

# Quadrat Plant Identification



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2021 extern at Mississippi Project Office

## Part I: Overview of Workplace

- In charge of 314 miles on the Mississippi River from Potosi, Wisconsin, to Saverton, Missouri.
- Manages 16 campgrounds, 14 day use facilities, 22 boat ramps, a visitor center and 55,000 acres of forested land for public use.
- Forested resources managed by the U.S. Army Corps of Engineers.

## Part II: Workplace Focus

- Flood regeneration project. This project consists of driving to various areas or plots to count and identify plants that have regrown since the flood in 2019.
  - The project has over 40 plots that are being studied which will likely be compared to data taken from a parallel study performed 15 years ago.
- Plant identification and measurement of growth and decline
- Full-time foresters, three summer interns
  - Boat certification
  - GPS Navigation certification
  - Trailer certification

### Part III: Introduce the Problem

Students will produce a four straw “quadrat” square to use to identify the plants within a plot of ground when the “quadrat” is placed on the soil with vegetation. Students will learn to identify what plants reside in the plot and whether they are natural or invasive species, if they should be removed, and what future ramifications may come from removal.

## Part IV: Standards, Driving and Essential Questions

What kinds of plants do you think we'll find? How can we find out what kind of plants they are? How will you identify the differences (invasive vs native species) in the garden and what to remove? What do you think will happen if we do not remove the invasive species?

Standards:

- 2-PS1-1 Investigate and Classify
- 2-PS1-2 Analyze Data
- SS.2.19 Prediction of Future
- RL.2.10 Comprehend Literature
- RI.1A.1 Research Based Comprehension Strategies
- RI.2.5 Text Features
- RI 2.7 Using Images to Clarify Text
- RI.2.10 Comprehend Informational Text
- RF.2.4 Reading with Accuracy
- W.2.7 Research and Writing Projects
- W.2.8 Gather Information from Sources to Answer a Question
- SL.2.1 Collaborative Discussion
- SL.2.6 Produce Complete Sentences to Provide Detail or Clarification

## Part V: Extern Host Role

The Mississippi River Project Office employs two rangers that are in charge of Smith Island, which is a mile observation walk of the various species that live in Iowa and Illinois:

Allison Borkowski and Jake Kresel  
Supervisory Park Ranger 309-794-4537

After speaking with them, they were excited about the idea of bringing students over and having various plots set out for them to identify and continue to learn about the species that are present all around them.

## Part VI: Student Learning

- Students will have the opportunity to choose how to learn about the different types of plants through books, approved websites, or apps like Seek
- Students will be able to reflect on their opinions about whether a plant is invasive and whether or not it should be removed and what would happen if it were removed.
- Students will be able to think about the job of plants and how important they are to the environment and ecosystems surrounding them.