but were destroyed

Xylem- the channels in a tree that carry water up the stem or trunk

Phloem- the channels in a tree that carry up food and other nutrients up the stem or trunk

Photosynthesis- the process by which plants make food and oxygen by capturing sunlight and mixing water and CO<sub>2</sub> together

Food Web- a community of animals and plants that rely on each other for food

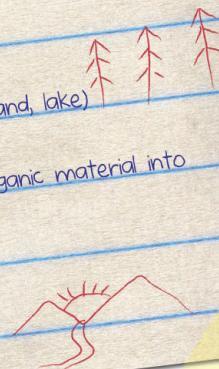


Habitat- a type of environment where many plants and animals live together (e.g. woodland, lake)

Decomposer- a type of organism, like bacteria or mushrooms, that break down dead organic material into nutrients that other animals and plants consume



Erosion- is the washing away of soil by the flow of water



## ARMENIA TREE PROJECT

Developed by Nayiri Haroutunian and Sarah Hayes. Designed and illustrated by Alik Arzoumanian  
 Funded by the Thomas A. Kooyumjian Family Foundation as part of ATP's Building Bridges Program  
 Armenia Tree Project (617) 926-8733 (TREE) [www.armeniatree.org](http://www.armeniatree.org)

**Do you want to be a tree hero and make Armenia greener? You can make a donation to plant a tree.  
 Just cut out this form and mail it with your donation to the address below. And thanks!**



**YES! I WANT TO PLANT A TREE! Your name \_\_\_\_\_**

**ENCLOSED IS MY DONATION OF:**

\$ \_\_\_\_\_

**PAYMENT METHOD:**

Check    Visa    Mastercard    Discover    American Express

Please make checks payable in U.S. dollars to "Armenia Tree Project" and mail to Armenia Tree Project,  
 65 Main Street, Watertown, MA 02472

**BILLING ADDRESS:**

**Parent's Name** \_\_\_\_\_ **Phone Number** \_\_\_\_\_

**Address** \_\_\_\_\_ **Email** \_\_\_\_\_

**Credit Card #** \_\_\_\_\_ **Expiration Date** \_\_\_\_\_ **Card-Holder's Signature** \_\_\_\_\_

BB14



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