



DALLAS ARBORETUM  
Education

# *Garden STEM at Home* *Time Lapse*



WE GROW MINDS, TOO.





### OBJECTIVE:

STUDENTS WILL DESCRIBE THE SUCCESSIONAL CHANGES, INCLUDING SPECIES DIVERSITY, IN A FOREST ECOSYSTEM AND THE FACTORS THAT AFFECT THESE CHANGES.

### SOURCE

Project WILD K-12 Curriculum & Activity Guide

### BACKGROUND

Ecological succession is the process in which an ecosystem changes and ages over time. This fairly predictable change is comparable to the stages of growth of a plant or animal, and is divided into two types: primary and secondary.

Primary succession is succession in an area where no species previously lived. This could include life gradually developing on an exposed rock cliff or sand dune.

Secondary succession occurs when a natural area is disturbed due to natural or human-caused events. Some examples include wildlife, flooding or clear-cutting a forest.

Learn more here: [https://en.wikipedia.org/wiki/Ecological\\_succession](https://en.wikipedia.org/wiki/Ecological_succession)

### INSTRUCTIONS

1. Through the background information above, introduce the concept of succession to students.
2. Share a photo of a mixed deciduous forest with students, such as this one: [https://commons.wikimedia.org/wiki/File:Mixed\\_deciduous\\_forest\\_Catalonia.JPG](https://commons.wikimedia.org/wiki/File:Mixed_deciduous_forest_Catalonia.JPG) and read the description of the 151-300 years from the Descriptions of Successional Stages in the Project WILD link below.
3. Discuss the types of plants and animals one may find in a forest of that age and discuss how that forest could be used (recreation, lumber, etc.)
4. Next, find a photo of a clear-cut forest. What animals and plants may still survive in such an area?
5. Then, create groups and provide students with one of the Descriptions of Successional Stages and accompanying documents from below.
6. Ask each group to create a visual (print or digital) representation of their successional stage in the cleared area on Diagram A. Students should include characteristic vegetation and animals, and may do additional research if desired.
7. Present representations and then arrange in the correct successional order. Then, ask students to summarize the changes that occur in populations, types and locations of plants and animals during the stages.
8. Optional: Take a photo safari to and document either examples of primary and secondary succession or representations of each stage of succession.

### ADDITIONAL RESOURCES

Project WILD Time Lapse STEM Connections:

<https://www.fishwildlife.org/projectwild/step-stem-and-wild-work/time-lapse>