

About the Beetle Project

Empire State College was granted a Higher Education Grant from the United States Department of Agriculture to create a citizen science project that increases student interest, participation, and retention in science.

In The Beetle Project, students develop a visual, virtual map of the life stages and population density of Japanese beetles across the state of New York. Students make observations and record data regarding:

The insect life cycle

- Vegetation
- Soil properties and types
- Atmospheric conditions.

They analyze the data to discern patterns of beetle life stages, phenological correlations, and climate trends. Participation in the project will enable students to better understand the ways climate change impacts local ecosystems and biodiversity and non-native species.



Citizen Science at SUNY Empire State College



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Outcomes

- The Beetle Project captures the interest of a wide diversity of students to increase interest and enrollment in STEM: studies, programs, and majors.
- Students will learn how to work as a team and communicate within an online open learning environment. Students will also learn how to adapt technology and the scientific theory to solve new problems.
- Students will develop an understanding of how climate change impacts regional ecosystems and biodiversity.
- Increase faculty resources for developing new and innovative studies in environmental and agricultural studies.

The project is easy to incorporate into courses either as a small learning exercise or extrapolated on to be the basis of an entire study. Some of the courses at SUNY Empire State College that this course has been used in include:

- Environmental Science
- Global Climate
- Soil Science
- Urban Ecology
- Physical Geography

- In Our Gardens: Exploring Gardens Through Literature and Science
- People, Places and Plants
- Invasive Species.

Getting Started

This course can be found at www.esc.edu/citizenscience. Each student that participates in the project creates a user name and password. The project site includes guidelines on how to take data that is consistent with the methods being used by other project participants. It is important that these guidelines are used so that data collected across the state in a variety of settings and courses is comparable. Following established methods helps ensure that the data collected can contribute to our understanding of the ecological processes under investigation.



Beyond Beetles ...

The Beetle Project is only one example of how citizen science can be incorporated into courses. Examples of other data related to sustainability that could be captured and mapped include:

- Populations of medicinal plants
- Populations of indicator species
- Access to local foods by demographic
- Healthcare access related to socioeconomic factors.

The Beetle Project was developed using an open source, packaged Drupal Installation Profile customized for mapping points onto a map. All of the necessary tools to download this package and create a citizen science project of your own are available for free in our Citizen Science Template. Instructions on how to download the template are found at www.esc.edu/citizenscience. Once the download is complete you will find instructions on how to create your own data fields and maps.

To download the toolkit you will need a web hosting account and ftp access to that account. Once you have created your project, we welcome you to post a link to it on www.esc.edu/citizenscience by emailing citizenscience@esc.edu