National Park Service U.S. Department of the Interior Black Canyon of the Gunnison National Park



Noticing Habitat Changes: Teacher Guide

Background

Our video and resources provide an introduction for students to learn that habitats can and do change.

The National Park Service (NPS) defines scientific monitoring as "the repeated observation and measurement of specific park natural resources in order to better understand their condition. Monitoring allows us to detect change, identify any potential problems in the early stages, and measure success."

The NPS Inventory and Monitoring website has a five-minute video that provides an excellent introduction to our monitoring program: <u>www.nps.gov/im/</u>

Independent Monitoring Activities

Option 1: At Home or Outside (editable worksheet attached)

Students monitor nature at home and record notes each day using our field note worksheet.

Students could sketch and identify clouds using the NASA cloud chart found here: www.nasa.gov/pdf/312992main_CombinedCloud2.pdf

Option 2: Citizen Science & Technology

With a device and an internet connection, students upload photos and observations using various online citizen science applications (see two options below). If your photo observations are high-quality and geo-tagged, they can be used in real research!

More Online Resources

National Geographic

Watch this 5-minute video on Billy Barr, who has kept daily weather records in Gothic, CO for decades. www.nationalgeographic.com/news/2017/07/billy-barr-weather-data-climate-science/

<u>Budburst</u>

Budburst is a citizen science app where your observations of plants and the timing of their annual phases contribute to an overall understand of how plants in your area are responding to environmental change. Explore grade specific education resources and how you can incorporate this technology into your classroom here: <u>budburst.org/educators</u>

"Seek" by iNaturalist

"Seek" is a kid-safe and family friendly app that uses the smartphone camera to identify flowers, bugs, mushrooms and more. www.inaturalist.org/pages/seek_app

Phenology 101 for Educators

Written for educators, this resource explains the science of phenology, and why the study of the timing of biological events in plants and animals is important.

phenocam.sr.unh.edu/education/U1_WhatIsPhenology_Background_Final.pdf