



MEGA:BITESS Lesson Plan

Lesson plans related to Medical Entomology & Geospatial Analyses:
Bringing Innovation To Teacher Education & Surveillance Studies

<https://www.megabiteess.org/>

Lesson plan title: Placement of ovitraps based on hypothesis.

Lesson plan author(s): Emily Butterfield and Lauren Waldron

Lesson plan school(s): Bearden Middle School

Required background

All needed materials will be housed within this website.

<https://sites.google.com/view/clubbiteess/home>

Students can work their way through each lesson independently or as directed by an instructor as a part of a club, group, or organization.

Before leading this lesson, the instructor should become familiar with the the process students will be asked to complete. The teacher will need to prepare either a digital survey using Survey 123 app or locate a printed or virtual map of the area ovitraps will be placed.

All needed information on placing and marking ovitraps can be found in the google slide show on the above linked website.

It is recommended that the instructor work through lesson one on the website so that they are familiar with the materials and activities students will be completing.

There is a google form quiz to test understanding of the materials in the Google Slides. This is set up to give a score and automatic feedback.

Objectives

I can...

- Use my hypothesis to choose ovitrap locations
- Carry out an experiment based on my hypothesis
- Collect data about my ovitrap location: marking on a map, conditions, take photos, etc.

Standards addressed

TN Science Practices: Planning and carrying out controlled investigations to collect data that is used to test existing theories and explanations, revise and develop new theories and explanations, or assess the effectiveness, efficiency, and durability of designs under various conditions.

Primary task

Students or Teachers will also be placing their initial ovitrapping cups and either geolocating the cups with the Survey123 app or marking their cup placement on a map.

Other activities

Video

Google Slides

Google form quiz

Digital breakout at the end of the unit.

Assessment

Teacher check of site location data and mapping by students

Google Form quiz

Virtual breakout at the end of the unit.

Materials/links

<https://sites.google.com/view/clubbitess/home>

Potential limitations/issues to anticipate

To use the Survey 123 app the instructor will need to set up a survey with an ARC GIS account. You will need to apply and register for this several weeks before it is needed and it will require an understanding of how the program works. If the instructor does not have an account or prior knowledge of the Survey 123 app, it is recommended that they use a printed or digital map to make ovitrap locations.

Internet access may not be available for all students and they may need to access the content asynchronously.

Teachers may want to set up virtual meetings with their club members if they are unable to meet in person. When there are bandwidth issues, having students turn off their camera can help them hear and see others in the meeting.