

Summerfield Trail

Plan(t)ing for the Future

Why should we reforest developed areas?

Replanting trees can help reduce erosion and nutrient depletion. Without trees, the topsoil would be washed away, and the nutrients would go with it, as the minerals and chemicals that make soil rich and fertile are mostly stored in the vegetation above ground. This polluted runoff then flows into streams and lakes. The excess nutrients found in fertilizer (e.g., nitrogen and phosphorus) can cause algae to grow faster than ecosystems can handle. Significant increases in algae harm water quality, food resources and habitats, and decrease the oxygen that fish and other aquatic life need to survive. Large growths of algae are called algal blooms and they can severely reduce or eliminate oxygen in the water, leading to illnesses in fish and the death of large numbers of fish (also known as a “fish kill”). Nutrient pollution in ground water - which a significant amount of people use as their drinking water source - can be harmful, even at low levels.

Why should we plan(t) for the future?

By their very nature, trees and green space provide benefits and add value to developments. The ability of trees to improve and maintain the quality of water, soil, and air and to remove pollutants from the air is well known. Trees also provide shade and help lower temperatures during hot weather. Trees enrich people’s lives and beautify landscapes.

Preserving trees has positive effects on the image and attractiveness of developments and enhances developers’ reputations and profits. Preserving trees in developments increases a project’s attractiveness, monetary value, and marketability by providing aesthetic and functional values. Lots where trees are preserved can be sold more quickly and at higher prices. The Maryland Department of Natural Resources Forest Service says that landscaping, especially with trees, can increase property values as much as 20%. Developers who understand these values realize that it is in their best interest to encourage the preservation of trees and green spaces.

Take a look around your yard and village. Do you see a place to plant a tree on your own yard? Is there a common area or village that could benefit from reforestation? Do you see a new development area where existing trees should be preserved? We can help reduce storm water runoff, nutrient pollution in our streams and lakes, and beautify our community. We can all plan(t) for the future, by adding new trees and preserving existing trees in our community.

Trail Start:

Park at the rear of Deer Crossing Elementary School. Your Quest will begin on the foot path just beyond DCES and ends at the Tot Lot on Mississippi Lane. Feel free to stop and play for a while after your Quest! The trail is about 1.5 miles and is considered EASY since the trail is paved.

*Please note some of this Quest uses sidewalks close to residents’ private property. Please be respectful of people’s yards and do not trespass. Also, please leave no trace on your hike. Any trash you make, please take home with you and only take pictures of things you may find interesting. Thanks and Happy Questing!

Supplies to bring:

- Quest Instructions and LogBook
- Pencil
- Water and a snack
- Sunscreen and
- Bug spray

PART I


Why are trees so important?

Maybe you have an answer right away. Maybe you can even think of several answers. No matter what, you can probably find a few more. Ask your family and friends why it's so important for us to keep trees around. Imagine what your neighborhood would look like without any trees in it. How would your backyard be different? How about the park? The school? What else would be different? Go ahead, start some conversations!

On this Quest, you will look for some of the types of trees that can be found in our community. Follow the trail in order to answer the clues to solve the Quest.


Quest Directions:

1. On the path make a left onto Douglas Avenue's sidewalk at the end of the path. Once on the sidewalk, head up the hill. Continue past Watson Ct. and Samuel Rd. Just when you start going downhill again there will be a small path on your right. Continue to follow the path.
2. Follow the path all the way to the end. Here you will be at Finn Drive. Carefully, cross the street and onto the path that begins at the "T" intersection where Samuel Rd. and Finn Dr. meet. At the bend in the path, you will see a grove of evergreen trees.

Many species of wildlife live among the conifers and use them for food. Squirrels love to dig out the pine nuts and stash them for a winter snack. Mourning D ___ ___  ___ nest in the protective shelter of these large trees. Chickadees pick boughs clean of insects. Hawks use the treetops as lookouts. Groups of evergreen trees camouflage deer. Branches lying on the ground make perfect homes for snakes, salamanders, and shrews. Owls also find comfortable perches in the tree tops. It's amazing how many animals can benefit from one group of trees!


3. Back track towards Samuel Rd. and Finn Dr. "T" intersection. Once there turn left. While you walk, enjoy looking at people's landscaping. How many different kinds of trees can you find? Notice the natural shapes of the trees. How are they different? How are they the same? Notice the variety of colors. Can you find any trees with berries or fruit?

While you are walking, keep your eyes peeled for the smallest variety of maple tree. Can you find it? Here's a hint--The colors of this type of maple tree range from light to dark green and they are also found in every shade of red. They can be light, bright, medium, burgundy and blackish red. You got it! It's the Japanese maple tree!

You may also know of another variety of maple tree. These types of maples only grow in southeastern Canada and the northeastern United States. They are called S ___ ___  ___ Maples because of their sweet sap. You have probably enjoyed the syrup from these trees on your morning pancakes and waffles! Yum! Isn't nature great!

4. Continue on Finn Drive's sidewalk until you see the traffic circle. Carefully, cross the street onto the traffic circle. There are three deciduous trees that are on the outer part of the circle. These three trees are Red Oaks. Take a closer look at the branches. Notice the different parts of the branch and what is growing close to the base of the leaves. What do you think those little nubs (cupules) will become?

Oaks, as well as other trees, can improve environmental conditions in a landscape. The trees casts shade to cool the ground, block or diminish wind that filters through its branches and foliage, and can help stabilize soil with its root system.


Oaks also play an important role in forest ecology. The oak tree itself acts as a habitat, providing cover for birds and tree-dwelling critters. While a wide array of wildlife, from birds to squirrels and deer, use the trees seeds, better known as ___  ___ N ___, for a high-protein food source.

Fun Fact Alert! The Cellon Oak in Florida is 83 feet tall, 108 inches around, and has a crown spread of 150.5 feet. It is so big that it can be seen from space!

5. Turn and face Huckleberry Way. Carefully cross the street towards Huckleberry Way and when you reach the sidewalk, turn right and continue on Finn Drive. Walking up Finn Drive (towards the pool) you will find the last trail (If you hit Mississippi Dive you went too far!). Go around the bend in the path. Just ahead on the left you will find a pine tree.


Did you know that pinecones can help you predict the weather? Sounds impossible, but it's true! When the weather is dry the pinecones open up and when it's going to rain they close down. Why does this happen? Pinecones open and close depending on the humidity to help seed dispersal. Inside the pinecone there are lots of feather light seeds. When the weather is dry the pinecone opens up and wind will catch the seeds and allow them to be dispersed in the air far away from the original tree.

When the humidity rises and rain is likely, then the pinecone closes up to prevent the seeds from becoming water logged. Once wet, the seeds would be too heavy to catch the wind well and they would travel only a short distance.

Pinecone seeds also have another name—Pine nuts! Many species of birds and ___ Q ___ ___ R  ___ feed on pine nuts, and people even eat some varieties of pine nuts, too.

6. Before reaching the Tot Lot, you will reach a horseshoe shaped side path (pass unless you want to explore!) when you reach the part of the path that curves to the right. There are only two types of trees along the left side of the path:

One of the trees is a **Coniferous** tree. These trees keep their leaves throughout the year, shedding only the oldest leaves. Some of the best-known members of the conifer family are pines, spruces, firs, and hemlocks. The cones of the conifers are its flowers.

The other tree is a **Deciduous** tree. These trees are also known as broadleaf trees because the leaves are generally larger and wider than those of conifers. The larger leaf size means a greater surface area for photosynthesis, but it also means the leaf is too fragile to withstand winter conditions. Therefore, most deciduous trees D _ _ _  their leaves in autumn.

Congratulations, you did it! Your Quest ends at the tot lot. After completing Part II enjoy the tot lot!

PART II

Unscramble the letters from the clues you answered during the Quest and enter it in the space below to complete the sentence.

Now that you have the last “_ _ _ _ _” of your Quest, look around where you ended and find the symbol that matches your unscrambled word. Now, gently look and keep a sharp eye for a hidden LakeQuest box. Follow the instructions inside the box to show that you have completed this Quest.

IMPORTANT!

Make sure you put the Quest materials back in the box and return the box to the location you found it in so other LakeQuest Teams can have fun finding it too!

Did you have fun? Want to learn more?

If you are interested in tree identification on the go, check out these Smartphone Apps:

Leafsnap: an electronic field guide developed by researchers from Columbia University, University of Maryland, and the Smithsonian Institution. This free mobile app uses visual recognition software to help identify tree species from photographs of their leaves.

What Tree is That?: The Arbor Day Foundation’s tree identification guide for smartphones.

Trees Word Search Puzzle

M H J C D O O W D E R S X P H
E M Y O B A B O A B D O B E I
E G D N U U U P A S E N I C C
I N O I T A D X A S R E R A K
S A R F A S S A S P O E C N O
H Y F E A C C U Y R M R H R R
G N U R H M C S U U A G W X Y
W A K A R E N E G C C R I C Z
A B N C A W R I F E Y E L Y F
L A W A O I O A K I S V L P R
N M V Q N L O J D A R E O R U
U B J O K A M U E E O H W E B
T O C H J U B E Q N C P Z S B
E O N E D N I L H E I T B S E
S Q O B E E C H G A S P O P R

BAMBOO
BANANA
BANYAN
BAOBAB
BEECH
BIRCH
CEDAR
CONIFER
CYPRESS
EVERGREEN
FIR
GENERA
HEMLOCK
HICKORY
LINDEN
OAK
PECAN
PINE
REDWOOD
RUBBER
SASSAFRAS
SEQUOIA
SPRUCE
SYCAMORE
UPAS
WALNUT
WILLOW
YUCCA