



Environmental Resource Pack
Children's Activities
2012

THE LIFE OF TREES AND THE TREE OF LIFE

Trees are an invaluable part of our world! They provide habitat and food for countless animals, and food and medicines for people. They use and store carbon, which helps us slow down the effects of climate change. They produce oxygen for us and other animals to use. They also have an important place in the Bible! Trees are signs of life and God's provision—from the trees in the Garden to Eden to the Tree of Life in the New Jerusalem. They are amazing parts of creation—and these activities aim to explore aspects of trees and the life they support.



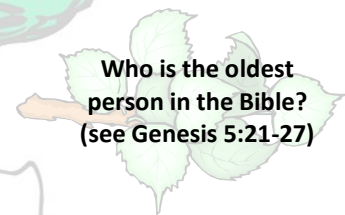
TREE TRIVIA

Eco-facts about trees—use them for quizzes, trivia games or facts to add to a craft or display.

On average, one tree produces nearly 260 pounds of oxygen each year. Two mature trees can provide enough oxygen for a family of four. - *Environment Canada, Canada's national environmental agency*

In 2005, there were approximately 61 trees per person on the planet.— *Evergreen State University*

The oldest single tree in the world is estimated to be 4,841 years old. "Methuselah" lives in the White Mountains in California. - *Rocky Mountain Tree Ring Research*



Clonal tree colonies, which are connected by their root systems, can be over 10,000 years old! - *Bryce Canyon National Park Service*

In the rain forest, you would find about 750 trees in an area the size of a football field. —*Raintree Nutrition*

The rarest tree in the wild is the *Pennantia baylisiana*. The only one in the world is a tree in New Zealand. —*The Wild Foundation*

The Nordmann Fir is the UK's most popular Christmas tree.—*Which?*

The largest tree house in the world is 10 stories tall! It is made out of reclaimed wood, almost 100 feet tall, built around a white oak tree, and has about 258,000 nails in it.—*inhabit.com*

The world's most dangerous tree is the manchineel (*Hippomane mancinella*) found in Florida and the Caribbean. Its sap is so poisonous that contact with human skin causes a breakout of blisters, and blindness can occur if it touches a person's eyes. Even standing under it in the rain is enough to cause blistering if raindrops collect any sap. A single bite of its small green apple-like fruit causes blistering and severe pain, and can prove fatal. If one of these trees is burned, the smoke can cause blindness. —*Guinness World Records*



RECYCLED FOREST

Build a rainforest out of old newspaper and animals out of bottles, cardboard, egg cartons, and anything else you might have around!

Newspaper trees

All ages

Materials

- 6 sheets of newspaper
 - Scissors
 - Tape
 - Cardboard tube (kitchen roll tube works great)
1. Unfold a section of the newspaper and tape the sheets of newspaper together, making one long column of pages.
 2. Use the cardboard tube as a guide to roll the newspaper into the shape of a tube. Secure the roll on the side with tape so it doesn't unroll.
 3. Remove the tube from the centre of the newspaper roll.
 4. Starting at the top end of the newspaper roll, cut the edge of the newspaper down to the middle of the cylinder. Turn the roll a quarter turn and make another cut from the top down to the middle. Do this two more times so you have four equal strips.
 5. Bend back each of the strips so that you can see the inside of the roll.
 6. Hold onto the base of the tube with one hand while reaching into the centre of the newspaper roll with the fingers of the other hand. Pull up on the newspaper inside the tube to start the tree growing. Keep pulling to make the tree grow taller and taller.

Remember to recycle the trees when you are done with them!



Recycled animals

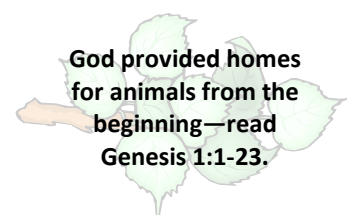
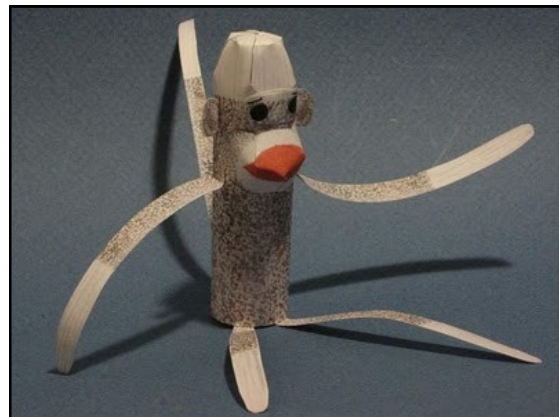
All ages

Materials

- Cardboard tubes and boxes
- Old clean egg cartons
- Used clean plastic bottles
- Newspaper
- Paint and paint brushes
- Glue
- Googly eyes, chenille straws, yarn, string, etc—any extra decorations for your animals
- Images of rainforest / forest animals for inspiration

1. Use the cardboard tubes, boxes, egg cartons, etc as the body of your animal. Add legs, wings, beaks, etc. Paint and decorate!
2. Add your animals to your trees with string or tape.

There are no rules here—just be creative!





TALES FROM THE TREES

“Mad libs” are fill-in-the-blank stories that bring out the creativity in all of us. Using nouns, adjectives, verbs and exclamations to fill in the blanks, children will make their own forest tales!

Ages 8 and up

Instructions:

Print out copies of the four stories in the next section. Children work in pairs and give each partner a different story. Each child asks their partner for the nouns, adjectives, etc to fill in the blanks without telling them any of the story. After all the blanks are filled in, have the other child ask their partner to do the same for them. After both are complete, have each child read their forest adventure!

Read Genesis 3 after completing the “Garden of Eden” tale. Talk about why Adam and Eve chose to eat from Tree of Knowledge when they could eat from any of the other trees.

Example: “The Treehouse”

One morning I woke up in the pickle to the sound of slippers singing.
(noun) (plural noun)

They were cheerful and blue. One football jumped on top of
(adjective) (adjective) (noun)

my treehouse and cooked at me. I said “Eureka!” and
(verb ending in -ed) (exclamation)

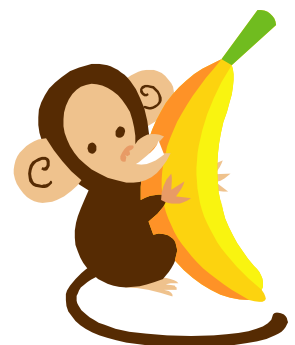
jumped down the tree. I planted past the spoon
(verb ending in -ed) (verb ending in -ed) (noun)

of cute banana trees and laughed up the vines to sit with the
(adjective) (verb ending in -ed)

ipods. I picked a bike and started screaming it. One
(plural noun) (noun) (verb ending in -ing)

sun tried to eat it from me, but I tackled down the
(noun) (verb) (verb ending in -ed)

shoe to get away.
(noun)



"The Treehouse"

One morning I woke up in the _____ to the sound of _____ singing.
(noun) (plural noun)

They were _____ and _____. One _____ jumped on top of
(adjective) (adjective) (noun)

my treehouse and _____ at me. I said " _____!" and
(verb ending in -ed) (exclamation)

_____ down the tree. I _____ past the _____
(verb ending in -ed) (verb ending in -ed) (noun)

of _____ banana trees and _____ up the vines to sit with the
(adjective) (verb ending in -ed)

_____. I picked a _____ and started _____ it. One
(plural noun) (noun) (verb ending in -ing)

_____ tried to _____ it from me, but I _____ down the
(noun) (verb) (verb ending in -ed)

_____ to get away.
(noun)

"The Forest Princess"

Once upon a _____ there lived a _____ princess in a _____. She had a
(noun) (adjective) (noun)

_____ power: when she _____ all the animals in the _____ followed. In
(adjective) (verb ending in -ed) (noun)

the _____ there lived a _____ witch. The _____ wanted to control
(noun) (adjective) (noun)

the _____. She _____ the _____ princess and _____ her in a
(plural noun) (verb ending in -ed) (adjective) (verb ending in -ed)

_____ tower. The king and _____ sent a handsome _____ on his
(adjective) (noun) (noun)

_____ to rescue the princess. He _____ up the tower and defeated the
(noun) (verb ending in -ed)

_____. The prince and the _____ happily ever after in the
(noun) (noun) (verb ending in -ed)

forest.

“Garden of Eden”

God told Adam and Eve not to _____ any _____ from the tree of
(verb) (plural noun)

_____ and _____ in the garden. They could eat any _____
(adjective) (adjective) (plural noun)

from any other _____. One day a _____ asked Eve to _____
(noun) (noun) (verb)

in the _____ to the _____ of good and _____. The snake said if
(noun) (noun) (adjective)

Eve _____ from the tree she would be _____. Eve took the _____
(verb ending in -ed) (adjective) (noun)

to Adam and they both _____ the _____ apple. God was _____
(verb ending in -ed) (adjective) (feeling/emotion)

and _____ them both to leave the _____ of Eden.
(verb ending in -ed) (noun)

“The Forest Animal”

Once upon a time a _____ lived in the _____ forest. It made loud
(noun) (adjective)

_____ at night but the _____ was never seen. People said it was
(plural noun) (noun)

_____ and scary with long, _____ claws and sharp _____. One day a
(adjective) (adjective) (plural noun)

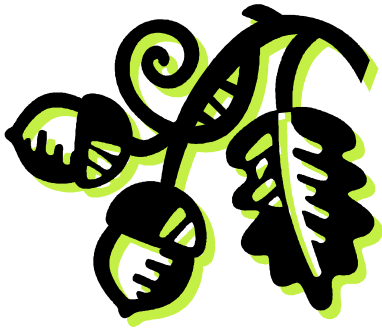
_____ was _____ in the _____. He got lost and the _____
(noun) (verb ending in -ing) (noun) (noun)

became _____. The _____ boy heard “_____!” and was very
(adjective) (adjective) (exclamation)

_____. Then he saw the _____ that made the _____ noise. It
(adjective) (noun) (adjective)

was a small _____ so he _____. No one was _____ of the
(noun) (verb ending in -ed) (adjective)

_____ again.
(noun)



THE LIFE OF TREES

An activity to get kids moving and acting out the life cycle of trees with their bodies. Make sure each child has enough space to spread their arms out and not touch anything or anyone.

Ages 6-8

Instructions:

Have children spread out in the room / area. As you ask them questions, have them answer and then make the corresponding movement to act out the life cycle of a tree. At the end, talk about the different stages and how the stages form a complete circuit. To extend the activity, have children draw the different stages and label them.

1. How does a tree start out? (as a seed) children curl up in a ball to form a seed
2. What happens to the seed? (it grows/sprouts) children uncurl and stand on their knees
3. What starts to grow out of trees that stick out? (branches) children stick their arms out with fists clenched
4. How do trees go taller? (sunshine and rain) children stand on their feet
5. What grows on branches? (leaves) children open their hands and wiggle their fingers
6. What blows through the leaves? (wind) rub fingers together to sound like wind
7. What is high in the sky that helps the trees make food? (sun) stretch arms high
8. What gives trees water? (rain) snap fingers to sound like rain
9. What keeps trees in the ground? (roots) spread feet for roots
10. What makes nests in trees? (birds) cup hands on top of head for a nest
11. What do trees make so more trees can grow? (seeds such as acorns) wiggle fingers and make dropping noises
12. What climbs on trees and stores acorns in tree trunks? (squirrels) make squirrel sounds
13. What happens when it gets windy? (branches sway) sway arms over head, drop one arm as branch breaks
14. Which bird hammers on trees with it's beak? (woodpecker) shake and make hammering noises, drop other arm as woodpecker hammers off the other branch
15. What happens when lightning hits? (tree falls) drop to the ground
16. Remember those seeds? What happens to them? (they grow) stick one arm up as a new sprout

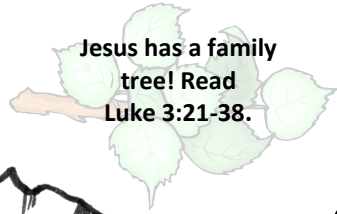
Jesus promises new
life—read about it
John 3:1-21 and
Romans 6:1-10.



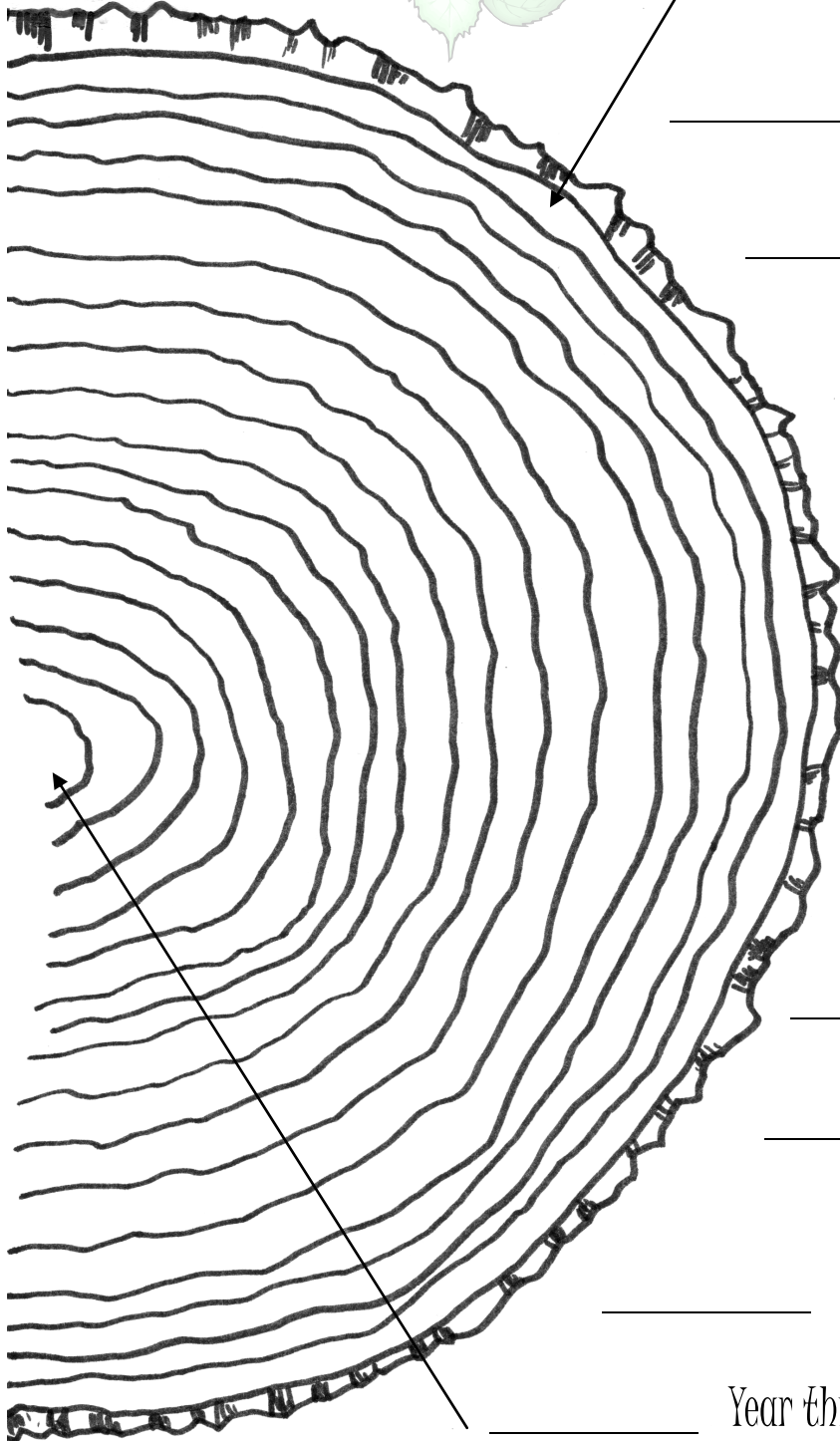


TREE TIMELINE

Every year a tree grows a new ring. By counting the rings, you can tell how old a tree is! How old is the tree below? What were you doing when it was growing? Write this year in the first blank for 'this year's growth' and fill in the years from your life in the following blanks. Draw lines to the matching year and find out how big the tree was for each of those years.



Jesus has a family tree! Read Luke 3:21-38.



_____ This year's growth

_____ I learned to ride a bike.

_____ I was born.

_____ I met my best friend.

_____ I went on my favourite holiday.

_____ I started school.

_____ I lost my first tooth.

_____ I learned to read.

_____ I climbed my first tree.

_____ I learned to tie my shoes.

_____ Year this tree began



READY STEADY GROW!

How do trees get food and water so they can grow? Learn about phloem and xylem tubes, leaves and roots, and photosynthesis, and play a game to see if water or nutrients can move fastest around the tree!

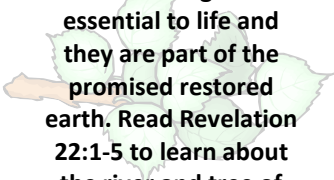
Ages 8 and up

Background:

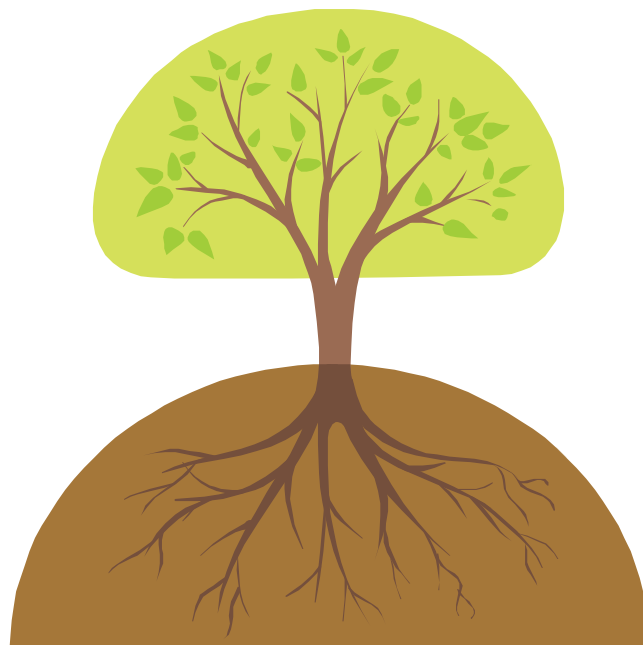
Every part of the tree is involved in the nutrient system. The roots gather water and nutrients from the soil. Water flows up the trunk to the leaves where it is combined with carbon dioxide and sunlight to make food. This food flows back down through the trunk to help all parts of the tree grow. Just inside the bark there is a pipeline that the leaves use to send food down to the roots. This pipeline is called phloem (flo-em). Next to the phloem towards the middle of the tree is another pipeline—this one is called xylem (zi-lem)—that sends water up from the roots to the leaves.

The food that trees need is made in the leaves. Each leaf contains millions of cells with chlorophyll. Chlorophyll cells are green, which is why leaves are green in the spring and summer. These cells actually make food through a process called photosynthesis. Chlorophyll cells take in carbon dioxide from the air. Chlorophyll cells combine this carbon dioxide with water sent up from the roots of the tree. In the chlorophyll cell, sunlight passes through this mixture and turns it into sugar and oxygen. The sugar is the food that trees need to grow. Oxygen is released into the air that we breathe.

Underground, there is a root system that extends two to four times further than the branches of the tree. In some trees the root system spread may be twice the height of the tree. Attached to every root are tiny root hairs which have beneficial fungi growing on and in them (mycorrhizae). They act like miniature straws to draw up water and nutrients. That mixture is sent up the pipeline to the leaves.



Water and light are essential to life and they are part of the promised restored earth. Read Revelation 22:1-5 to learn about the river and tree of life.



READY STEADY GROW! THE GAME

Ages 8 and up

For 2 players

Materials:

One print-out of the gameboard (next page)

Cut-out of the spinner, metal fastener and paperclip *or* 1 coin for flipping

Cut-outs of phloem and xylem markers *or* any 2 small objects for markers

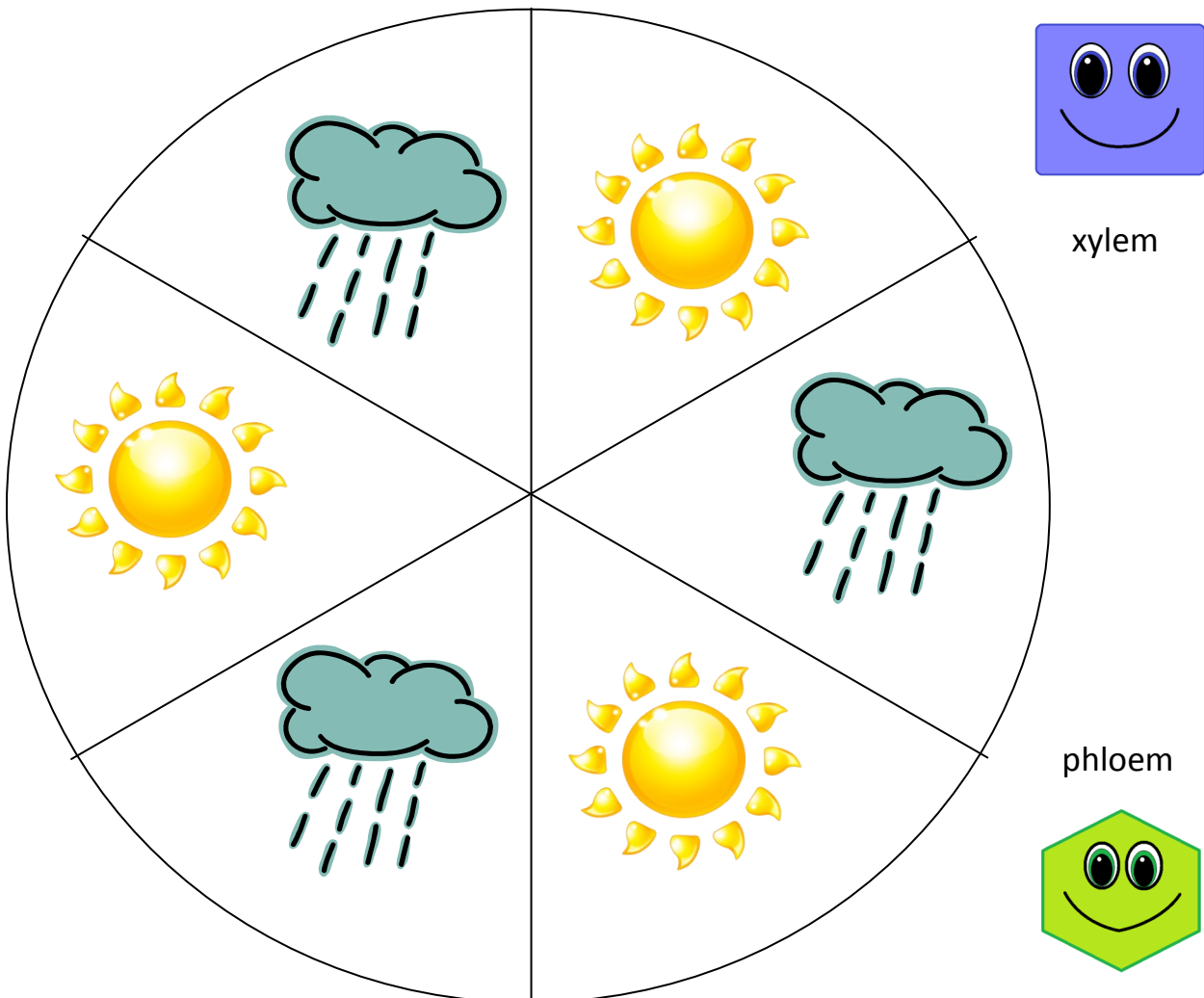
Setup (if needed):

Cut out the spinner. Push the fastener through the centre, securing the paperclip in the middle to complete the spinner. Cut out the phloem (green) and xylem (blue) markers.

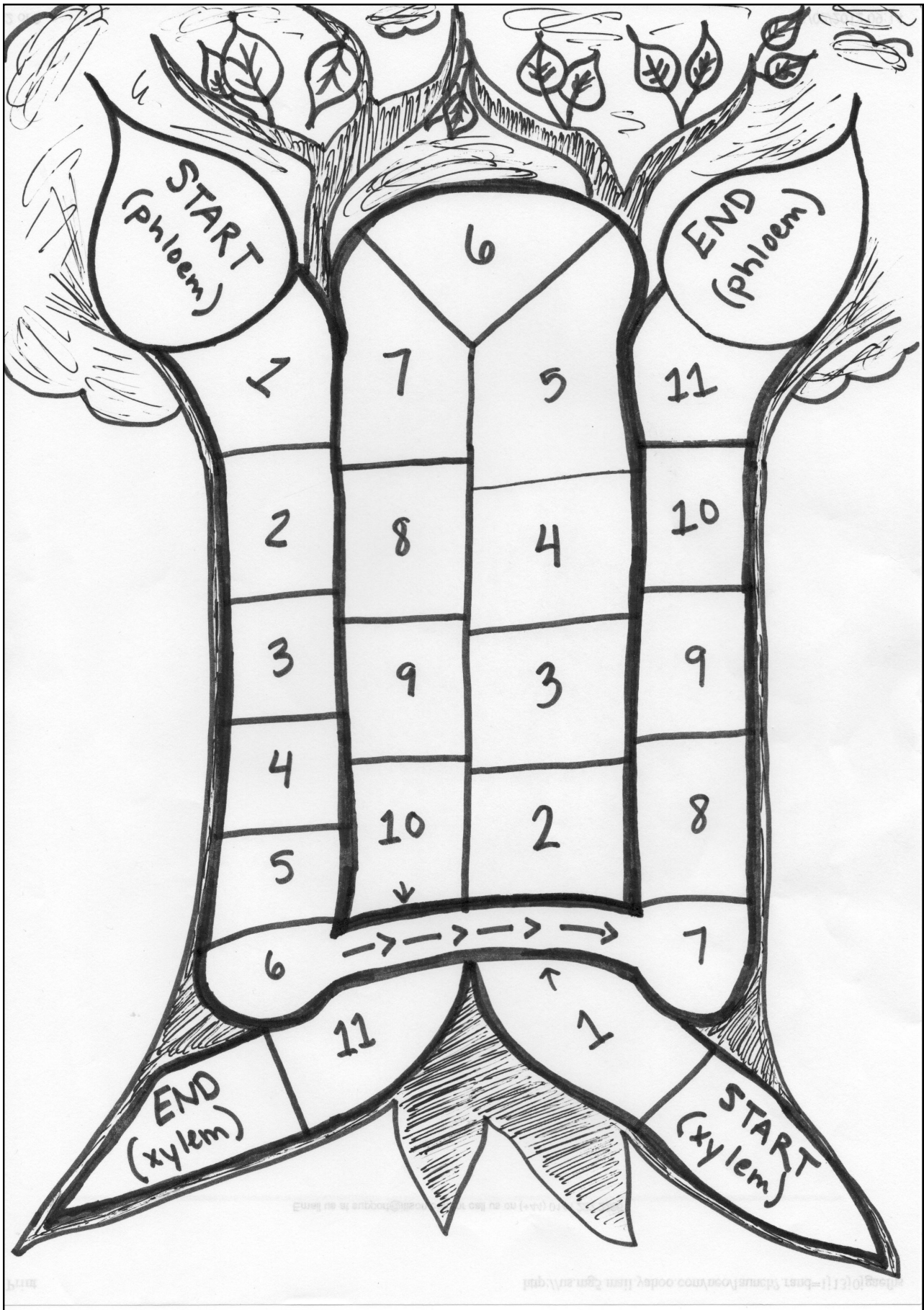
How to play:

One person is 'phloem' and the other is 'xylem'. You can use the cut-outs below or use any small marker. Each starts in their labelled 'start here' stations (phloem in the leaves and xylem in the roots). Each player alternates spinning. When the spinner stops on a sun, the phloem moves one; if it stops on rain, xylem moves one regardless of who spins what. The first person to move all around the tree to complete its cycle wins.

Alternatively: flip a coin instead of using the spinner. When it lands heads, phloem moves; when it lands tails, xylem moves.



READY STEADY GROW!



MORE TREE ACTIVITIES

Tree of hands

Draw a large tree trunk on flip chart paper, or other large piece of paper. Put green and brown paint in plates or other shallow containers. Have children paint the trunk brown with footprints (or handprints if that's too messy) and add green handprint leaves at the top.

Hug a Tree

Walk along to an area with trees, some really big ones if possible. See how many kids it takes to hug each tree, reaching around the tree hand-to-hand. Try to guess how many kids it will take to hug the tree before hugging it. Make notes of how big each tree is in terms of 'hugs'.

Ready Steady Grow! 2.0

Play the 'Ready Steady Grow' game outdoors. Using chalk, draw a tree 'board game' (similar to hopscotch) and instead of markers, have kids be the 'xylem' and 'phloem'.

Tree Tag

(a variation of Freeze Tag)

One (or several) person is the tree binder and chases the others. When someone is tagged, they are frozen and have to stand with their hands clapped together over their heads as a 'frozen tree'. To be freed, someone else must come along and clap over their heads between their arms before they are tagged. The last one(s) to be tagged when everyone else is the next tree binder(s).

Adopt a Tree

Have each child take a pen and notebook to a wooded area, or a space with a few trees. Have each child choose a tree and spend some time getting to know the tree. Write down what it looks like: how tall is it? How wide is it? What colour is the bark? Is it rough or smooth? What do the leaves look like? Are there seeds on the tree or on the ground near the tree? What does it smell like? Does it have flowers or fruit? Have the child name his/her tree. If possible, visit in different seasons and journal how the trees change.

