

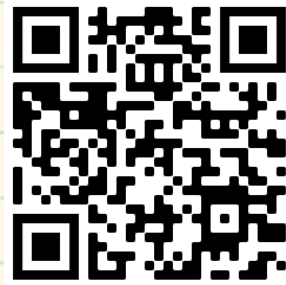
WE NEED YOUR HELP!



We are glad to provide these materials for free. In order for us to continue receiving funding for new materials, we need to collect information on how they are used.

Thank you for taking the time to answer the following one-minute survey.

There are three ways to complete the survey:



- 1** Scan this code with your smartphone camera
- 2** Type the following link into your web browser:
<https://plantheroes.org/educator-survey>
- 3** Email your answers to:
plantheroes@publicgardens.org



- 1) Job title
- 2) Name of organization you belong to
- 3) What kind of educator are you?
 - Teacher
 - Summer camp counselor
 - Home schooler
 - Public garden educator
 - Informal educator
 - Other (please describe)
- 4) What grade level do you teach?
 - Elementary (K-5)
 - Middle School (6-8)
 - High School (9-12)
 - Other (please describe)
- 5) Specify what subject area you teach:
 - Science
 - Math
 - Language Arts
 - Social Studies
 - Other (please describe)
- 6) How many students do you teach in a school year?



Help the Plant Heroes protect our forests
by slowing the spread of pests and diseases!

INSECT | WHITE PINE BLISTER RUST

PLANTHEROES.ORG
BEGINNER
ACTIVITY
BOOK

Nate Green



BE A PLANT HERO!
Help Nate slow the
spread of White Pine
Blister Rust!



Plant
Protection
Program

AMERICAN PUBLIC GARDENS ASSOCIATION

A 'CURRANT' THREAT



Nate and his parents spent winter break with his older sister, Karen, at her new home near Salt Lake City, Utah. They spent a bunch of time on the slopes and the snow was awesome!

Several months later they are getting ready for another visit ...

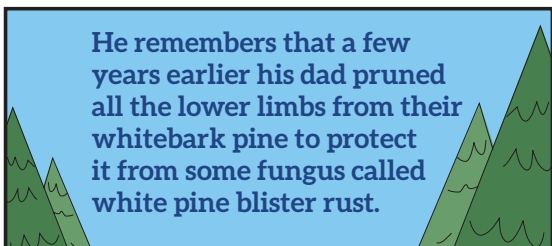
Nate's mom suggests that he dig up a few small black currant bushes from the backyard and bring them to Karen for her garden.



When Nate starts digging up the currant plants the next day, he notices that a lot of leaves are covered in orange spots.



He remembers that a few years earlier his dad pruned all the lower limbs from their whitebark pine to protect it from some fungus called white pine blister rust.



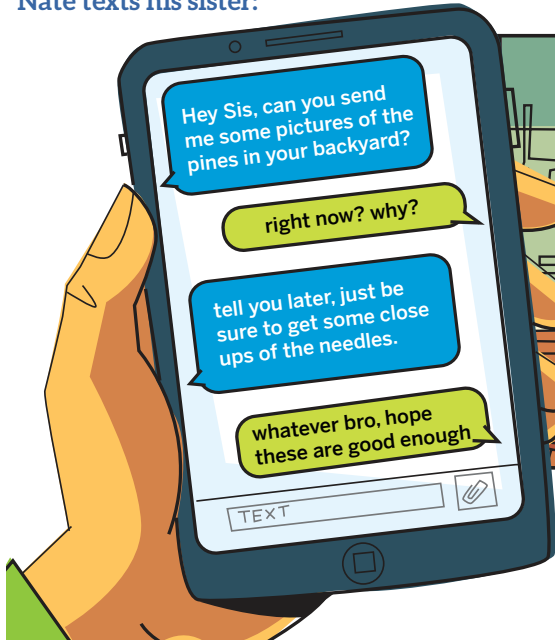
HANG ON!!

What was the funny name of those pines I didn't recognize at Karen's last winter... limber pine? Is that some kind of white pine?



He looks it up on his phone and learns that all white pines have needles in bundles of five and that limber pine is in that group.

Nate texts his sister:



The pictures arrive and Nate was right ...

FIVE NEEDLES!!

“MOM! If we bring these plants, we might infect her pines with a deadly disease! Maybe we should find something else for her while we’re there.”



They wait, and, sure enough, they find a native plant nursery in Salt Lake City that specializes in edibles. The owner explains that white pine blister rust hasn’t been found in Utah yet, and they hope it never is.



He helps them pick out some choke-cherry and elder-berry bushes for Karen’s place and even sends them home with some samples of their fruit.



They put the plans in the ground that afternoon and then do some celebrating in the kitchen. Maybe it’s knowing that they weren’t the ones to introduce white pine blister rust to Utah, but everyone agrees, Karen’s scones taste extra sweet today!

The Plant Heroes are brought to you by the American Public Gardens Association. This comic was developed with financial support from the USDA – Animal and Plant Health Inspection Service and reproduced with financial support from the USDA – Forest Service. Play games and learn how you can protect plants at plantheroes.org.



Nate Green



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plantheroes.org



PLANT HEROES



Name _____



Date _____

Find and circle the following words:

**BARK
FOREST
SPECIES**

**RUST
DISEASE
LEAF**

**NEEDLE
SEEDS
ORANGE**

**FIVE
BRANCH
WHITE**

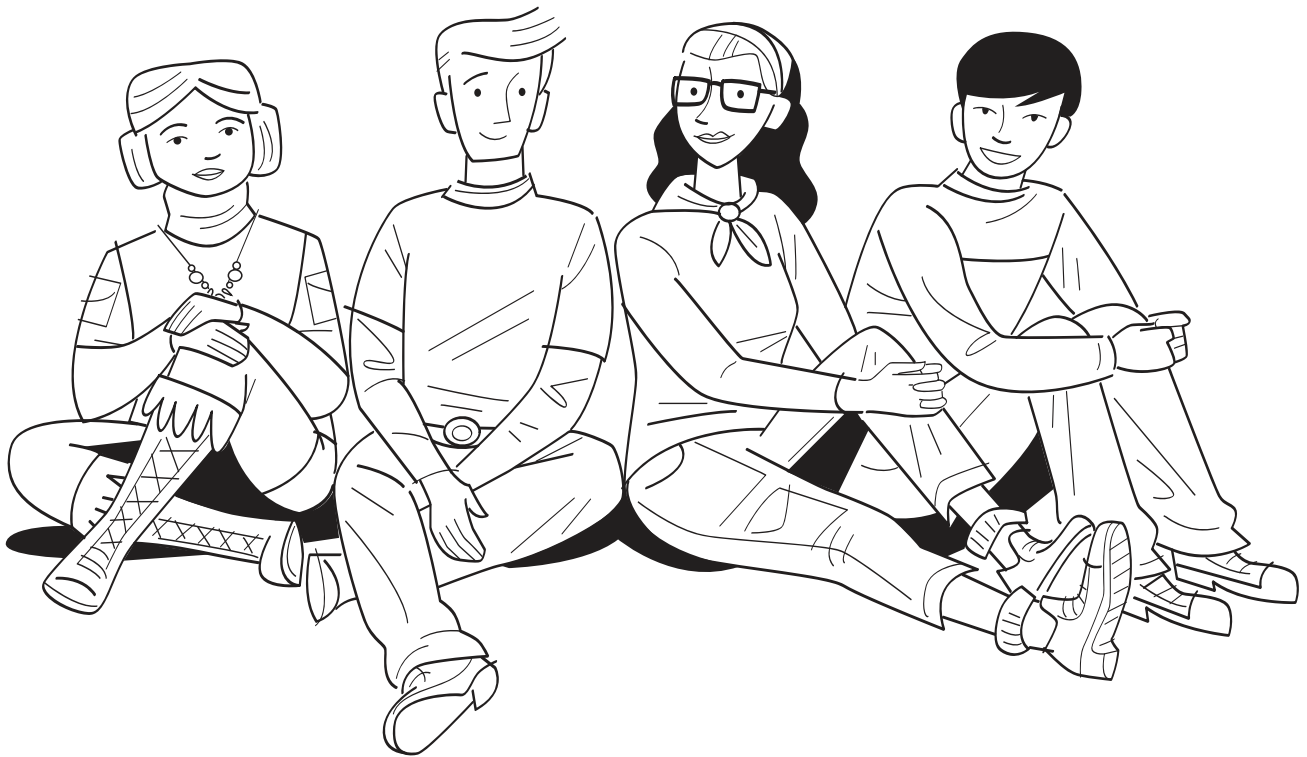
Complete the maze, and then find the words. The words can only be found along your maze path.

START
▼

MBEBMSAWUHWAPSGE	IIGVKAQYQMFIVNIKLBAYK
P	A V Y
H	F O Y
O	O J G
H	G R Y
PIXYRRHAPWHITEDY	B T L AJKEFH
S	B W F V
P	R D Y P
E	M G O K
C	M X W N
I HHGJYQ SEEDSY BCVBRANCHBP	V
E T K	X
S S W	I
F U X	B
H J B	F
H TVWQURBARKI NEEDLE FOREST	I
R	N V
U	M E
S	F W
T	J Y
RSUAVKDISEASEXWGFORANGEVYAAAYODK LEAFBV	

▼
END

PLANT HEROES



Name _____



Date _____

**FUNGUS
PINE
NEEDLE**

**RUST
FOREST
CANKER**

**TREE
SPORE
GROW**

G P I N E E P E X

P Z I S P O R E R

D M N E E D L E L

C A N K E R A N A

U U F U N G U S H

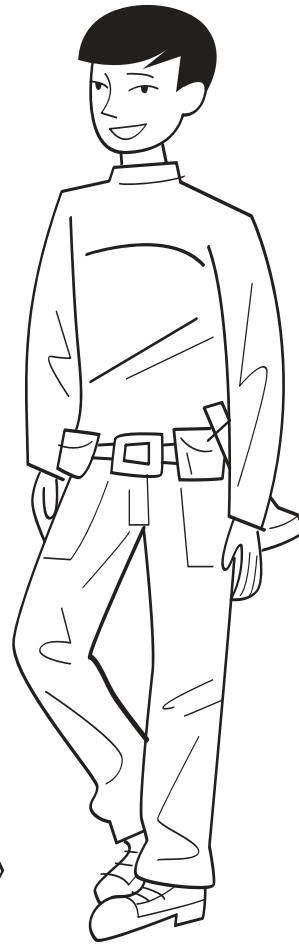
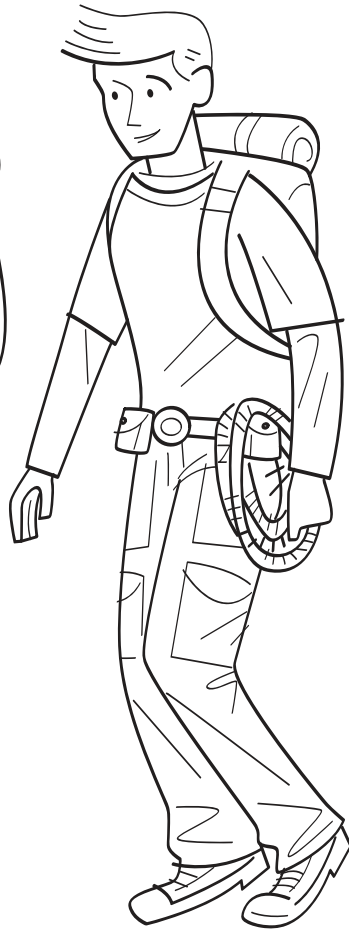
G R O W W G W V M

A R U T R E E E B

E R T R R U S T P

F T F O R E S T C

PLANT HEROES



Coloring Page



Plant Heroes Pledge

This Certifies That

is an Official Member of the Plant Heroes Team and pledges to:

**Learn about the
pests and diseases
that affect the
plants in my region**

**Be on the lookout
for symptoms of
pests and diseases
on trees in my
neighborhood**

**Report any suspicious
findings to an adult
who can notify the
local extension agent**

**Refrain from
moving firewood**

Awarded by the
American Public
Gardens Association





Join our team of Plant Heroes and learn about trees, forests, and the natural world around you!

PLANTHEROES.ORG

You can be a Plant Hero!

Are you curious about plants and animals? Do you like asking questions about nature? Do you enjoy being outdoors and having fun, climbing trees, balancing on logs, or finding a new butterfly or beetle? If so, you are already on your way to becoming a Plant Hero! We invite you to join forces with Nate, Laura, Aponi, and Frankie to protect the plants and ecosystems we all love.

How can you become a Plant Hero?

Join our team and go on a journey with Nate, Aponi, Laura, and Frankie. As a Plant Hero, you will learn to notice when plants are in trouble. You will also find out ways you can act quickly to help find solutions in your own neighborhood. Follow their adventures and learn how they help plants and ecosystems stay healthy.

On the Plant Heroes website, you will find materials to help you learn about plants, forest health, and ecosystem balance. The more you know, the more you can help protect plants and ecosystems in your own yard, neighborhood, and community!

Plant Heroes strives to spark curiosity about nature and science in all children. Our program provides hands-on, nature-based learning materials for educators to engage children in topics of plant health, ecosystem balance, and forest health. We also spotlight the amazing work our public gardens do in protecting the plants and ecosystems we all depend on through our website and printed materials. Visit plantheroes.org today to learn more!

Plant Heroes is brought to you by the American Public Gardens Association, founded in 1940. Over the last eight decades, the Association has supported the work of public gardens in North America and beyond. Our mission is to champion and advance public gardens as leaders, advocates, and innovators in the conservation and appreciation of plants. Our vision is "A world where public gardens are indispensable" as they provide botanic, conservation, community, education, and economic resources to their community.

The Association is committed to increasing the knowledge of public garden professionals throughout North America through information sharing, professional development, networking, public awareness, and research, so that they have the tools to effectively serve visitors and members.



**American
Public Gardens
Association**

PublicGardens.org



This publication was developed with financial support from the US Forest Service and the USDA Animal and Plant Health Inspection Service.

