Phenology & Climate Change – Changing Nature's Clocks

Oct. 25, 2016

http://naturechange.org/2016/10/25/phenology-climate-change-changing-natures-clocks/

Each spring, people in Northwest Lower Michigan witness the emergence of wildflowers on the forest floor. Then, the buds of hardwood trees burst open, unfurling broad chartreuse leaves. These and other annual events in nature are timed to match the seasons, responding to the changing light, temperature and precipitation.

So, what can such familiar natural events tell us about climate? If the climate is changing, can we see it in the responses of plants and animals?

In this video, the botanist and ecologist, Liana May (Borealis Consulting) explains how an understanding of phenology can help us track climate change. She also describes how a changing climate is impacting familiar plant communities and encouraging some invasive plants.

Topics Covered

Botany; Biology; Climate Change; Habitat Management; Seasonal weather patterns

Next Generation Science Standards

- 2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.
- 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.
- 3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
- HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.
- HS-ESS2-4. Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.
- HS-ESS3-5. Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.