

Drawing for Understanding in Field Science

Brief Description:

In this cross-disciplinary course, students will build scientific knowledge about their immediate environment through observational drawing and field research. Using the principles of visual design and the scientific investigation, students will communicate their scientific knowledge to others through visually powerful images and forms.

From the pre-historic drawings of bison in the caves of Lascaux, France to the anatomical studies of the 14th century Flemish physician, Andreas Vesalius to the incredible journals of Leonardo Da Vinci, people have used drawing to

understand the natural world and to communicate that understanding to others. In this course we will look at the natural world – the flora, fauna, history, and systems at play in real time field experiences. Student will engage in active discovery through observational drawing as the principal technique for recording data. Direct observation and construction of knowledge lies at the heart of what both scientists and artists do. Field trips and talks by visiting artists/scientists will supplement our studies. Students will build knowledge together through observation, drawing, discovery, discussion, and design. This course may be taken for .5 credit in the Visual Arts Department.

Grade Level: 9-12

Number of Meetings per week: 4

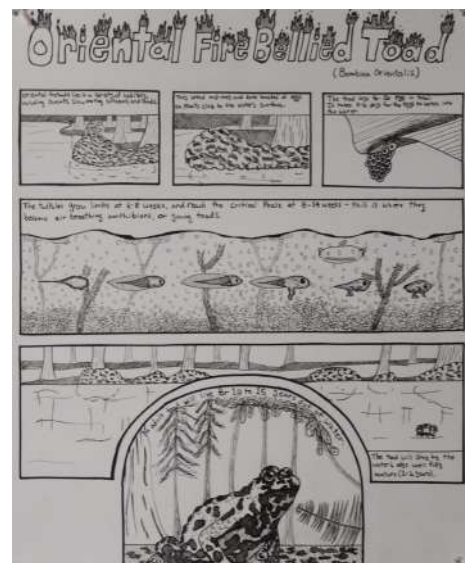
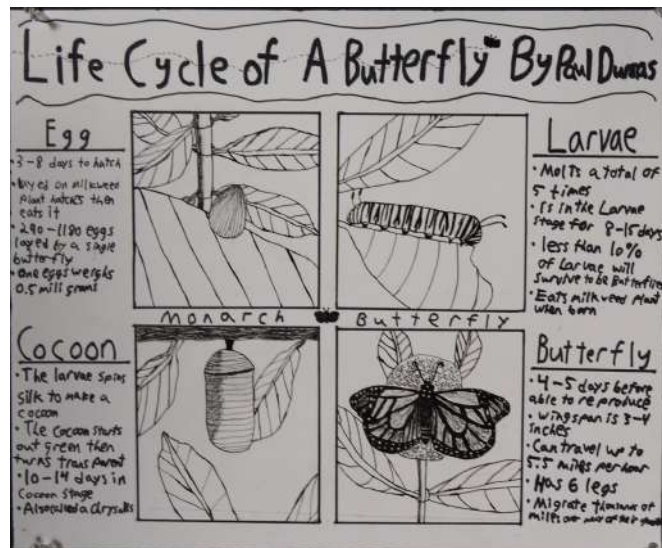
Full year or half year: Half Year

Number of Credits: 0.5

Prerequisite/helpful classes: None

Example of a unit

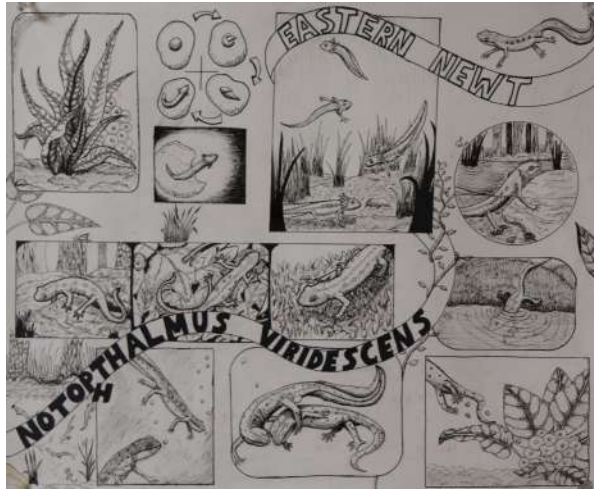
One project students do is an illustration about change where they look at both insects and frogs, species that have radical transformations in form and in habitat over their life cycles. A couple of researchers have come in from the graduate program at BU to talk about their research out in the field. Then, students illustrate something that they have learned about change - either change in growth or development or change in the interconnectedness of species. There is a pretty extensive collection of insects and a frog and lizard skeleton that students can look at



when drawing. If we don't have the actual insect they are looking for, students can supplement with photos from the internet or guidebooks.

Class Structure

The class is mixed-leveled, so there are some students who are completely beginners in drawing and there are also students may be taking the AP Studio Art class. The class is also very structured in that there are two projects per term, and each project involves a research component.



Homework

Homework is assigned once a week to be completed in a week. It's basically additional information - articles, poem, stuff about art - that is related to what is being studied.

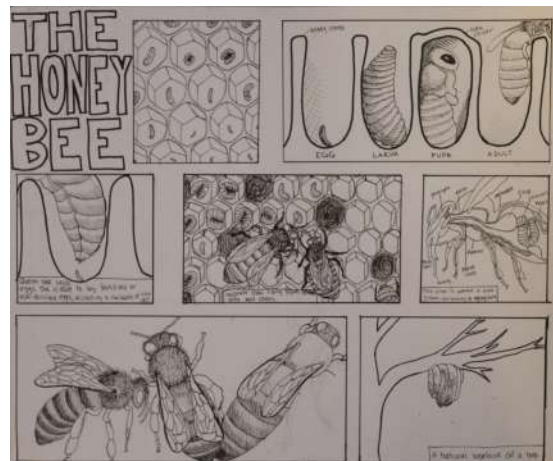
Significant Project

At the beginning of the year, researchers from the Arnold Arboretum visit BHS and then students go visit the Arboretum. After getting a behind-the-scenes tour, students go through the

Arboretum's collections and select a specimen to do a field identification illustration. The Arboretum then sets the artwork up in an exhibit which is open for about a month.

Who should take this class?

Any student should take the class. It involves a practical use for drawing unlike a portrait or "drawing one's feelings". It's a way students can learn about the world just like writing or mathematics.



STUDENT PERSPECTIVES

"My favorite assignment was an assignment where we went to the arboretum, chose a tree, learned about the tree by researching and then drew it. The arboretum took all of that work and put it in their visitor's center, and it made everyone in the class feel very accomplished, that people were actually appreciating the work that they were doing. I recommend this course to anyone who is interested in drawing and wants to take a new perspective on drawing or anyone who's interested in science and wants to take a new perspective on science. It is an amazing

opportunity to do an interdisciplinary course in both drawing and science. It's a new perspective in both subjects."

- Anjali M. '20

"I've never been much of a drawer, just kind of an amateur drawer, but this class gives you the opportunity to hone your skills in a lot of different areas with pastels, colored pencils, pen. But it also teaches you a lot about nature - plants, animals. So, it is the best of both worlds."

- Masha K. '19