

Pre-webinar questions from the online survey

1. How do I best focus a project: how do I choose organisms to observe; label plants and track the participation of individual students. How do I access the data?

The best thing to do before beginning is to determine why you want to implement *Nature's Notebook*, for how long, and who will be collecting the data. It sounds like you are interested in using this in a class (maybe for a semester). If that is the case, I would develop a plan that will span multiple years – the students collecting the data each time will not be the same, but you will be there, creating a dataset on the plants and animals that you've tagged for a longer term. This “legacy” data can be used by incoming students to compare what they see to what the class, in prior years, saw. They can also compare data they collect to data collected on the same species, elsewhere.

You can observe any of the 1000+ species in our database, as long as they are part of your ecosystem and available to you outside. The link to search for species is here: https://www.usanpn.org/nn/species_search. If there is something that you'd like to observe that you do not see on the list, email us (education@usanpn.org) and we can send you a link to our species request form. We review and add species once a year, in the fall, making the new species available in the spring.

Alternatively, you can participate in one of our campaigns (<https://www.usanpn.org/nn/campaigns>) if those species are available to you outside. One of the benefits of participating in a campaign is that we send out additional information, periodically throughout the growing season, reporting on what your data are telling the researchers leading those projects.

Once you've selected the species you'd like to observe, your next step is to pick individuals of that species and mark them with plant tags, flagging tape, or signs so that each time someone goes out to observe they are **observing the same individual**. This is what creates a long-term record on that individual through time.

If you create a group for your class, using a shared site (https://www.usanpn.org/shared_sites), send an email to groups@usanpn.org with your name and your *Nature's Notebook* account user ID. Tell us what you'd like to call the group and we will create it and make you an administrator. This will allow you to add sites to your group, and plants and animals to the sites. As an administrator, you can see which students have joined the group and who has contributed data. You can also download data from the Manage Users page, linked on the left side of your Observation Deck.

Data for your site (instead of just per person) can be accessed via our Data Download page (<https://www.usanpn.org/results/data>); via a link at the top of the Edit Site link on the lower left side of your Observation Deck, or in a few months via our to be released (revised) Visualization Tool

(<https://www.usanpn.org/data/visualizations>). The Data Download Page and the Visualization Tool page each have links to videos and print resources on how to use them.

2. I would like some suggestions about how/whether to use *Nature's Notebook* as part of the curriculum with 3rd through 8th grade students.

We have resource on the Education Page (www.usanpn.org/education) broken down by grade level, with general ideas for implementation. I've also linked many of the curricula to the new Next Generation Science Standards. For example, here is some information on how to get started in a middle school classroom, with links to available resources for that audience (<https://www.usanpn.org/education/5-8>). We are often asked if *Nature's Notebook* is appropriate for all grade levels, and the answer to that is, *it depends*. It depends on what you are trying to achieve and how much time you have. I, personally, have taught early elementary school students how to collect data for *Nature's Notebook*, and some teachers who do that make one entry for the class based on what they see outdoors at the time. We are also developing phenophase definitions that are a bit easier to understand, so that may be helpful when working with younger audiences. Alternatively, *Nature's Notebook* works very well in a 6th – 8th grade class, they can certainly collect their own data, often using our Mobile Apps (<https://www.usanpn.org/nn/mobile-apps>) and can interpret some of the data as well. Again, it is just a matter of how much time you can dedicate to doing this activity in your class OR how you can manage a group of students coming to your site for a field trip. For more information, or if you have further questions, please be in touch with lorianne@usanpn.org!

3. Should there be a concern about hacking?

Our website and database have a number of security measures built in, so there is no more chance of it being hacked than anything else. We do not capture sensitive information, except email addresses, during the log in phase, and we don't share that information with anyone via the data download tools. If you have more specific questions about hacking and security, please email our support@usanpn.org email address and we can address those there.

4. Provide examples of how others got started and how they are utilizing *Nature's Notebook*. What have been proved successes in engaging audiences of various ages, skill levels, and interest levels? How do you introduce this to guests?

The first place to learn about how other groups are implementing *Nature's Notebook* is a link on our Start a Local Project Page, on the side bar, Groups Using *Nature's Notebook* (<https://www.usanpn.org/nn/mobile-apps>). Here you will find samples of how phenology monitoring is being applied. As we, at the National Coordinating Office (NCO), hear about projects (especially unique projects or a new type of audience), we contact a representative for the organization and ask them to share some information with us. Often, if the program includes a website of their own, we link to that and provide contact information. You can also check our Partners page (<https://www.usanpn.org/partner/current>) and Geographic Affiliates page (https://www.usanpn.org/partner/geo_affiliates) to see if there is someone who is similar to you using *Nature's Notebook* in programming at their site. If they have provided contact information, you will find it there. That said, we are going to be moving toward doing some more evaluation of existing projects over the next 3-5 years, where we will begin to collect more concrete information about how well projects are

doing. If you implement a project PLEASE share with us some of your successes, and difficulties. Otherwise, it is hard for us at the NCO to obtain information on what has worked, other than what I, personally, have done in the field.

Secondarily, you should plan to join our Local Phenology Leaders listserv (<https://list.arizona.edu/sympa/info/local-phenology-leaders>) and send a note out to the over 300 subscribers to ask how they got started at their location. I can also answer specific questions about how to begin, so send me an email (lorianne@usanpn.org).

Lastly, some helpful resources include our:

- ❖ How to Observe Handbook (<https://www.usanpn.org/nn/guidelines>) – this provides lots of details on how to get started on the ground (physically) as well as on the computer. The PDF link to the Handbook can be found by scrolling down that page a bit to the first section.
- ❖ Highlighted Publications (https://www.usanpn.org/nn/connect/highlighted_pubs) - these are short explanations of recent scientific journal articles that have done studies using phenology data. We have distilled the information into an understandable format (for a typical student or volunteer) with information about the implications of the research for citizens (you and me).
- ❖ USA-NPN YouTube Channel (<https://www.youtube.com/user/USANPN1>) - here you will find all of our webinar archives, training videos, and similar information that may be helpful as you get started or work with volunteers.
- ❖ Workshop Resources (https://www.usanpn.org/educate/workshop_resources) - this page has information about hosting a *Nature's Notebook* workshop, with sample PowerPoints, training materials, getting started guides, registration brochures, etc. You are welcome to edit any of my PowerPoints (most of them are annotated) to suit the needs of your audience.
- ❖ Phenology Trail Resources (<https://www.usanpn.org/trail-resources>) - This includes our Phenology Trails guide – how to get started, and links to editable signs and tags, a link to our Pinterest site, as well as lessons learned from a few established trails.

Thanks so much for participating and happy observing!!

