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SPECIAL EDITION!

# Arbor Rangers™

FORESTERS OF URBAN NATURE™

\$0.00 US

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APR

2016



Get ready to exercise your brains with these fun word games, mazes & activities brought to your community by the **Arbor Rangers™**!

Special THANKS to IDNR Dept. of Forestry/CUF, Hoosier ReLeaf, IUFC, Purdue University/Indiana Arborist Association and our growing fans!



Jeff  
Harris

Our Sun's solar energy helps plants, like trees, to grow.

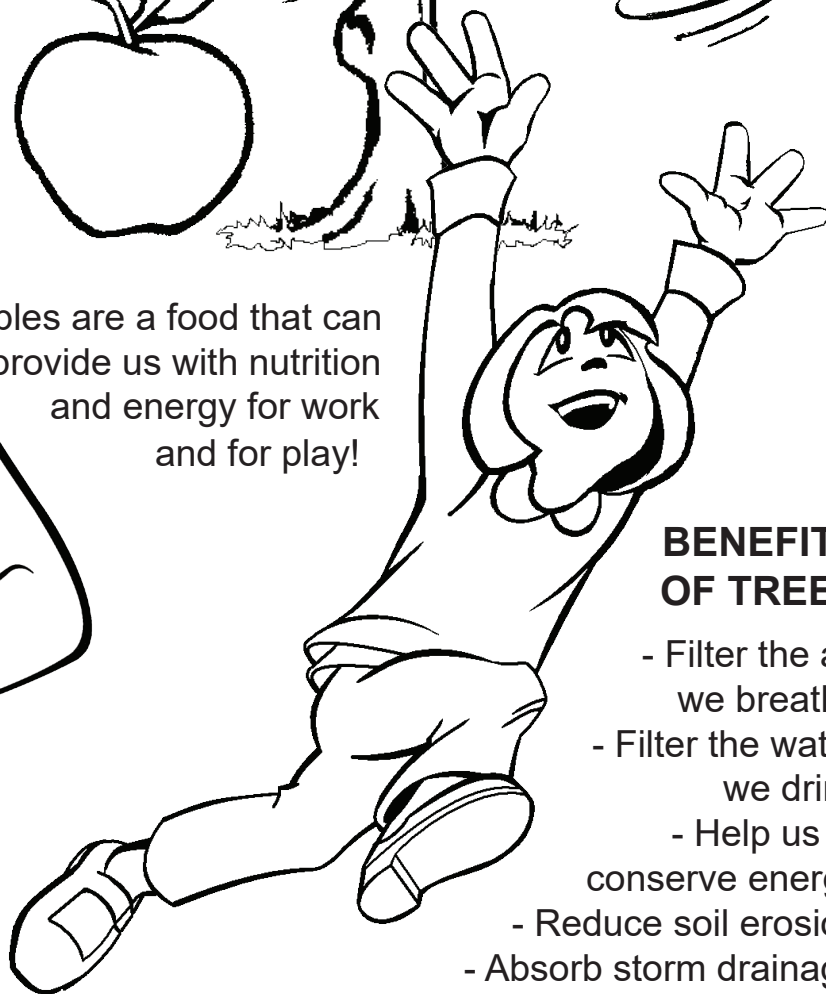
Apple trees use energy to produce food.



Apples are a food that can provide us with nutrition and energy for work and for play!

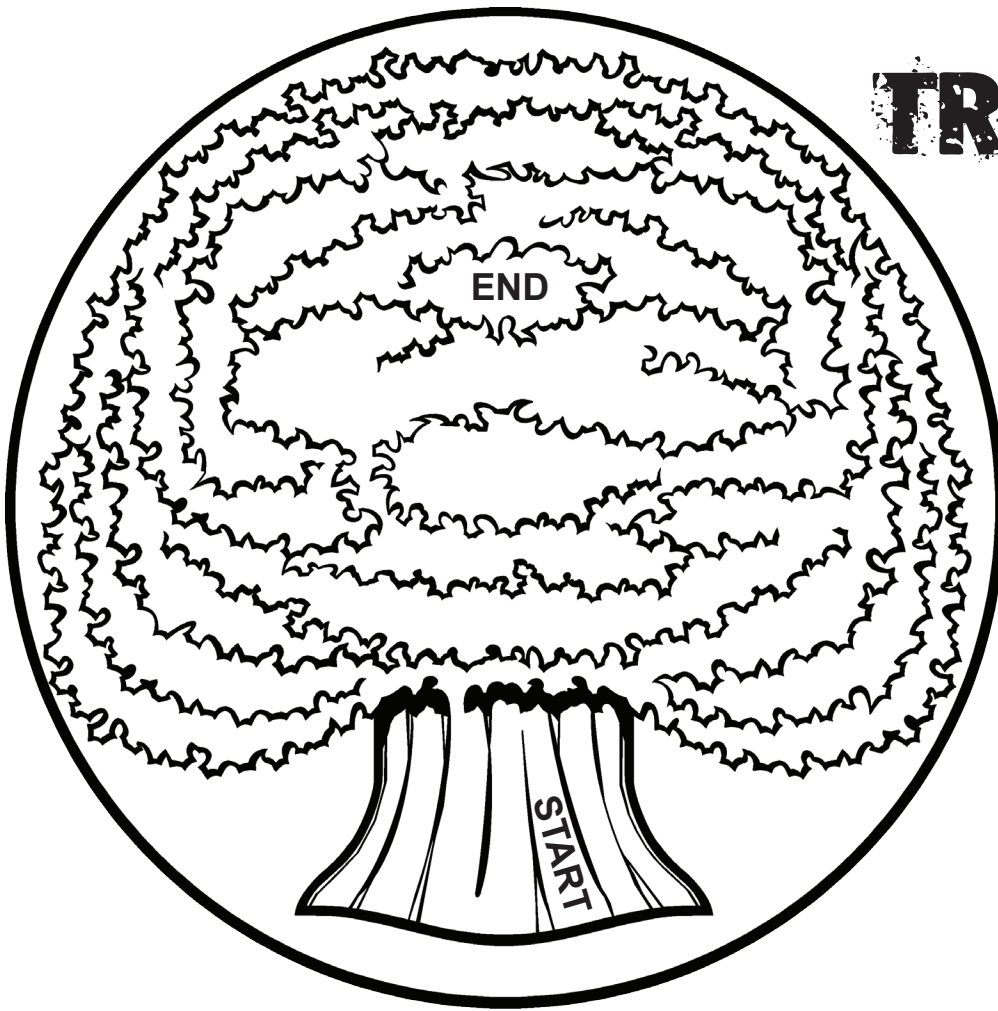


Keiko loves trees, apples and to play! She also loves to draw and color. Let's color this page!



### **BENEFITS OF TREES**

- Filter the air we breathe
- Filter the water we drink
- Help us to conserve energy
- Reduce soil erosion
- Absorb storm drainage
- Beautify and add value to our land



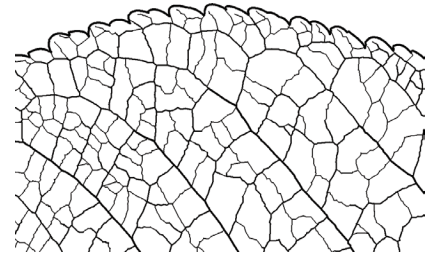
# TREES

that

a-MAZE!



Find your way to the tree top.  
Begin from the **START** at the  
tree's lower trunk. Try to work  
your way up through its canopy  
leaves until you reach the **END**.



A tree leaf close up. What they do is amazing!  
Look up **PHOTOSYNTHESIS** to see why!

## WORD



## SEARCH

What sort of things might you find  
in our urban forests?

Find the words below in the word search puzzle  
to the right by circling each word as you discover them.  
Study carefully, because some of the words may be  
upside-down, backwards and diagonal! "ANTS" has  
already been found. Can you find the other words?

ASH	FOREST	REDBUD
BARK	FOX	ROOTS
BEAVER	GINKGO	SAP
BRANCH	LEAF	SEEDS
CONES	LOGS	SPRUCE
DEER	MAPLE	SQUIRRELS
DOGWOOD	NEST	TRUNK
EAB	OAK	TULIPTREE
FALL	OWL	TWIG
FIR	PEAR	WALNUT
FLOWERS	RACCOON	WOLF

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



# TREEBUS

What is a "treebus"? A treebus is a rebus (or word puzzle) that relates to trees. These use a combination of pictures, letters, numbers and symbols to form words or phrases. See how many word puzzles you can figure out below on the left and write your answers on the right. (See the example.)

EXAMPLE: A +  ANSWER: **ACORN**



1. \_\_\_\_\_



2. \_\_\_\_\_



3. \_\_\_\_\_



4. \_\_\_\_\_



5. \_\_\_\_\_



6. \_\_\_\_\_



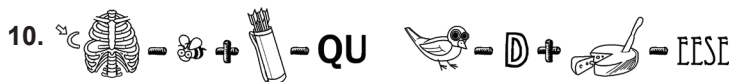
7. \_\_\_\_\_



8. \_\_\_\_\_



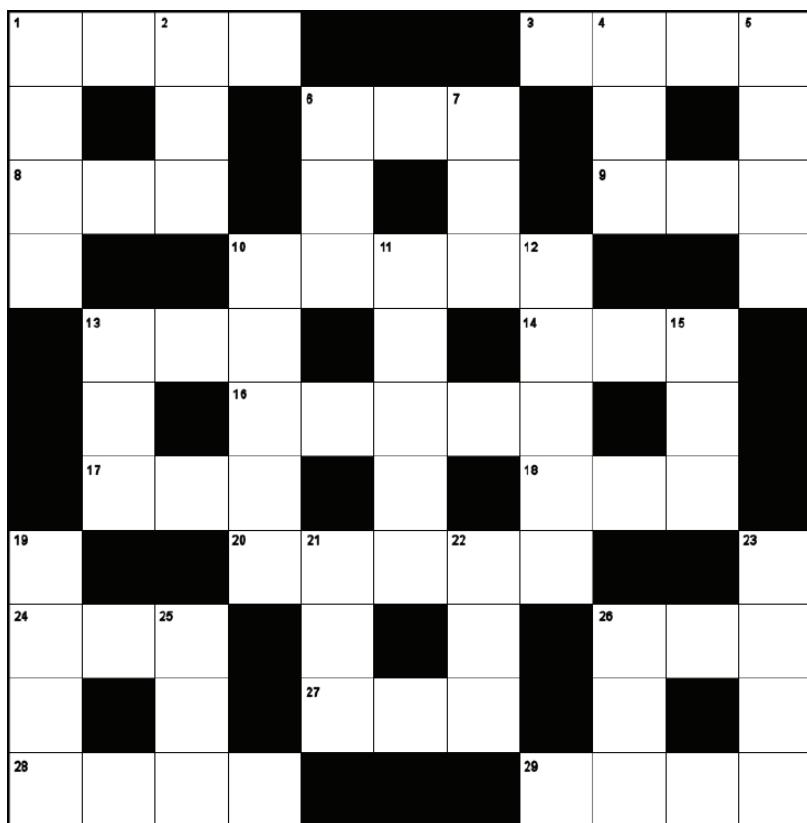
9. \_\_\_\_\_



10. \_\_\_\_\_

TREEBUS ANSWERS: 1. dog + wood (DOGWOOD) 2. pin yolk-y (PIN OAK) 3. sick + a + mower (SYCAMORE) 4. sweep+ing-s well+o (WEEPING WILLOW) 5. y+pillow-p pop+lure (YELLOW POPLAR) 6. sweep-p+tt+gum (SWEETGUM) 7. honey halo-ha+crust-r (HONEY LOCUST) 8. bread-ba m+ape+pole (RED MAPLE) 9. armor+can elbow-bow+m (AMERICAN ELM) 10. rib-b+quiver-qu bird-d+cheese-eese (RIVER BIRCH)





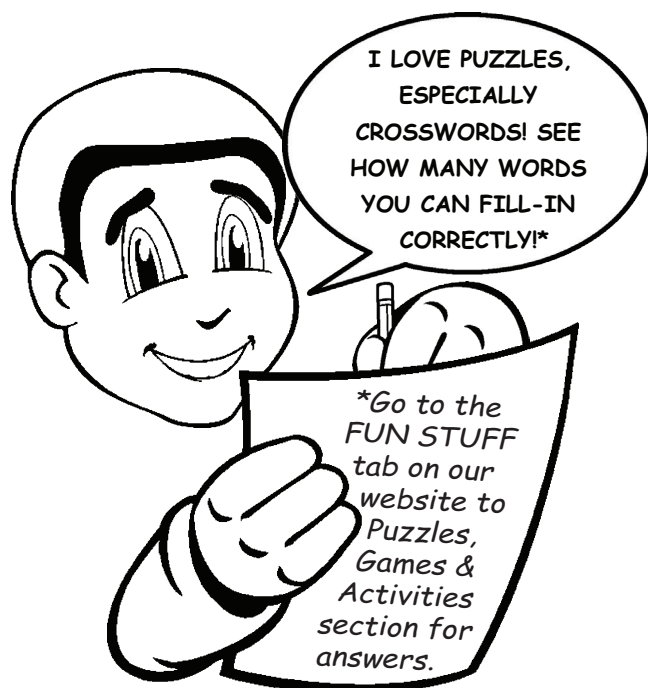
# Cross-WORDS No. 001

## DOWN

1. These clusters of living cells form on twigs to produce leaves or flowers.
2. A charity race event with sponsored runners supporting a particular cause.
4. A common shade tree nearly wiped out by a disease carried by beetles.
5. A strong cord made of natural or artificial fibers and used to climb trees.
6. To glide downhill over snow, while avoiding trees along the way.
7. Common acronym meaning to give delicate and affectionate attention.
10. Arbor Ranger Sandy's last name; also a tree species.
11. Term relating to the countryside or farmland.
12. Able to survive under unfavorable climate conditions.
13. Area of a garden or mulched landscape for ornamental plantings.
15. To haul away something, such as a broken down vehicle by a truck.
19. A public land area used for recreation, like camping, hiking and picnics.
21. This tree produces acorns which squirrels love to gather and eat.
22. Acronym for a digital display that uses liquid crystal cells.
23. A robin's treehouse that is made of twigs and twine.
25. An inflated feeling of pride in oneself.
26. Acronym for the name of the organization of Certified Arborists in Indiana.

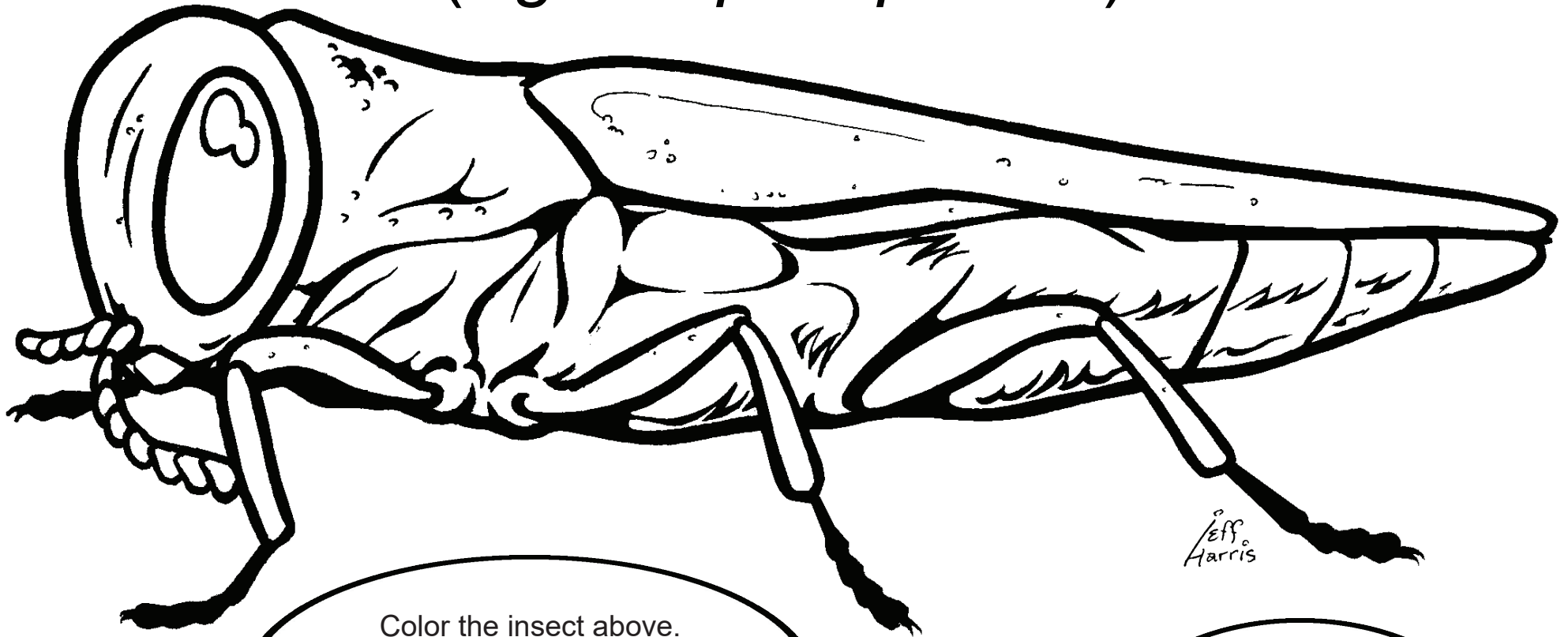
## ACROSS

1. Perched high in a tree is this flying creature chirping early in the morning.
3. A sweet, juicy and gritty-textured fruit grown on certain tree species.
6. Don't forget to \_\_\_\_ the time on your alarm or you might wake up late!
8. Home for a fox in the woods.
9. An aerial diagram which is sometimes used to plot tree locations.
10. Its white paper-like bark was used to make canoes.
13. An insect that is vital in the pollination of flowers and food crops.
14. This social insect lives in a colony; some species chew through decaying wood.
16. A mistake, like believing tree-topping will not harm a tree.
17. Causal way of addressing a physician using this shortened title.
18. Water vapor that condenses onto cool surfaces overnight.
20. A tree or shrub having red berries and prickly shiny evergreen leaves.
24. Counting the rings of a log can provide you the tree's approximate \_\_\_\_.
26. Frozen substance that can collect on trees causing them to break.
27. To be silly, joke or tease one another; could also be a young person.
28. A hardened woody lump on a tree where a branch once grew.
29. Used to melt 26 ACROSS, but can cause serious dehydration in plants.



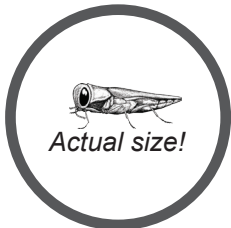
# EMERALD ASH BORER

(*Agrilus planipennis*)



Jeff  
Harris

Color the insect above.  
For more EAB information, go to:  
<https://extension.entm.purdue.edu/EAB/>  
and remember...



Actual size!



...Avoid moving  
firewood across County  
and State Lines to help  
reduce the spread  
of infestation!

# WORD

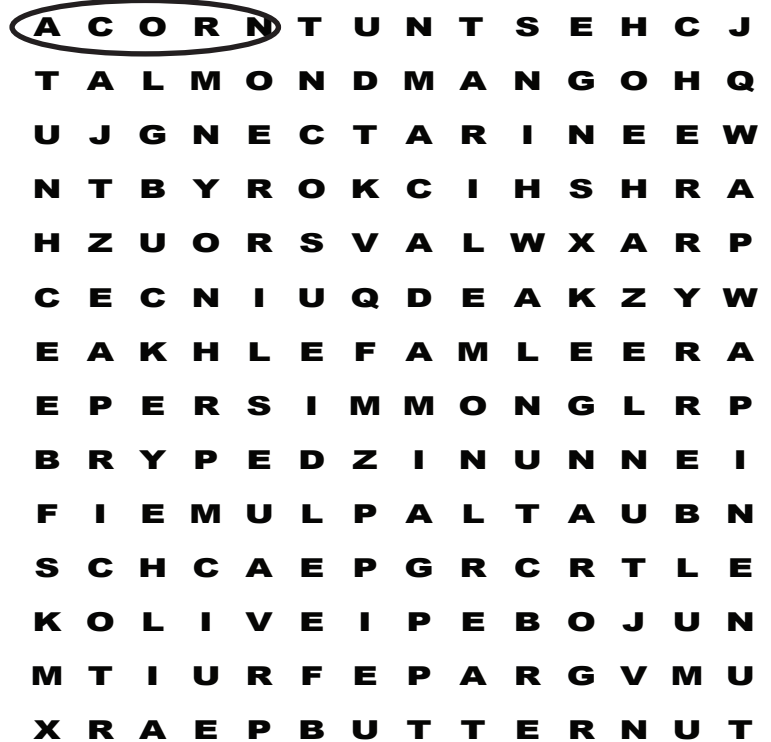


# SEARCH

**Trees can provide an abundance of food for humans, birds and animals!**

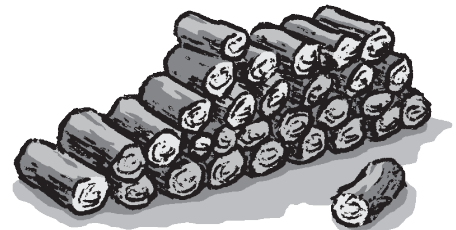
**FRUITS 'n NUTS:** Find the words below in the word search puzzle to the right; circling each word as you discover them. Study carefully, because some of the words may be upside-down, backwards or even diagonal! The word "ACORN" has already been found. Can you spot the other hidden words?

ALMOND	GRAPEFRUIT	ORANGE
APPLE	HAZELNUT	PAWPAW
APRICOT	HICKORY	PEACH
BEECHNUT	LEMON	PEAR
BRAZIL NUT	LIME	PECAN
BUCKEYE	MACADAMIA	PERSIMMON
BUTTERNUT	MANGO	PINENUT
CHERRY	MULBERRY	PLUM
CHESTNUT	NECTARINE	QUINCE
FIG	OLIVE	WALNUT



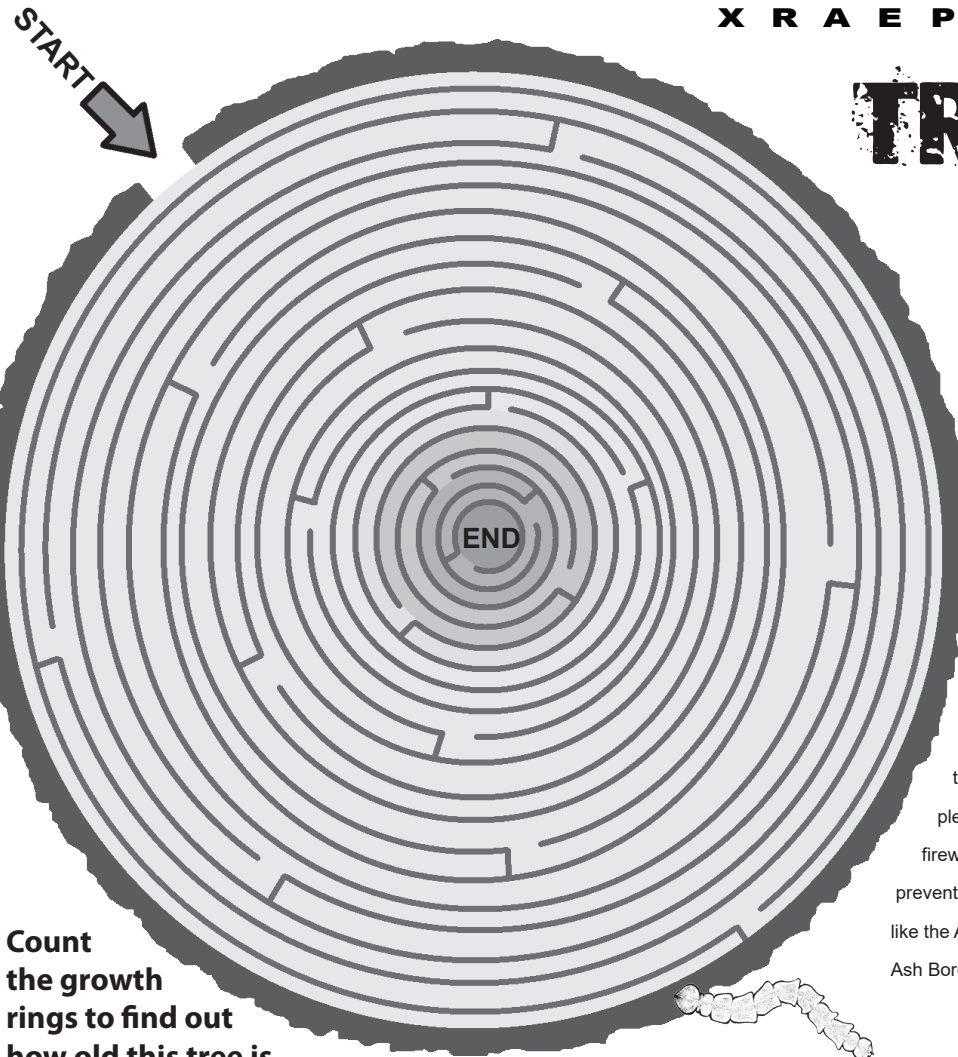
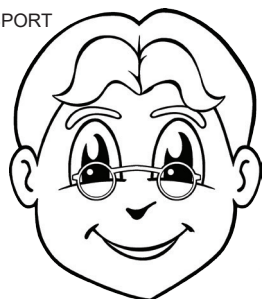
## TREES that a-MAZE!

Find your way through the tree rings. Begin at the outer bark (START) and follow your way into the heartwood until you have reached the center (END) of the maze! Have fun!



Fallen trees can provide winter firewood to heat homes or to roast hot dogs or toast marshmallows in a campfire! But please remember **DO NOT TRANSPORT**

firewood over county or state lines to prevent the spread of tree-killing pests, like the Asian Longhorn Beetle, Emerald Ash Borer, Walnut Twig Beetle & MORE!

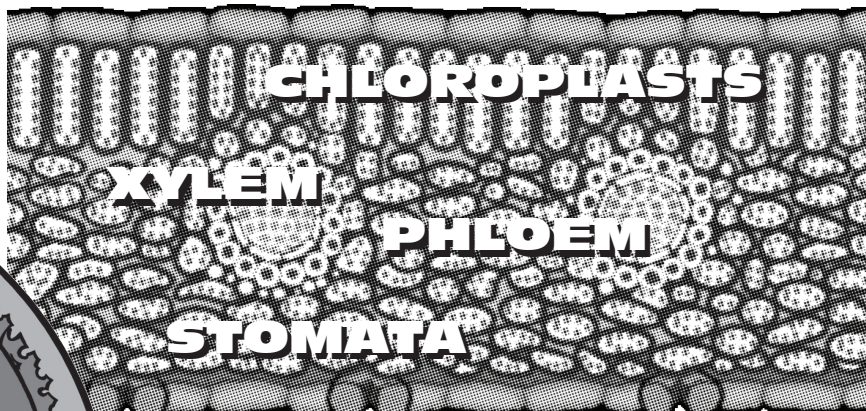
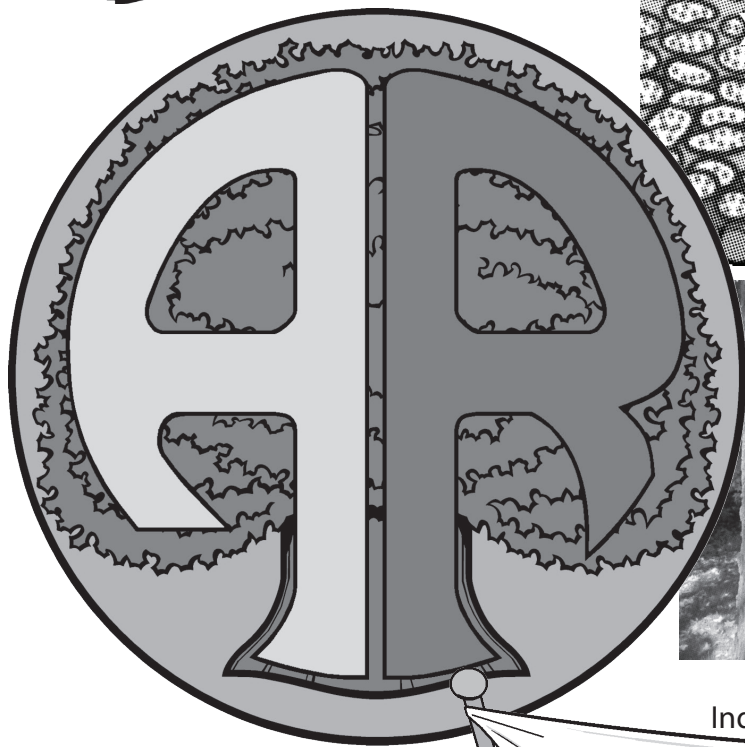


**Count the growth rings to find out how old this tree is.**



There are so many cool things to learn about trees!

Visit [www.arborrangers.com](http://www.arborrangers.com) for more information about Arbor Rangers.™



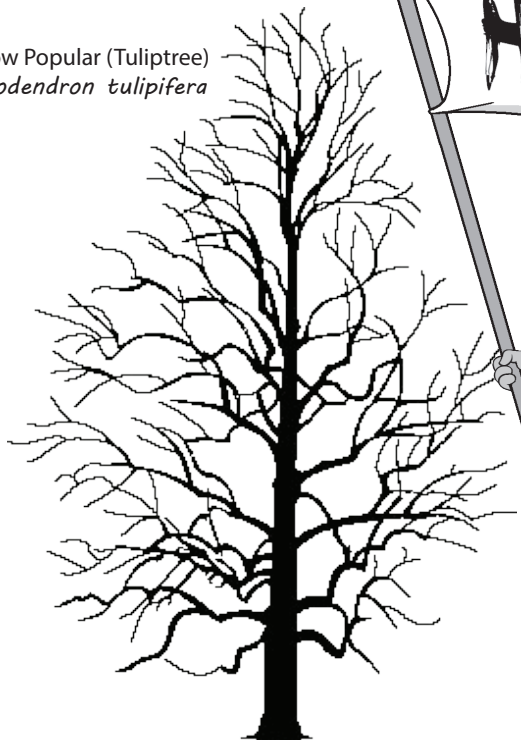
Jaira has grown up to be an Indiana Community Tree Steward

Many insects feed on trees

Emerald Ash Borer pupa



Yellow Poplar (Tuliptree)  
*Liriodendron tulipifera*



Did you know that trees can be identified in the winter, even without their leaves?

## HAPPY ARBOR DAY!



**ARBOR DAY**  
IN INDIANA IS OFFICIALLY  
CELEBRATED ON THE LAST  
FRIDAY IN APRIL\*

\*However some communities celebrate it earlier to include Earth Day and other environmentally-themed events, like Conservation Days!