BRANCHING OUT IN WORKING FORESTS
Created by Debra Wagner

Background:
Healthy forests assure us of sustainable wood production, they are vital for fresh air, wildlife habitat, clean water, enjoyable outdoor recreation and quality of life.

Trees are a good crop for people in Florida to grow for many reasons:
- o It is currently the leading agriculture commodity in Florida.
  - ▪ As of 2014, Florida timberland ownership, which supports the forest products industry, was 71 percent private, 18 percent state and local, and 11 percent federal. Florida's 15.5 million acres of timberlands supported economic activities that generated $16.34 billion in total output impacts in 2013. According to Florida Department of Agriculture website.

- o Working forests create jobs for more than 78,000 people in Florida.

- o Florida's working forests generate $16.1 billion in economic activity annually.

- o They provide jobs for more than 78,000 Floridians and provide material for more than 5,000 types of consumer goods.

- o When people can grow trees and sell them, it helps keep pretty green spaces in Florida.

The purpose of this game is to gather information about this very important agricultural commodity.

Materials Needed:

- ❖ Provided tree templates
- ❖ Provided dice templates
- ❖ Card stock (whatever color you'd like to be the tree)
- ❖ 6 different yarn colors: red, gold, brown, purple, green, blue
- ❖ Scissors
- ❖ Glue

Preparation Needed:

- ❖ Cut the yarn into pieces 3 inches long. These will represent pine needles.
  *How many pieces needed will depend on how many students participating. Each student will collect 10 pieces of yarn. The colors collected will vary based on their dice rolls.
- ❖ Print the tree pattern on card stock for each student.
- ❖ Print and make the dice for each station.
- ❖ Have materials gathered for students to use: templates, scissors, and glue

INSTRUCTIONS:

1. Divide students into approximately 6 equal groups and have each groups begin at one of the stations.

2. Have students roll the die, read the statement at their station, corresponding to the listed color on the die.

3. On their Branching Out Score Card, write their current station stop, the tree fact shown on their die, and their destination.
>   *Note: if a student rolls the same fact on their die during a second visit to that station, instruct them to roll again.

4. After writing down the tree fact and destination, instruct the students to grab the piece of color yarn corresponding to that station. (If a student visits a station twice they will have two pieces of yarn in that color, etc.)
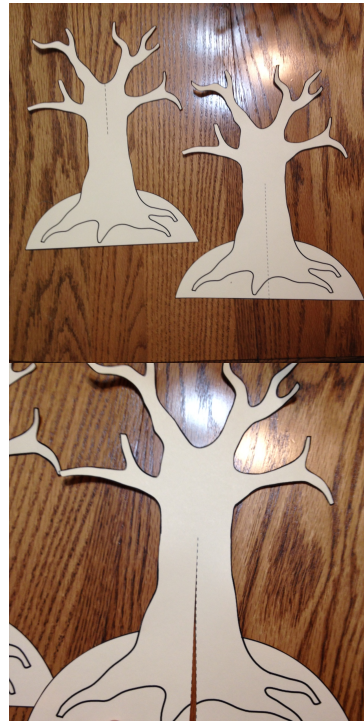
5. When directed the students will move to the next station on their paper.

6. Repeat the steps 1-5, 9 more times.

7. After the students have accumulated 10 facts and their colored yarn pieces, have them return to their seat to assemble their 3-D pine tree.
>   *Note: Each student should have two different tree templates printed on card stock, 10 different pieces of yard, glue, and scissors.

8. Have the students cut out the tree templates. Be sure they follow the outside lines towards the bottom of the tree; do not cut out the roots of the tree.

9. Each template has a dotted line. After the tree is cut out, have the students cut down the dotted line. Do not cut further than the line indicates.

10. Take the template that was cut half way up from the bottom, turn side ways, and fit into the cut slot of the other tree template. This will form the 3-D tree.

       *Note: This tree should be able to stand on its own. All paper should be cut evenly and should be touching the surface of the table. If not, assist the student with altering the cut dotted lines- these slits should meet half way in the middle of the tree.

11. The pieces of yarn the students collected will represent pine needles. They need to fold each piece of yarn in half and glue them on different tree branches.

12. On the bottom of the Branching Out Score Card, there is a small grid. The students should color in the squares corresponding with the stations they visited. (If a student visited the Economic station 3 times, 3 squares should be filled in gold.)

13. Working in small groups, have the students compare their grids and tree facts.

14. Students will summarize their stops throughout the 'forest' by practicing writing sentences using fractions or percentages. (If a student visited the Christmas Trees station twice, a sentence might say that 2/10th of my visits or 20% of my visits were to Christmas Tree farms where I learned about plantations and Red Cedar Trees.)

Tree Station Facts:

Christmas Trees

1. After the holidays recycle your tree for mulching. Go To Economics (Gold)
2. Farms are good for the ecology because farmers plant 2 or 3 trees for every harvested tree. Go to Fast Facts (Green)
3. Florida grown Christmas trees are good for the environment because less fuel is needed to transport the trees. Go to Working Forests (Blue)
4. Christmas tree farms are called plantations. Go to Wildlife (Brown)
5. Types of trees grown as Florida Christmas trees are Red Cedar, Virginia Pine, Sand Pine, Arizona Spruce, and Leyland Spruce. Go to Recreation (Purple)
6. A real Christmas tree is a renewable resource that you can enjoy without harming our environment. Go to Working Forests (Blue)

Working forests provide homes for Wildlife.

1. Birds place nests in trees for their home. Go to Working Forests (Blue)
2. Squirrels use trees for nests. Go to Christmas Trees (Red)
3. Indigo Snakes, a threatened species, use Long leaf Pines for habitats. Go to Trees as Habitats (Brown)
4. Red-cockaded woodpeckers, a threatened species, use cavities of pine trees for a home. Go to Recreation (Purple)
5. Eastern Cottontail Rabbits use cavities near the roots of trees for a home. Go to Economics (Gold)
6. The Ocala National Forest and Osceola National Forest are important for the survival of the Florida Black Bear. Go to Fast Facts (Green)

Working forests help keep our air and water clean.

1. Forests in the United States provide drinking water to more than 180 million people. Go to Trees as Habitats (Brown)
2. Fallen leaves help trap moisture in the forest floor. Go to Recreation (Purple)
3. Tree roots cover soil to prevent soil erosion. Go to Christmas Trees (Red)
4. Forests act as filters to remove surface borne pollutants. Go to Economics (Gold)
5. Forests remove carbon dioxide from the air. Go to Fast Facts (Green)
6. U.S. forests create oxygen for people to breathe. Go to Working Forests (Blue)

Forests as Recreations

1. Hiking in Goethe State Park you'll find: the endangered red-cockaded woodpecker, Florida black bear, gopher tortoise, gopher frog, striped newts, Florida mice, Sherman's fox squirrel, bald eagle, and at least 34 species of orchids. Go to Trees as Habitats (Brown)
2. Camping can be found for both tents and cabins at the Ocala National Forest. Go to Economics (Gold)
3. Learn about a state forest through the Florida State Forests Trailtrotter Program by riding horses. Go to Christmas Trees (Red)
4. Apalachicola National Forest – is the largest forest in Florida with an abundance of fresh water streams, rivers, lakes, natural springs, and caverns. Go to Working Forests (Blue)
5. Great Florida Birding and Wildlife Trail is a network of 510 wildlife viewing sites. Visit this trail to see native birds, butterflies and wildflowers. Go to Trees as Habitats (Brown)
6. Blackwater River State Forest has trails for off-road vehicles. Go to Fast Facts (Green)

Economic: More than 5000 forest products touch every part of life

1. Trees provide medicines like aspirin and prescription drugs. Go to Fast Facts (Green)
2. Most people think about trees providing us with wood products like books, magazines, paper, furniture, house, and lumber. Go to Christmas Trees (Red)
3. Trees give us food like nuts, spices, ice cream, cereal bars, salad dressing, and even chewing gum. Go to Trees as Habitats (Brown)
4. Pine Needles can be used for mulch. Go to Recreation (Purple)
5. Trees can even provide fashion items like cosmetics, rayon, toothpaste and toothbrushes, shampoo, laundry detergent, and perfume. Go to Economics (Gold)
6. Trees help us have fun with items like skateboards, football helmets, books, paper, fireworks, sports drinks, crayons, TV and cell phone screens. Go to Working Forests (Blue)

Fast Facts

1. Forests cover about 17.3 million acres in Florida. Go to Working Forests (Blue)
2. Forestry/forest products are Florida's top Agricultural Exports. Go to Economics (Gold)
3. Most of the forests are located in north Florida and Florida's Panhandle.
   Go to Christmas Trees (Red)
4. It takes longer to grow a crop of trees than it does to grow fruits or vegetables. Trees grow between 15-30 years or more before they are harvested. Go to Fast Facts (Green)
5. Florida Forests are a mixture of state and national forests, privately owned forests, and mills.
   Go to Trees as Habitats (Brown)
6. Loggers are men and women that cut and process trees into logs in the forest.
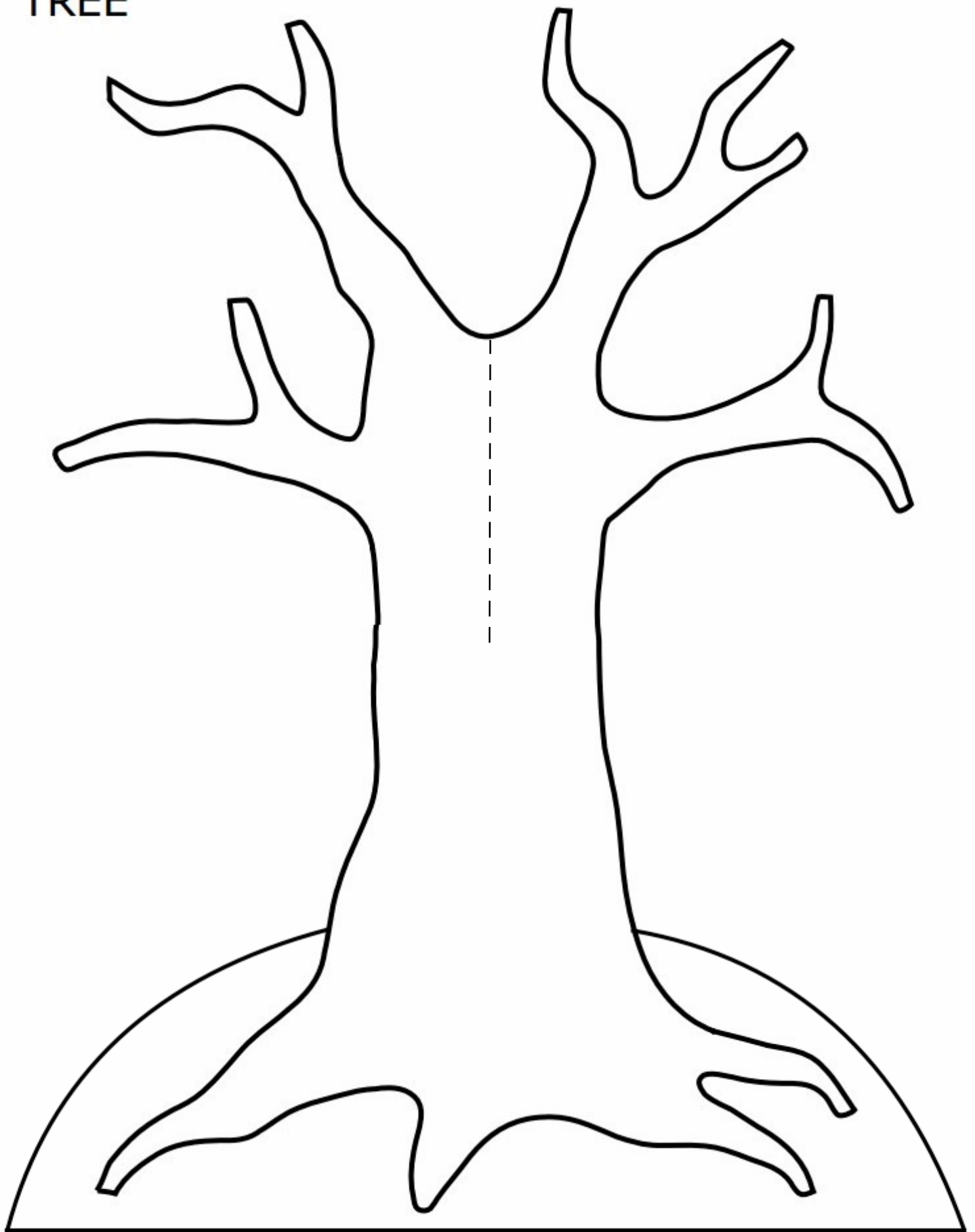   Go to recreation (Purple)

Branching Out Score Card

	Station Stop	Facts Learned	Destination/color

1.

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2.

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3.

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4.

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5.

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6.

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8.

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9.

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10.

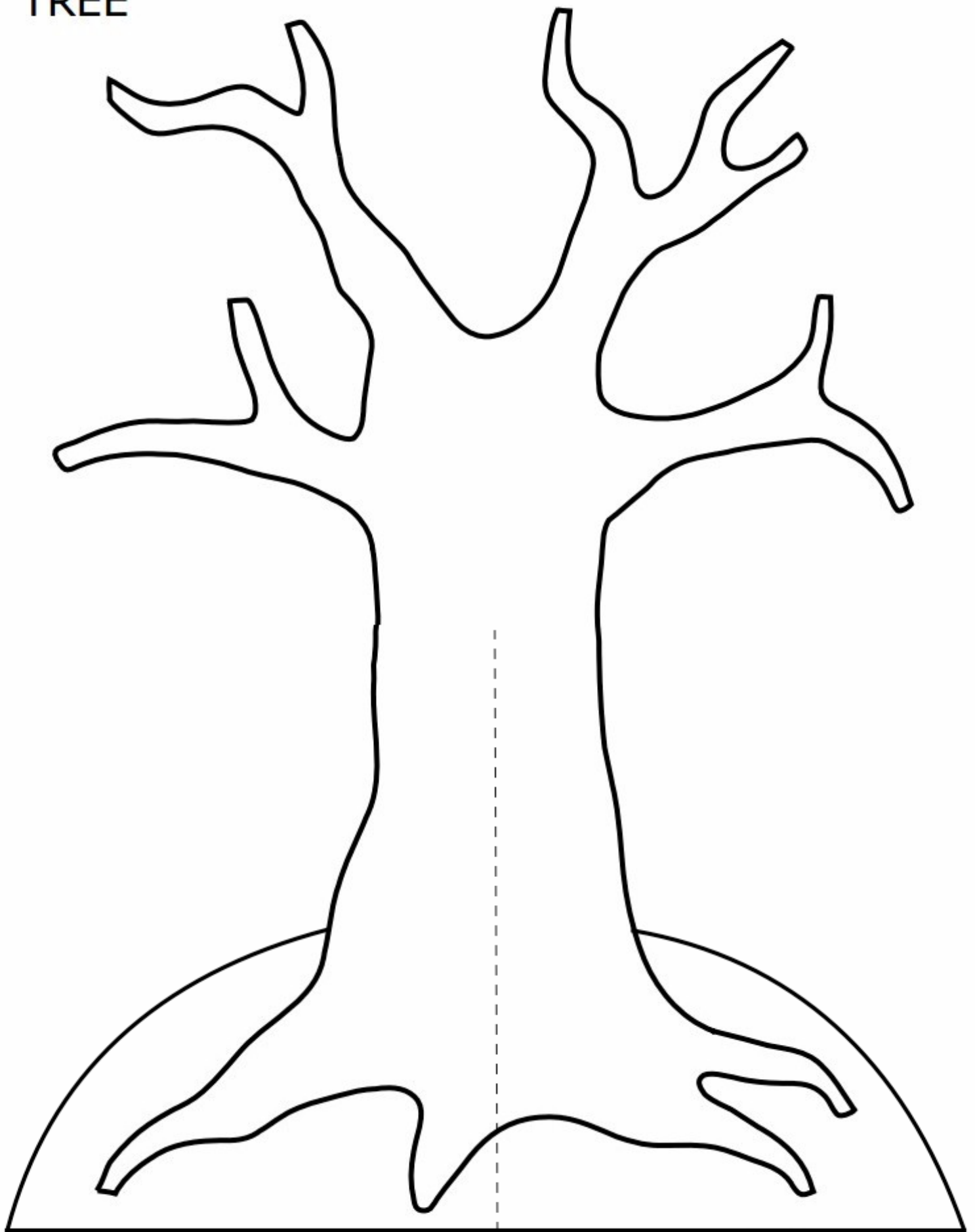|									

Summary:

TREE

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Types of trees grown as Florida Christmas trees are Red Cedar, Virginia Pine, Sand Pine, Arizona Spruce, and Leyland Cypress.

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Habitat

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Indigo Snakes, a threatened species, use Long Leaf Pines for habitats.

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