Forestry

*Lesson Plan for Grade 1, Science*

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*Modified by Mississippi State University, School of Human Science*

*for Mississippi Farm Bureau Federation - AITC*

# OVERVIEW & PURPOSE

Students will learn about the different developmental stages in the life of an organism.

# EDUCATION STANDARDS

**Mississippi College-and-Career Readiness Standards:**

L.K.2.3 With teacher guidance , conduct a structured investigation to observe and measure (comparison of lengths) the changes in various individuals of a single plant species from seed germination to adult plant. Record observations using drawing or writing.

ELA-SL.1.1 Participate in collaborative conversations with diverse partners about grade 1 topics and text with peers and adults in small and larger groups.

**NALOs**

T2.K-2 f. Identify the types of plants and animals found on farms and compare with

plants and animals found in wild landscapes.

# OBJECTIVES

* Compare life cycles of humans and trees in the forest
* Analyze the stages of a trees life

# MATERIALS NEEDED

* Pictures of somebody from infancy to adulthood (can be found on the internet or personal photos.)
* [Tree life cycle cards (one set per two students)](https://docs.google.com/document/d/1qMzIzNbc9Izcb-CYojvaqZ5jMo_YbClZ/edit?usp=sharing&ouid=109918902593538910659&rtpof=true&sd=true)
* Plastic bags (1 bag per set)
* Stapler (1)
* Crayons (1 box per student)

# Lesson Set Up:

1. Collect pictures of an individual growing up from infancy to adulthood.
2. Print out the Tree Life Cycle cards (below) (1 per two students).
3. Cut out each set of Tree life cycle cards and place them mixed up and out of order into a plastic bag (1 set per bag).
4. Set aside some crayons and a stapler for the students to use later in the lesson.

# Vocabulary

**Acre:** An area of land measuring 43,560 square feet. A square 1-acre plot measures 209 feet by 209 feet; a circular acre has a radius of 117.75 feet.

**Bark:** The tough exterior covering of a woody root or stem that protects the tree from injury caused by insects and other animals, by other plants, by disease and by fire.

**Forestry:** The art and science of managing forests to produce various products and benefits including timber, wildlife habitat, clean water, biodiversity and recreation.

# Ag Facts:

* Mississippi is a heavily forested state with 18.6 million acres of forestland (62% of the state’s land area). The total economic impact of forestry and the forest products industry is $14.8 billion.
* Almost 66 percent of the state’s forestland is owned by private, nonindustrial forest landowners. (MSStateExtension)

# Background Information for Teacher:

“Forestry is really big in Mississippi,” says the director of forest protection and forestry information for the [Mississippi Forestry Commission](http://www.mfc.ms.gov/). “Almost 20 million acres across the state of Mississippi are covered in trees. That’s a very large land area and a very large economic impact.” The commission estimates that the timber industry earns between $1.3 and $1.5 billion from forestry and forest products every year. This is especially impactful due to the nature of tree growth in the state.

“You can just walk away from a tract of land and trees are going to grow. It’s just the way it is,” says Bozeman. “We grow trees here in Mississippi. That being said, forestry and forest management have become an essential part of this.”

Roughly 70 to 80 percent of the harvested forests in Mississippi are owned by nonindustrial private forest landowners – everyday people who own forest land. These landowners harvest, on average, 50 acres of trees every year. So, not only do these private forest landowners own the majority of the harvested forest land, they also make up most of those involved in the forestry and timber industry in the state.

“The way forestry works is, if there are trees on the property, there are industries inside Mississippi and outside who will use that resource,” Bozeman states. “This can be anything from fiber production to make everyday household products, like toilet paper and writing materials, to structural uses such as lumber and furniture.”

While many are familiar with using timber to make paper products and for construction, the Mississippi forestry industry is creating modern uses for timber and wood products.

“We have some innovative technology uses when it comes to biofuels that can be produced for larger markets in Mississippi and throughout the southeastern United States,” says Bozeman. “Everything from wood pellets that can keep furnaces running – and some people are even working to develop biofuels you can use in vehicles like an oil-based product. But the ultimate uses for timber and wood products depend on the market and depend on the trees.” (Excerpt from from FarmFlavor <https://www.farmflavor.com/mississippi/mississippi-ag-products/mississippi-forest-landowners-harvest-and-regrow-timber/>, Author: Beverly Kreul)

# LEARNING PROCEDURES

Interest Approach:

1. Explain that you have just received a loose collection of different photographs of an individual over the years and you’d like the students’ help putting them in chronological order.
2. Ask them to brainstorm a list of the important events or stages in a person’s life that might be recorded in the photographs. Record their ideas on the blackboard.
3. Once the list is complete, work together to sequence their suggestions in chronological order.
4. Randomly label your photographs and lay them in a central location for the students to observe. Allow time for the students to study the photographs.
5. Have them guess the proper sequence and record their guesses using the labels. When everyone has finished, ask the class what they think the right order is.
6. Have them match the photos to the stages and events they brainstormed. Explain that all living things go through different stages of development in their lives just as we do.
7. The sequence of these stages from beginning to end is called a life cycle.

“**Can you think of any examples in nature?”** (egg, tadpole, frog, chicken, cow, puppy, etc.)

Activity: 1

1. Pair up students into partners.
2. Pass out a set of the tree life cycle cards to the pairs of students.
3. Tell the class you have pictures of a tree throughout its life. Once again, they are out of order. Ask them in groups to sort these in the correct sequence, staple, and color the pages.

**Concept Elaboration and Evaluation**

* When the students are finished, ask each student to look carefully at the life cycle stages represented in the picture of their completed tree book. By seeing what comes before and after, can they guess what stage of a tree’s life is represented on their card? Review the life cycle order. Finish by making comparisons between the stages in a tree’s life and a human’s.

# Additional Learning Procedures

To help students review and elaborate more about forestry, complete a [“I used to think… now I think…”](https://drive.google.com/file/d/1oGrqECWexc20UR-5IhC1d_rpgspjUY6C/view?usp=sharing) chart and share with other students.

Additional resources to encourage students to make new connections to forestry is reading aloud [“Forest Magic: A guidebook for Little Woodland Explorers” by: Sarah Grindler](https://www.amazon.com/Forest-Magic-Guidebook-Woodland-Explorers/dp/1771089261/ref=asc_df_1771089261/?tag=hyprod-20&linkCode=df0&hvadid=532800953219&hvpos=&hvnetw=g&hvrand=15746603100376358615&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=1020785&hvtargid=pla-1364634744125&psc=1).

Additional Texts to Consider:

[Forestry](https://www.agfoundation.org/recommended-pubs/forestry)

[Forestry Ag Mag](https://www.agfoundation.org/recommended-pubs/forestry-ag-mag)

[Zee Grows a Tree](https://www.agfoundation.org/recommended-pubs/zee-grows-a-tree)

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# Source: <https://www.plt.org/network/massachusetts/>

*For more information and additional lessons visit*

*https://msfb.org/ag-in-the-classroom/lesson-plans/.*