

PEOPLE OF FORESTRY

DISCOVER CAREERS IN THE FOREST



Name:

WHAT IS A FOREST?

A forest is a large area of land that is covered by trees and other plants.

Forests are good for animals. Many different kinds of animals have forest habitats where they get the food, water, and shelter they need to survive.

Forests are good for people. All life on earth, including our own, depends on forests. The trees, plants, and soil that make up our forest ecosystems help clean our water, make oxygen for us to breathe, and cool off the earth when the temperatures start to rise.

Forests are renewable. Forests provide us with products that we use every day, such as timber, paper, and medicine. Just like wind and solar energy, when we use forest resources, they can be replenished.

Forests need to be nurtured. Sometimes our forests need help to grow and stay healthy.

That's where people come in. Stewards are people that help forests stay healthy, well-managed, and protected.

Forests have a big job to do, and that means we do too! It's up to everyone to make sure that our forests stay healthy because healthy forests mean a healthy environment, people, and economy.

In this book, you'll learn all about the jobs that help keep our forests healthy every day. Maybe one of these jobs will be yours when you grow up!



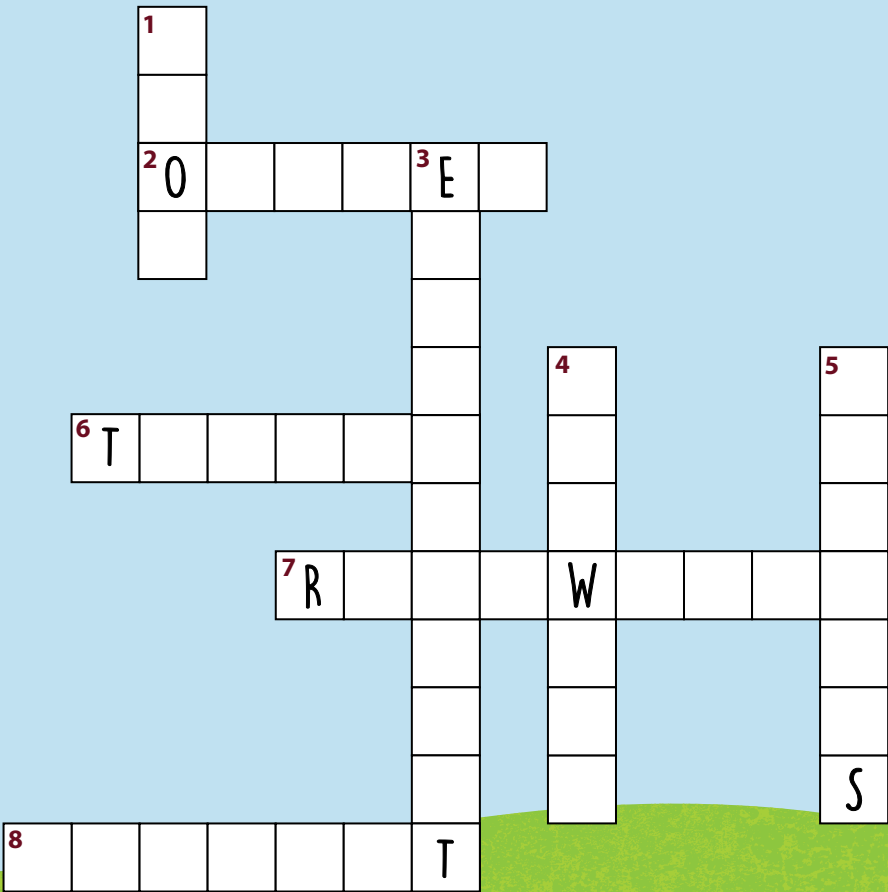
Complete the crossword puzzle below.

ACROSS

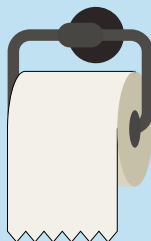
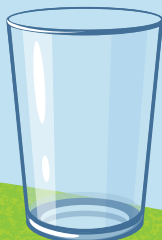
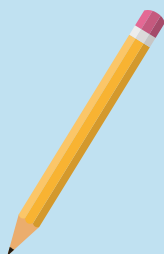
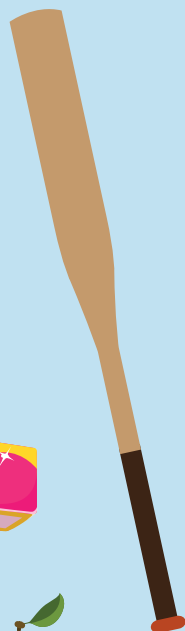
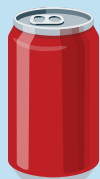
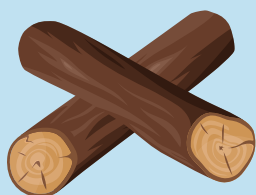
- 2. Plants make _____ for us to breathe.
- 6. _____ are trees that are grown and harvested for their wood.
- 7. A _____ resource is one that can be replenished, like forests, wind, and solar energy.
- 8. A _____ is a natural home that provides plants and animals with the food, water, and shelter they need to survive.

DOWN

- 1. Forests help _____ off the earth when temperatures start to rise.
- 3. Healthy forests mean a healthy _____!
- 4. A _____ is any person that helps forests stay well-managed, healthy, and protected.
- 5. All life on earth depends on _____.



CIRCLE ALL OF THE PRODUCTS THAT
CONTAIN RENEWABLE MATERIALS FROM
A TREE OR THE FOREST.



DID YOU KNOW THAT FORESTS PROTECT OUR HEALTH?

HEALTHY TREES, HEALTHY LIVES



Unscramble the words,
then fill in the blank with
the body system.



N B A I R

Healthy trees are good
for our _____. Playing
outdoors near trees helps
us stay focused and learn
better in school.



U G N L S

Healthy trees produce
oxygen and help filter
pollution for our air, which
keeps our _____ healthy.



T R A E H

Healthy trees give us
relaxing green spaces that
slow down our _____ beat
and helps us feel relaxed.



K S N I

Healthy trees give us
shade that cools us off
and protects our _____
from getting burned or
too much sunlight.



WHEN I GROW UP, I WANT TO BE A FORESTER!

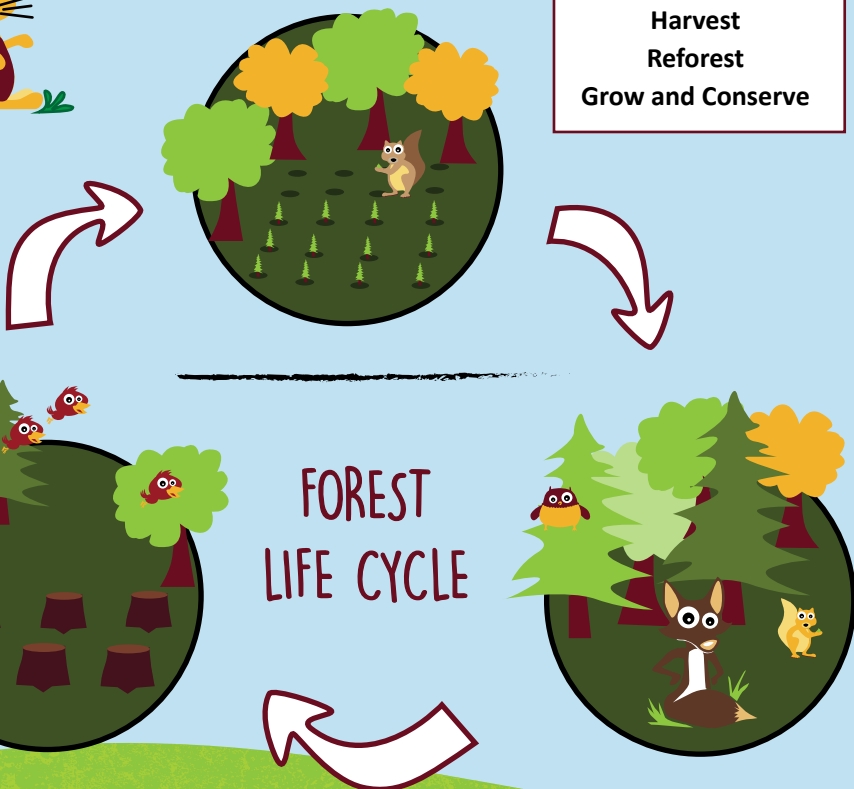
A forester is someone who plans, manages, and takes care of forests as they grow. A forest is able to be healthy and thrive when a forester knows how many trees there are in the forest, what kind of trees there are, and how they are growing. When a forest is healthy, it is stronger and more likely to survive when it is attacked by disease, insects, storms, and natural disasters.

A forest life cycle shows each stage of a sustainable forest. Can you label the diagram below?

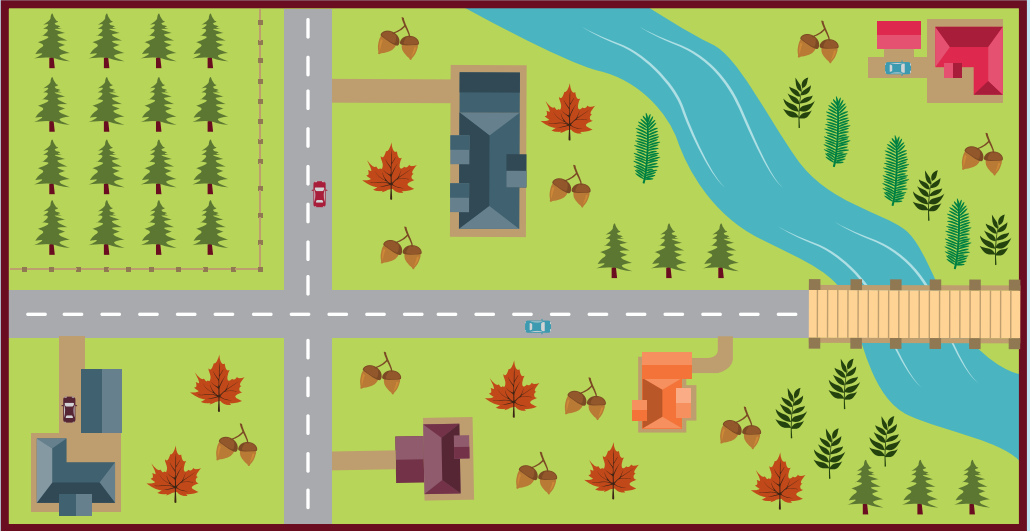


WORD BANK

Harvest
Reforest
Grow and Conserve



Use the forest inventory map below to answer the questions. Then, use the cryptogram to answer the riddle. For example, if an answer is 34 then a letter in the riddle answer is A.



Count the total number of trees on the map: ____

How many pine trees are planted in the square plantation? ____

How many oak trees are there in total? ____

How many ash trees are there in total? ____

How many more oak trees are there than ash trees? ____

A	B	C	D	E	F	G	H	I	J	K	L	M
34	4	1	28	4	36	7	5	16	18	11	9	100

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
10	17	23	102	50	3	62	71	117	15	14	2	75

If you want to know a tree’s age, count the dark

WHEN I GROW UP, I WANT TO BE A LOGGER!

A logger is someone who harvests trees and transports them to the mill to be turned into products we use. Loggers have to know how to cut trees safely and how to operate large machines like bulldozers and trucks.

How tall is this tree? Use the height of the logger to estimate how tall the tree is.

The logger needs to cut this tree and divide it into smaller pieces so it can fit on the logging truck. If each log needs to be 8 feet long, how many pieces can the logger cut from this tree?

At the mill, each log cut from the tree can make 5 boards. How many boards will come from this tree?

As a tree gets older, it adds a new ring each year. Can you tell how old this tree was?



6 FEET



A farmer hired a logging company to harvest a pine plantation. To conserve the forest, the farmer will plant new trees. If the farmer plants 12 rows with 9 trees in each row, how many total trees will they plant?

When those new trees grow big enough for their first harvest, the logger only needs to cut down 1/3 of the trees. How many trees will be harvested?



CRYPTOGRAM

For example, if an answer is 8 then a letter in the riddle answer is K.

Trees that are grown and harvested for their wood are called

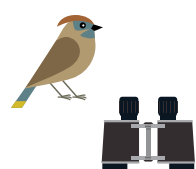


WHEN I GROW UP, I WANT TO BE AN URBAN FORESTER!

An urban forester helps care for and manage trees in urban environments. We call a city or town “urban,” so a forest inside a city or town is called an urban forest.

Place a check mark on the activities you have
done in an urban forest and circle the
activities you would like to do.



CAN YOU FIND AND COLOR THE ANIMALS HIDDEN IN THE URBAN FOREST?





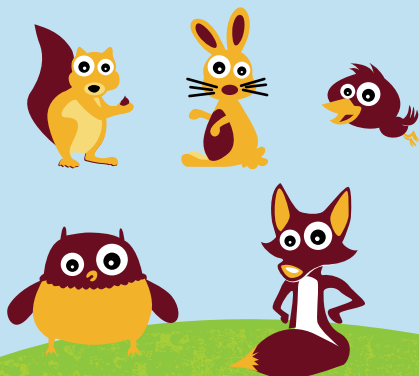
WHEN I GROW UP, I WANT TO BE A FOREST EDUCATOR!

A forest educator connects all ages to nature and teaches them about our forest ecosystems through field trips, forest hikes, summer camps, and more! Forest educators help us make better decisions about protecting and enjoying our forests.

What do plants compete for?

- 1) W _____
- 2) S _____ L _____ T _____
- 3) _____ P _____ E _____

Circle the 3 woodland friends
that live in the tops of trees.



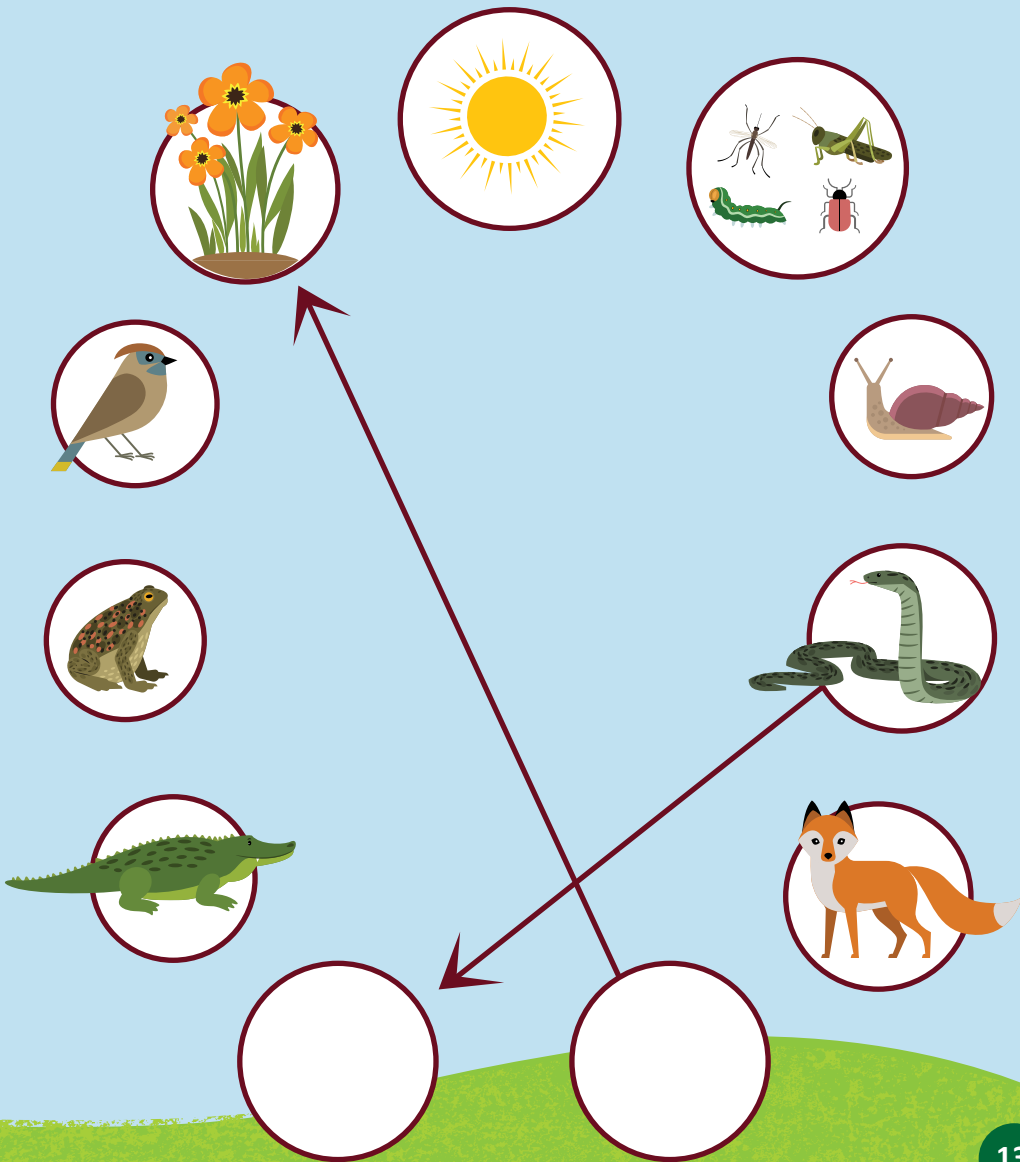
DRAW AN ANIMAL EATING.

DRAW AN ANIMAL THAT
LIVES IN A POND.

A food web shows the flow of energy in an ecosystem. Animals get their energy from the foods they eat. Some animals are herbivores and eat only plants. Some are predators that eat other animals, and some are omnivores that eat both plants and animals.

Complete the food web below. Draw an arrow from each animal to what it eats. (Bonus: Where do plants get their energy?)

Use your imagination to fill in the missing plants or animals. (Keep in mind that they can eat a variety of things.)



WHEN I GROW UP, I WANT TO WORK IN A TREE NURSERY!

A tree nursery is a farm that grows trees from seeds. By growing new trees, we help replenish the trees we use for wood products - keeping our forests renewable. You also can do experiments at a tree nursery that can help make healthier trees. You can learn how to grow trees taller, faster, and on fewer acres than ever before.

Unscramble the words
to match the seed
to its tree!



— — — KOA



— — — NIPE



— — — PLMAE



— — — DREDUB



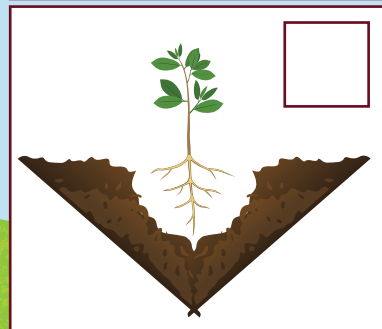
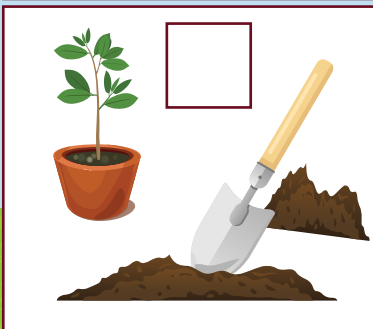
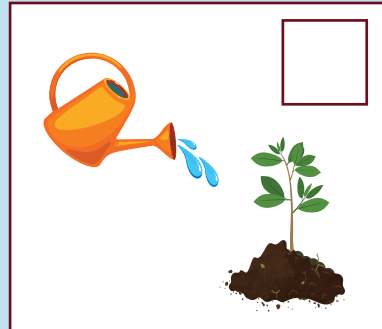
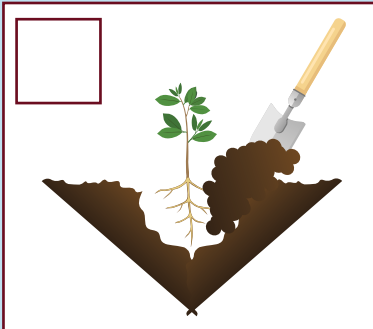
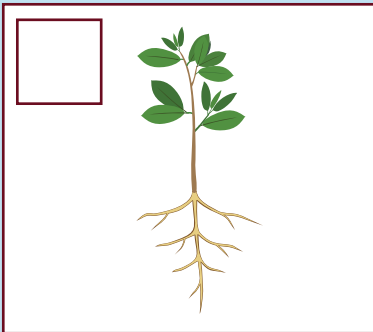
— — — AGNOMILA



HOW TO PLANT A TREE

Number the pictures in order of the proper tree planting steps

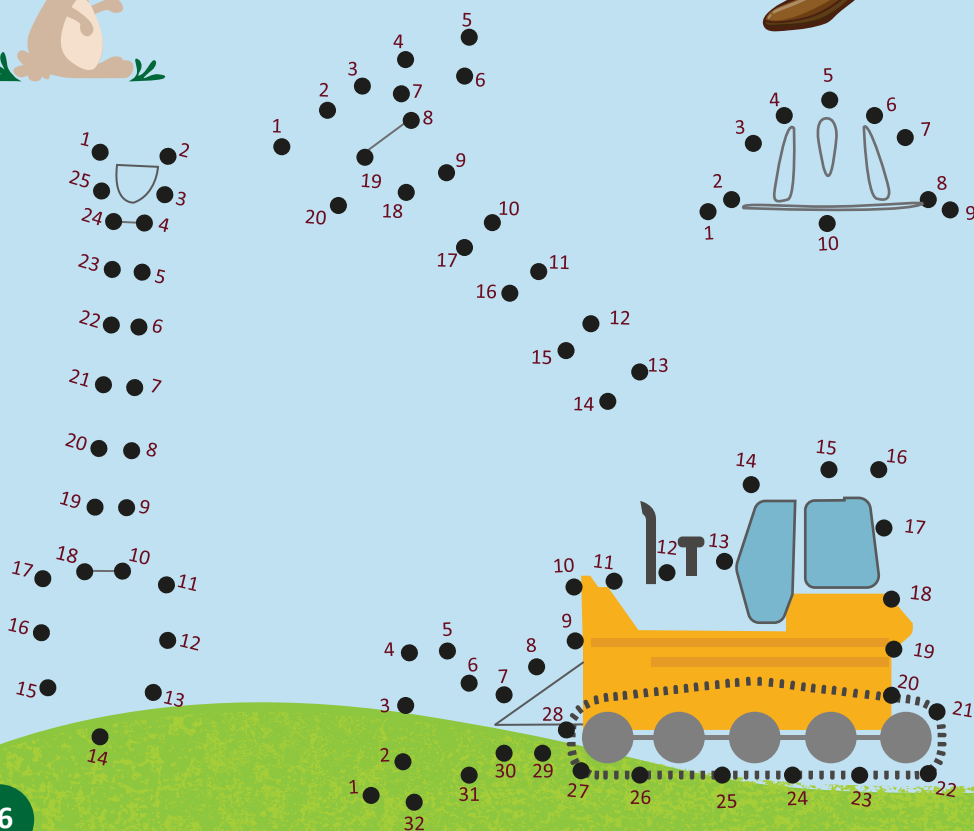
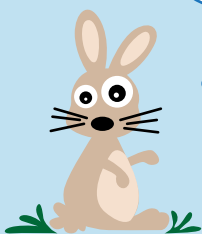
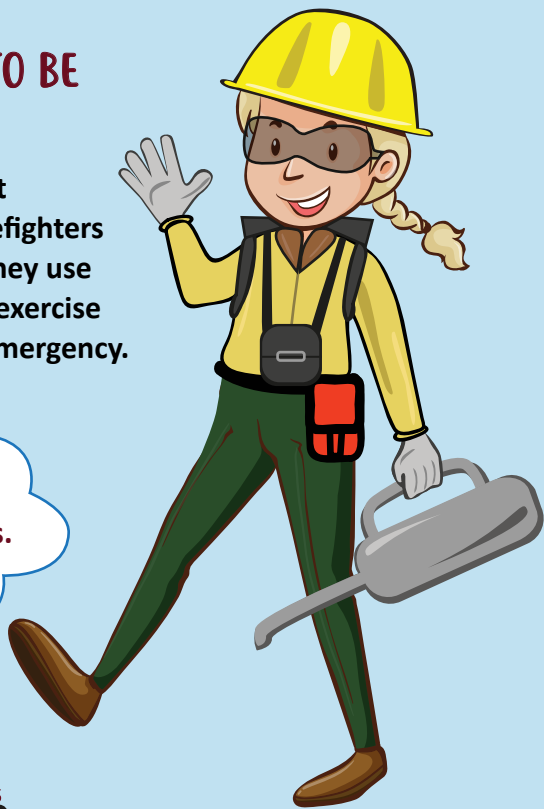
1. Dig a hole 3 times the size of the tree container and only as deep as the root ball on the tree. Set the soil aside for later.
2. Gently break up the root ball to loosen the roots of the tree.
3. Place the tree in the hole. Make sure the top of the root ball is even with the ground's surface.
4. Fill in the hole around the root ball with the soil you had set aside.
5. Add mulch around the tree creating a small mound. The mulch should be at least 2 inches away from the tree trunk to avoid root rot.
6. Add water inside the mound to settle the soil around the root ball.



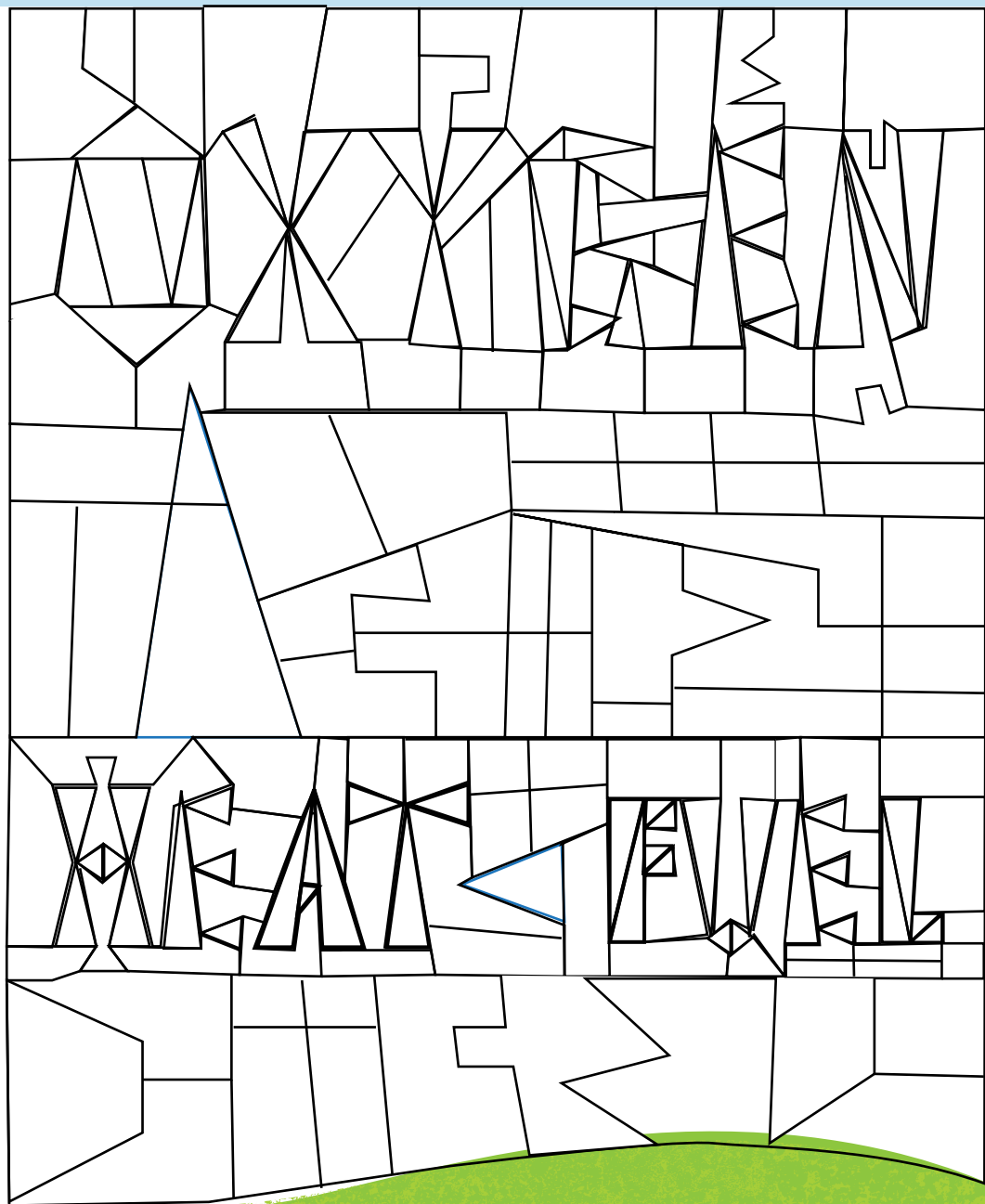
WHEN I GROW UP, I WANT TO BE A WILDLAND FIREFIGHTER!

Like urban firefighters who protect buildings and homes, wildland firefighters protect our prairies and forests. They use special tools and equipment, and exercise regularly to be prepared for any emergency.

Connect the dots in order to reveal the wildland fire tools.

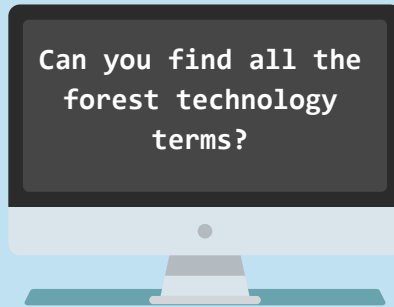


COLOR ONLY THE SHAPES WITH EXACTLY THREE SIDES TO REVEAL THE THREE THINGS A FIRE NEEDS.



WHEN I GROW UP, I WANT TO WORK WITH TECHNOLOGY!

Did you know there are ways you can help manage the forest without ever going outside? Using technology like drones, satellites, and computers, you can track the growth and health of the forest. As a technician, you can also plot the location of wildfires on a map and help firefighters protect lives, land, cities, and towns.



WORD BANK:

COMPASS
CODING
LONGITUDE
LATITUDE
SATELLITE
COMPUTER
DATA
DRONE
TABLET
APPS
NAVIGATE
MAP

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

A wildfire has broken out at the local campground. Use the map to help the town locate the fire, protect their property, and predict where the fire will spread next. **Answer the questions below, then write the letter in the space provided.**

- 1. At which point is the fire station located? Coordinate (__,__) Letter
- 2. Firefighters need to be prepared in case the fire spreads. Using the map scale, find the distance between the fire station and neighborhood. _____
- 3. Fill in the missing directions on the compass rose. Which direction is the wind blowing? _____
- 4. Wind can cause a fire to spread in the direction it blows. Which group of trees might catch fire next? Coordinate (__,__) Letter

BRAIN TEASER

- 5. The firefighters will call for more help when a wildfire is larger than 30 square miles. Is this fire large enough to call for assistance? (Hint: Draw a rectangle around the fire and find the area.) _____

MAP LEGEND



campsite



fire station



neighborhood



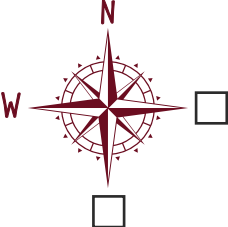
wind

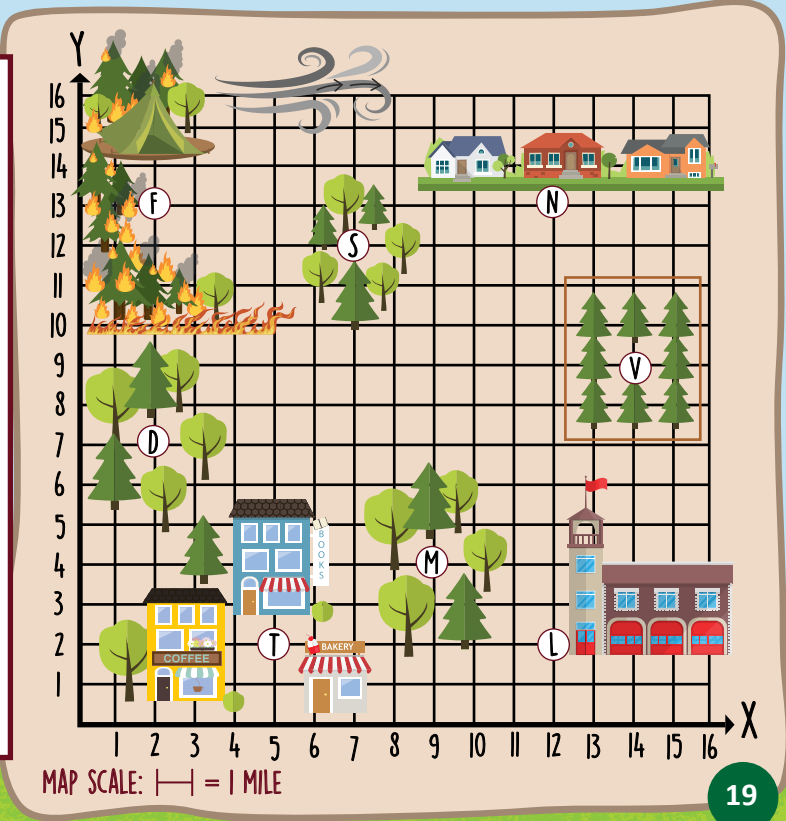


plantation



town







WHEN I GROW UP, I WANT TO BE A FOREST SCIENTIST!

There are many kinds of forest scientists. Some scientists, like geneticists, study how to make new kinds of trees using traits that are passed from the parent trees to their offspring. There are also many other scientists that study animals, water, and even the soil.

You can design new trees, too!
What do you think a tree with all three of these traits would look like?



DROUGHT
RESISTANT



PEST
RESISTANT

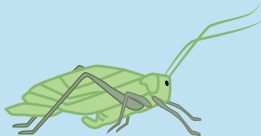


GROWS
FAST

You could be an entomologist! An entomologist is a scientist that studies insects.

Can you identify these insects?
Match the description and write the letter in the blank.

S	A katydid is a green or brown winged insect that is taller than it is wide. It has two long antennae and large hind legs. They are often found on trees and grasses.
B	An emerald ash borer has a shiny green body that is longer than it is wide. It has short antennae and six small legs. They are not native to North America and can damage our ash trees.
G	A common buckeye has two long antennae and a slim brown body. It has white and orange wings and spots that look like eyes. They drink nectar from flowers of aster plants.
U	An acorn weevil has a long, narrow snout and an oval-shaped body. It is brown with spots and lays eggs inside of oak tree acorns.



Draw a picture of yourself as a forest scientist superhero.
What kind of superpowers would you have?

A NOTE TO TEACHERS AND PARENTS

This booklet was designed as a fun, interactive tool meant to educate elementary age students about the importance of forests and forest management. The activities in “People of Forestry” are aligned with essential knowledge and skills in science and mathematics for grades 3rd through 5th and provide insight into the various types of job responsibilities students can expect in forestry careers. This workbook can stand alone or be easily integrated into existing lesson plans on ecology, earth science, or general environmental education. Teachers and parents are encouraged to use these lessons as a means of generating conversation about the importance of proper use and management of earth’s natural resources as well as to inspire students to consider careers in forestry.

ANSWER KEY

PAGE 3: ACROSS - (2) oxygen (6) Timber (7) renewable (8) habitat
DOWN - (1) cool (3) environment (4) steward (5) forests

PAGE 4: logs, maple syrup, baseball bat, pencil, bubble gum, books, cinnamon, crayon, apple, medicine, toilet paper

PAGE 5: brain, lungs, heart, skin

PAGE 6: Reforest (top), Harvest (left), Grow and Conserve (right)

PAGE 7: If you want to know a tree’s age, count the dark R I N G S.

PAGE 8 & 9: Trees that are grown and harvested for their wood are called T I M B E R.

PAGE 12: Plants compete for WATER, SUNLIGHT, and SPACE.

Woodland friends that live in the tops of trees: SQUIRREL, BIRD, and OWL.



PAGE 13: Answers may vary. Bonus: Plants get their energy from the sun.

PAGE 14: Oak, Pine, maple, redbud, magnolia

PAGE 15: First row: 2, 5 / Second row: 4,6 / Third row: 1,3

PAGE 16: Connecting the dots should reveal a shovel, an axe, bulldozer, and safety helmet.

PAGE 17: Coloring to reveal OXYGEN, HEAT, and FUEL.

PAGE 19:

1. Coordinate (2,13) Letter (F)

2. 11 miles

3. EAST

4. Coordinate (7,12) Letter (S)

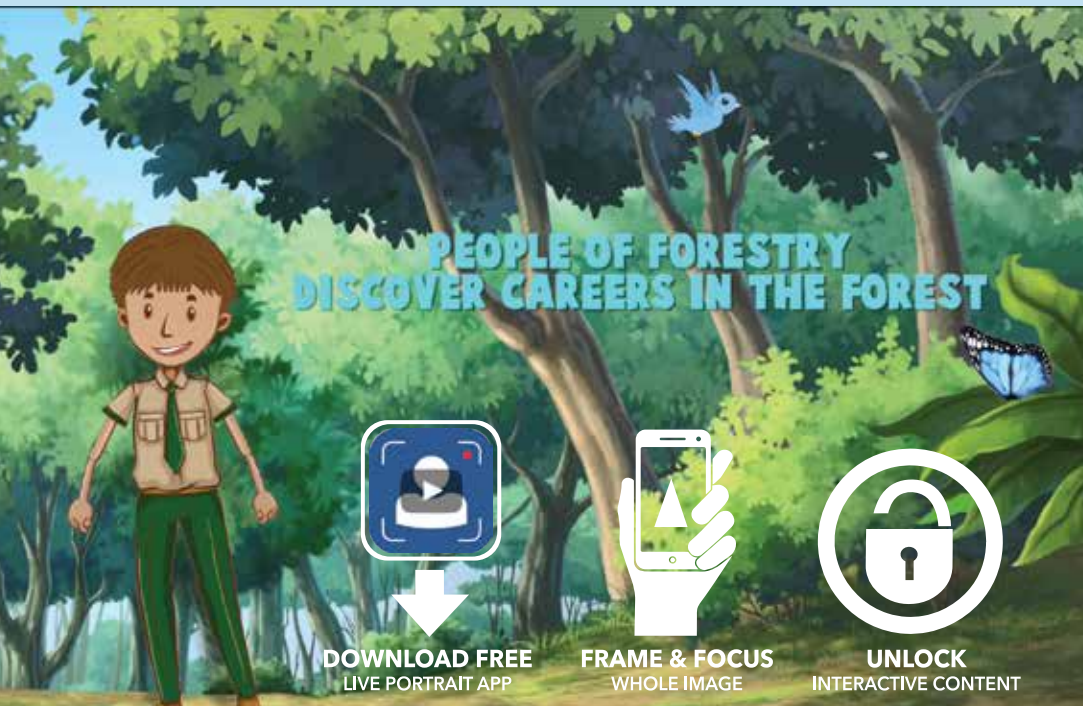
5. To find the area of the fire, draw a rectangle with a length of 5 miles and a width of 6 miles.

5 miles X 6 miles = 30 square miles - The firefighters do NOT need to call for help yet.

PAGE 21: B U G S

DO YOU WANT TO LEARN MORE ABOUT CAREERS IN FORESTRY?

Check out this cool video that plays on your device when you scan the image.



Live Portrait technology blends Augmented Reality (AR) with Image Recognition to create images that literally come to life through smart devices.

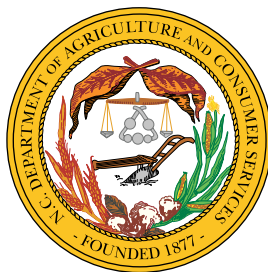
1. Download the Free Live Portrait App



2. Aim and frame this image
3. Unlock interactive content
4. Learn all about some of the cool jobs in forestry that might be yours when you grow up!

You can also explore more on careers in forestry by visiting SouthernForests.org.

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NCFORESTSERVICE.GOV

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