

A Tree Like Me

Students will compare human life cycles to plant life cycles and identify the various roles that a plant plays in its habitat during its life.

Elaborate/Apply

Supplemental Reading

Grades K-2:
In A Nutshell
By Joseph Anthony

From Seed to Plant
By Gail Gibbon

A Dead Tree by Alvin Tressault

Grades 3-5:
Treecology: 30 Activities for Exploring the World of Trees and Forests
By Monica Russo

The Tree Book for Kids and Their Grown Ups
By Gina Ingoglia

Grades K-5
A Log's Life
By Wendy Pfeffer

Grade Levels:

K, 1, 2, 3, 4, 5

Curriculum Correlation:

NCSCS – Science

K.L.1.2

1.L.1.1, 1.L.1.2

2.L.2.1, 2.L.2.2

3.L.2.2, 3.L.2.3

4.L.1.1

5.L.2.3

NCSCS – Social Studies

2.H.1.1

NCSCS - English Language Arts

K.W.3, K.SL.4, K.SL.5

1.W.3, 1.SL.4, 1.SL.5

2.W.3, 2.SL.4, 2.SL.5

3.RI.7, 3.W.2, 3.W.7, 3.W.8, 3.SL.4

4.RI.7, 4.RI.9, 4.W.2, 4.W.7, 4.W.8, 4.SL.4

5.RI.7, 5.RI.9, 5.W.2, 5.W.7, 5.W.8, 5.SL.4

Materials:

Human Life Cycle images (see Appendix),
Tree Life Cycle images (see Appendix), Plant
Biography student page (See Appendix)

Duration:

K-1: 30 minutes; 2-5: 30 minutes in the
classroom and additional research time
required.

Location:

Outdoor Study Area; classroom for research
time

Procedure (2-5):

1. Ask the students to describe how a person grows and changes during their life. Try to include baby/infant, early years of childhood, teenage years, young or middle aged adult, and older adult. Show them the images of the Human Life Cycle (see Appendix) and have them arrange the photos from beginning to end. Next, see if the students can name different “jobs” or roles a person might have during each of those life stages. Also discuss with them the different things that might happen during that life cycle: the birth of a sibling, moving to a new place, a broken bone, changing schools, having a baby, getting a job, etc.
2. Take a walk around the school yard and record observations of trees or plants in the different stages of their life cycle. They can look for seeds (acorns, pinecones, maple samaras, dandelion fluff), sprouts and saplings, adult trees or fully grown flowering plants, injured or unhealthy trees, and dead plants, trees or logs.
3. As they find different examples, ask broad questions such as: What is the role of the tree during that stage of its life.? What is it likely trying to do to survive? How is it affecting the environment around it? Use the Tree Life Cycle (see Appendix) images as a reference.

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4. Have the students work individually or in small groups on a plant life cycle research project on one of the 50 state trees or 50 state flowers. They should include either hand drawn or internet photos of at least five stages in the plant or tree's life cycle (seed, sprout, sapling - trees only, mature plant/tree, dead plant/tree, rotting plant/tree). They can use websites such as statesymbolsusa.org or field guides like [A Field Guide to Wildflowers: Northeastern and North-central North America](#), [Peterson's First Guide to Trees](#), or the [NWF Field Guide to Trees of North America](#) to find images and growth information about their plant or tree.
5. Remind the students of how the tree or plant might be interacting with its environment during each of the different stages and what events might occur that will change that plant's life (forest fire, bad storms, drought). It will be important for the students to do some research about their plant's habitat as well, so they can better understand some of the changes that plant will go through during its life.
6. Have the students use the information they collected to write a biography about their tree or plant using the student worksheet (see Appendix). Students can connect their project to the Human/Plant Life Cycle comparison, personifying the plant and what it might be doing as a human in a similar stage of life, i.e. growing at different heights during the teenage years.

Extensions:

1. Have the students research and identify ways that their tree or plant can be used by humans, i.e. wood from oak trees has been used for flooring and furniture, rose hips (fruit of the rose plant) have been used as an herbal supplement.
2. Have the students research whether or not this tree or plant has a historical or cultural significance to that state, i.e. the longleaf pine being used for turpentine production in North Carolina and across the Southeast.

Learning Targets:

1. Utilize different types of information/technology to research tree/plant species.
2. Conduct a research project based on focused questions, demonstrating understanding of the subject under investigation.
3. Represent a sequence of events in a timeline.
4. Summarize a plant/tree life cycle and the similarities and differences that plant/tree may have compared to others of the same species.
5. Explain the effects of environmental conditions and interconnected relationships on a plant/tree.

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Procedure (K-1):

1. Have the students describe a plant or tree life cycle in a way that is similar to that of a human.
2. Show them the Tree Life Cycle images and have them arrange those in order from beginning to end. As the class looks at each photo have them imitate the shape and movement moving through the life cycle.
 - A. Curl up small to be a **seed**.
 - B. Slowly open up, kneeling to sticking out leg as a root to show that you've **sprouted**.
 - C. If kneeling, stick out your arms and spread out your fingers to show your branches and leaves, then slowly stand up as you become a **sapling**.
 - D. Spread out your feet and wiggle your toes, keeping arms and hands wide open to show you are an **adult tree** growing and taking up space.
 - E. Wiggle your fingers all around to show how **pollen** spreads, making seeds that fall to the ground.
 - F. Start scratching all over—you're being eaten by insects.
 - G. A storm blows in and strong winds knock off a branch. Make a loud noise like thunder, lightening strikes and you lose another limb.
 - H. Smile and sigh as you become a cozy home for animals in your old age. Now you are a **snag**. A snag is a dead tree that is still standing.
 - I. Make a creaking and crashing sound, falling to the ground as a **rotting log**. Stick up one arm with hand spread wide to show that a new **seed has sprouted** from the soil you are helping to create.
3. Review the photos of the life cycle and ask the students what the job was of the tree during each stage. How was it similar to a human life cycle? Have the students compare the Tree Life Cycle and Human Life Cycle images.
4. How can the tree help its environment as a seed? What about when it is a sapling? (Food for some animals, home or shelter for birds) What did the tree do for it's environment as an adult tree? (Make flowers and pollen for bugs, able to make seeds that could be more trees or food for animals) How was the tree used as a snag? (Woodpeckers, owls and squirrels could move in, bugs lived in the tree) What happened to the tree when it fell and became a rotting log? (The tree decomposed and turned back into soil.)

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(The new soil helped more seeds grow to make more plants. The rotten log was also food for bugs and worms.) Have the students decide if the life cycle should be a straight line, or if a circle would be more appropriate.

5. Have the students draw and write about their own version of a tree's life story, making sure to include the main stages of the life cycle (bolded words above).

Learning Targets:

1. Explain a sequence of events using narration and drawings.
2. Compare characteristics of plants/trees in terms of their growth and changes.
3. Identify the basic needs of plants/trees and give examples of how those needs can be met by their environments.