



Climate Control Department

Lesson 5 Citizen Science!

Project BudBurst

http://www.windows.ucar.edu/citizen_science/budburst/

Essential Question:

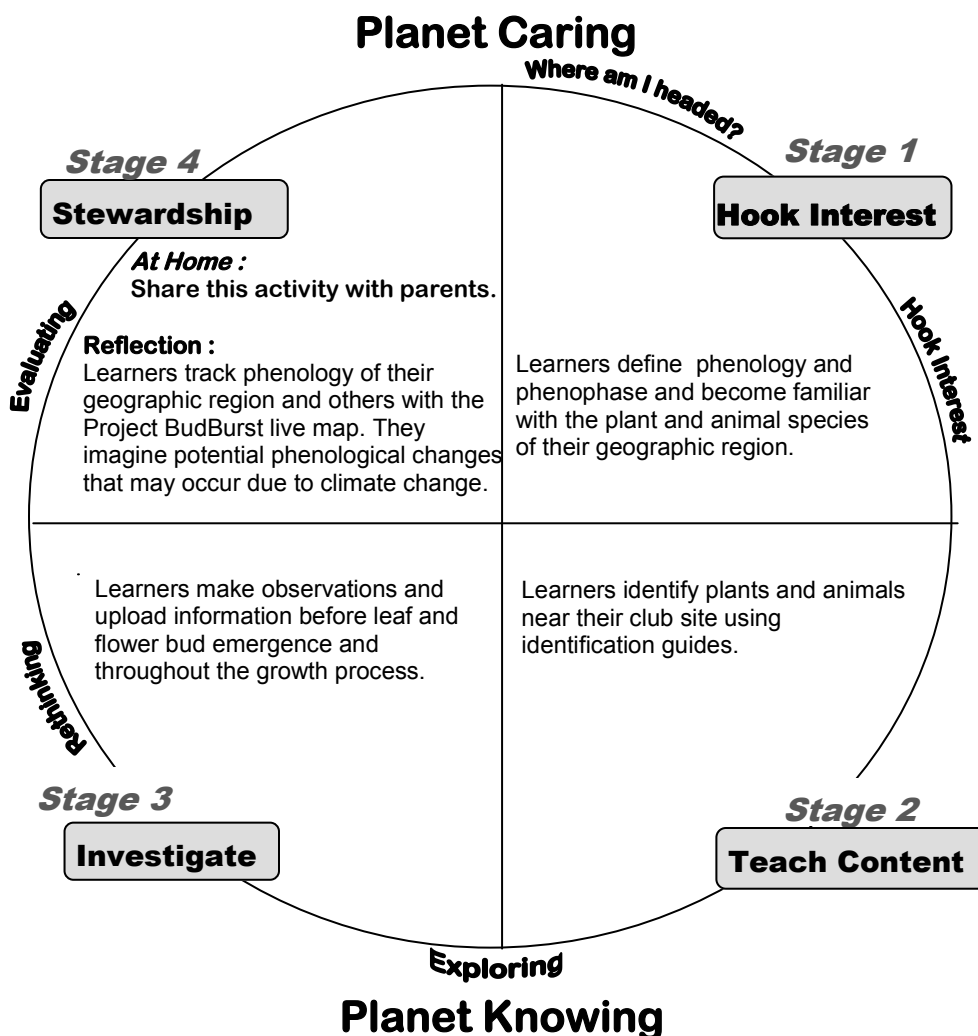
How are my observations of the plants around me important to researchers?

At a Glance:

Working as citizen scientists, learners make observations of the natural world around them in different seasons, such as leaf and flower bud emergence and the timing of flower opening and insect emergence. They upload this data to the Project BudBurst website and compare their information with that from other geographic locations in the US. This information is important to scientists researching certain plant and animal species and the effects of climate change.

Concepts:

- Observations of the natural world are useful to researchers in the areas of climate change, disease control, resource management, agriculture, recreation and conservation.
- Phenology is the study of plant and animal life cycles and their variations according to seasonal variations. It can be thought of as “nature’s calendar.”



Objectives

Learners ...

- 1) hone their observation skills in the natural environment while becoming familiar with using field guides.
- 2) gain experience uploading information to a website by submitting completed data forms.
- 3) become aware of the differences in phenology and how this relates to geographic location by tracking phenophase observations reported by others.

PROCEDURES IN BRIEF: Lesson 5—Citizen Science! Project BudBurst

Stage 1

1. Start by discussing phenology and phenophase and how this relates to plants and animals of an area. Become familiar with the plant and animal species of that may occur in your area.

Stage 2

1. Use identification guides to identify plants and animals near their club site. A plant identification guide and a phenophase field guide can be found along with lots of additional information at the Project BudBurst website (see Resources and Links). The website for the National Phenology Network is also a good source of information.

Stage 3

1. Learners begin making observations of the plants of their GEN club site before leaf and flower bud emergence and continue to make observations throughout the growth process. Photographs can be useful in seeing the changes that are taking place.
2. Learners upload their information by completing a downloadable report form (see Resources and Links).

Stage 4 *Reflection*

1. Learners compare their results with others using the live map provided at the Project BudBurst website. Guide learners in recognizing phenological patterns across different geographic regions.
2. Allow learners to imagine what changes may be observed among plant and animal life in a warming climate.

Supplies

- Computer and internet access
- Regional plant and animal identification guides
- Plant and animal identification guides
- Paper and pencil
- Camera (optional)

Resources and Links

- Project BudBurst
http://www.windows.ucar.edu/citizen_science/budburst/
- Instructions for participating in Project BudBurst
http://www.windows.ucar.edu/citizen_science/budburst/Steps_PB.pdf
- Submission form
http://www.windows.ucar.edu/citizen_science/budburst/ReportForm_PB.pdf
- National Phenology Network
<http://www.usanpn.org/?q=education>
- Climate Change info
<http://forces.si.edu/index.html>