

# Why Do We Need the Bees?



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2021 Extern at The Office of Sustainability and the Environment at the University of Iowa

## Part I: Overview of Workplace

The Office of Sustainability and the Environment (OSE) is an office at the University of Iowa that is a focal point for sustainability. The OSE promotes, coordinates, and maintains sustainability campus initiatives and programs that interconnect social equity, the environment, and the economy.

## Part II: Workplace Focus

My focus this summer is to learn about multiple aspects of sustainability and work with researchers, students, and staff to learn more and assist with a prairie reconstruction project. I will take what I have learned from these conversations and implement them in lessons, resources, and programs that can be used to teach sustainability in K-12 classrooms.

## Part III: Introduce the Problem

Bee colonies are decreasing at an alarming rate. The loss of bees can affect humans, the environment, and the economy. Without bees, our global ecosystem would be negatively impacted. At the end of this unit, students will develop a product for awareness that will be directed towards the general public and be evaluated by the Office of Sustainability and the Environment at the University of Iowa.

<https://www.ars.usda.gov/oc/br/ccd/index/#public>

## Part IV: Standards, Driving and Essential Questions

- HS-LS2-2: Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.
- **What role do bees have in an ecosystem?**
- **Why are bee colonies decreasing?**
- HS-LS2-6: Evaluate claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in new ecosystem.
- **How will humans, the environment, and the economy be affected if we did not have bees?**
- HS-LS2-7: Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.
- **What can we do to save the bees?**

## Part V: Extern Host Role

The extern host will give them a tour of pollinator gardens on the University of Iowa Campus, discuss ways that students can create their own garden, and will be the evaluator for the students' final project.

*Extern Hosts from the OSE:*

**Stratis Giannakouros**, Director

**Beth McKenzie**, Sustainability Program Manager

**Blake Rupe**, Sustainability Program Manager

## Part VI: Student Learning

Students will have the opportunity to choose a factors for population collapse to research and a potential solution in related to this factor that they are interested in for their product. Students have the choice of product for their project (presentation, movie, ad, book, etc.). Students will be completing a weekly reflection in their scientific notebook as well as writing a reflection piece at the end of the unit.