**Introduction**



**Major Themes for the Unit**

* Scientific themes: Life Cycles, Habitats, Ecosystems, Environmental Change, Conservation
* Scientific practice: Modeling
* SSI: Butterfly populations in Missouri are decreasing.  Should the elementary school convert one of their soccer fields into a butterfly habitat?

**Driving Question**:

* Should the elementary school convert one of their soccer fields into a butterfly habitat?
* How do animals interact with their ecosystem?

**Concepts needed to explore the driving question**

* Science concepts: Life Cycles, Habitats, Ecosystems, Environmental Change, Conservation
* What social ideas and concerns influence negotiation of the issue?
	+ Interest in soccer
	+ Impacts of a butterfly habitat on students (allergies)
	+ Interest in butterflies in general
	+ Food production

**Unit-level performance expectations**

**NGSS:**

* **3-LS1-1:** Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.
* **3-LS4-3:**Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
* **3-LS4-4:**Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

**Unit Specific:**

* Students use models as learning and reasoning tools.
* Students engage in socio-scientific reasoning to negotiate a SSI.
* Students will use scientific models to make and defend SSI arguments related to conservation and restoration of butterflies.

**Unit assessment(s)**

The students’ modeling packets are used to assess student learning through their models and written responses in each lesson.

[**Lesson sequence**](https://web.archive.org/web/20191025041707/http%3A/ri2.missouri.edu/sites/default/files/files/MONARCH%20lesson%20sequence.pdf)