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Teaching content area(s): High School Biology

School: Jesup High School

Extern host site: Iowa DNR-George Wyth

Part I: Overview of Business

George Wyth State Park was dedicated in 1940 as “Josh Higgins Parkway”, named after a popular radio character. In 1956, it was renamed George Wyth Memorial State Park after a well-known Cedar Falls businessman and conservationist.

The park is located near Waterloo and Cedar Falls. George Wyth is designated as a National Urban Wildlife Sanctuary, which includes woodland, prairies and wetland areas. It has many variety of wildlife. Activities to do in the park include: camping, hiking and biking, fishing, boating, and swimming.

Part II: Job Specifics

- While at George Wyth one of the projects that I worked on was putting in a pollinator area. I helped to plan, design, and put in the pollinator area.
- Students learn how a pollinator garden provides habitat for a variety of different animal species. They make observations and collect data to determine which species inhabit the pollinator garden, investigate relationships among them, and identify factors that may affect them. They use this data to track species over a period of time to discover patterns between their habitat and biodiversity.

Part III: Introduce the Problem

In this project, students conduct a species census to identify species within different garden habitats and observe their interactions with one another and their environment. Through repeated observation, students will understand that the greater the diversity of plant and animal life in the garden, the more effective ecological systems are in helping keep nature resilient and productive. Students will also learn how a garden functions as an ecosystem. Students will also design a smaller scale pollinator garden.

Part IV: Background

Students will research and apply the following:

- Observe and identify species found in the garden.
- Define the concept of a habitat.
- Define the concept of species within a habitat.
- Define the concept of biodiversity.
- Understand how biotic and abiotic factors interact as a system within a habitat.
- Evaluate how a garden models an ecosystem.
- Identify, record, and estimate the number of species present in the garden habitat during regular intervals of time.
- Review habitat data and garden design to formulate an opinion on what factors impact the degree of biodiversity present over time.
- Judge the effectiveness of the school garden to support biodiversity.
- Evaluate if and/or how the garden can support greater biodiversity.
- Generate ideas and list factors that may affect biodiversity.
- Develop a theory for how biodiversity makes nature resilient and productive.
- Describe the relationship between habitat and biodiversity in the garden.
- Describe the effects of pollinator behaviors in the garden habitat.
- Review the process of pollination and the role of pollinators within a habitat.
- Design a small scale pollinator garden.

Part V: Business Solution

- Planned, designed, and carried out work to create a pollinator garden(area).

Part VI: Student Solutions

- Students will observe a smaller amount of diversity in a garden when compared to a pollinator area. Thus the students will conclude that there is a relationship between biodiversity and resilience in nature.

https://www.natureworkseverywhere.org/asset/resources/NWEGardens_HabitatGuide_Final.pdf