

A Bug's Life
Introduction to Entomology and Apiculture



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| Learning Neighborhood | High School |
| Subject Area (s) | Green Studies, Ecology, Entomology, Biology |
| Topics | Introduction to Entomology |
| Level | Introductory |
| Teacher (s) | Noan |
| Prerequisites | None |
| Limitations | None |
| Interdisciplinary and/or Course Credit Details: | Can serve as Environmental Studies or Science credit |

Course Description:

If you take a moment to look around the Green School campus, really looking at detail, you will realize that we live in a very complex and diverse community. The arthropods of Green School range from nearly microscopic to as large as your hand. In this course, we will set out to document this diversity, while learning the fundamentals of entomology, learn about metamorphosis, and explore what it might be like to belong to a hive mind.

Core Competencies (Subject Based Skills):

In this module, students will:

- **CC 15 Sciences** - Develop and execute appropriate scientific written and verbal presentations
- **CC 31 Environmental Action** - Master biological systems thinking as it pertains to the diverse relationships between living and nonliving things.

Critical Skill Focus:

Organization

- Identifying and sharing tasks, completing those tasks to a deadline, staying informed of other's progress, informing others of your own personal progress, and appreciating other's work.

Inquiry

- Confidently ask informed questions that both further understanding and add depth to materials

Sample Activities: (linked to multiple intelligences and sustainability principles)

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|----------------|---|
| Emotional | Presenting and sharing what you have learned about various insects in a style that suits your learning and character. |
| Intellectual | classification, database input, forum participation |
| Intrapersonal | Sketches of Insect Anatomy |
| Physical | finding the insects around campus for the database |
| Sustainability | What food sources do the Bali Starlings have on Campus? Does it suffice? |

Assessments:

- Insect Database Input - 30%
- Anatomy Sketches - 20%
- Insect Profile Presentation: Self Evaluation - 30%
- Forum Participation - 20%

Module (6-week) General Planner

Either 2 or 4 days of week are needed here based on our timetable

| | Day of Week (Tuesday 1:15) | Day of Week (Thursday 8:35) |
|--------|------------------------------------|---|
| Week 1 | Introduction | Evolutionary History of Arthropods |
| Week 2 | Insect Database for GS | Insect Database for GS |
| Week 3 | Metamorphosis | Metamorphosis |
| Week 4 | Taxonomy and Classification | Insect Identification |
| Week 5 | Colonial Insects - Bees | Colonial Insects - Ants |
| Week 6 | Insect Profile Presentation | Video - BBC Life: Insects |

Resources Used:

- All materials can be found on Moodle
- Stereoscopes (dissecting scopes) would be wonderful for this course
- Magnifying glasses

Report Card Description:

In this module, students explored the phylum Arthropoda. The module started with an overview of the evolutionary history of this phylum. Fundamentals of Entomology were investigated through exploring metamorphosis, insect physiology, and taxonomy. the course explored the Ecology of colonial insects, as well as the importance of this phylum in our local food web.