

Nature's Notebook; Hands-on Learning in the 5th-12th Grades Classroom



What is it *Nature's Notebook*?

Nature's Notebook is a national program for professional and citizen scientists, developed by the **USA National Phenology Network** (USA-NPN). It is focused on the timing of plant and animal life cycle events (**phenology**), and is a great tool for teaching about ecosystems, the environment, species response to change (especially climate), and the scientific process.

The purpose of *Nature's Notebook* is to create a long-term, standardized database of ground observations of phenological events. Phenology data are used by researchers to better understand how things are changing related to a changing climate and for decision-making related to things like allergies, wildfires, water, and conservation.

How can *Nature's Notebook* help address Next Generation Science Standards?

Nature's Notebook can help teachers in meet a range of **common core standards**, not just science, required today. The citizen science program is grounded in real-world scientific research. Students can immediately see their observations and compare them to others made locally and nationwide.

A *Nature's Notebook* program in the classroom is meant to encourage long-term participation and potential collaboration among grade levels, so students can visualize the long-term effects of their efforts. It also provides opportunities for students to **engage with scientists** in real-world research and analysis.

Nature's Notebook provides an opportunity for teachers and students to experientially develop their own research questions, grounded in their place. The data that is collected is just as valuable to the broader

USA-NPN research goals as it is to the classroom participants.

How much time will this project take?

Depending on how your project is structured, it will take about **one hour per week** (or per outdoor session), once established, to make and enter observations with your students.

You may choose to do an abridged implementation of *Nature's Notebook* in the classroom. Our education team has developed lesson plans and adaptations for a variety of levels of engagement. Contact the **Education Coordinator** for more details (education@usanpn.org).

Ideally, a *Nature's Notebook* project should be conducted over multiple years and be incorporated into the classroom teacher's long-term project goals.

How do I get started?

Determine how *Nature's Notebook* can support current curricular needs by utilizing our **Project Planning Guides** on www.usanpn.org/education/5-8 or www.usanpn.org/education/9-12. Then:

1. Create a *Nature's Notebook* account. Details on www.usanpn.org/nn/guidelines.
2. Create a shared school site in *Nature's Notebook* to which students can contribute data and you can track who is participating. Select a species to monitor.
3. Review *Nature's Notebook* curriculum including **implementation guides** on www.usanpn.org/education.
4. Make weekly phenology observations with your class.
5. View your submitted data and compare it to other data across the US.
6. Join our **Phenology Education Community of Practice** by emailing education@usanpn.org!

nn.usanpn.org