

# DOMINANCE IN THE FOREST

## SUMMARY

Discover the dominant tree species along the trail by measuring your way through the forest and calculating the tree basal area for six different tree species.

**GRADE LEVEL:** 4-12

**ACTIVITY DURATION:** 1 hour

**SETTING:** Classroom

**SUBJECT AREAS:** Human Environment Interaction, Geographic Reasoning, Kentucky Geography, Kentucky History, Microeconomics

**NGSS:** 4.OA.2, 4.OA.3, 4.NBT.3, 4.NBT.4, 4.NBT.5, 4.MD.1, 4.MD.5, 5.OA.1, 5.NBT.4, 5.NBT.5, 5.NBT.6, 5.NF.6, 5.MD.1, 5.MD.5, 6.EE.2, 6.EE.6, 6.G.2, 6.G.4, 6.SP.1, 6.SP.2, 6.SP.3, 6.SP.5, 7.RP.3, 7.G.4, 7.SP.1, HS.G.15, HS.G.28, HS.G.29

### SUBJECT AREAS:

4: Operations in Algebraic Thinking, Number and Operations in Base 10, Measurements and Data; 5: Operations and Algebraic Training, Number and Operations-Fractions, Measurements and Data; 6: Expressions and Equations, Geometry, Statistics and Probability; 7: Ratios and Proportional Relationships, Geometry, Statistics, and Probability; HS: Geometry

**OBJECTIVES:** This program is design to provide a STEM experience in the outdoors. By utilizing the science of identification, the technology of equipment, the engineering skills required to collect data, and the mathematics to pull the data together, children will learn that outdoor careers can be complex and rewarding. Following this class, students should be able to:

- Identify at least 2 native trees by their leaf's or bark
- Explain the concept of dominant tree species in a forest
- Discuss the relationship between circumference, diameter, and radius

**COOPERATIVE APPROACH:** This program works well with *Into the Forest* so that students get additional information about other plants that live and thrive in the forest. *Woodland Wildlife* is another good companion program that looks at the animals that live in the deciduous forest. This program also works well with the *Cave Boat Tour* by providing the students with a view of the underground below the forest.

**MAKING CONNECTIONS:** With this program, students understand better what Forester's and other Native Land Managers need to do in order to obtain information about the health of their forests.

This may inspire more students to pursue science as a career. In addition, students become more attached to the local ecosystem, by experiencing it in a unique way, an therefore become advocates for its health and safety.

### EXTENSIONS:

The *Dominance in the Forest* program can be enriched as a STEAM program in which principles of art are applied:

-Take a Hike is a program where students must design a brochure encouraging people to take their trails based on the tree species they will encounter on their hike.