



- Overview
- Observe Plants & Animals
- Rescue Historical Data
- Share Existing Data
- Join Email List
- Partner your Organization
- Learn About Other Efforts



How to Observe

As part of Nature's Notebook, you are invited to observe both plants and animals. Observing phenology is very similar for both, however, because animals move around and plants do not, there is one important difference in the way we ask you to observe the two groups:

For plants: Observe the same individual plants each time you visit your site. For example, you should observe the same red maple in your back yard all through the year.

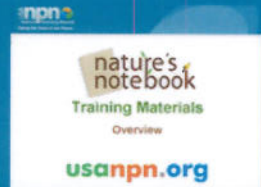
For animals: Create a checklist of animal species and look for all of them each time you visit your site. For example, if your checklist has robins, wood frogs, and tent caterpillars on it, you should record whether or not you see or hear those species anywhere in your site each time you visit.



Overview

Whether you choose to observe both plant and animals or only one or the other follow these detailed steps to set up your observation program on the ground (and see the [Frequently Asked Questions](#) page for more information):

- [Select a site](#)
- [Select plant and animal species](#)
- [Select individual plants](#)
- [Mark your sites and individual plants](#)
- [Get organized](#)
- [Record your observations](#)
- [Enter your observations online](#)



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Select a site

A site is the area within which you will look for your chosen animal species, and which encompasses any plants you choose to observe. When you select a site, such as your yard or a nearby natural area, consider these guidelines:

Convenience: You will be visiting your site(s) regularly, so it should be convenient and easily accessible.

Representative location: As much as is practical, the selected site(s) should be representative of the environmental conditions for your area. [More...](#)

Uniform habitat: The conditions of your selected site(s) should be relatively uniform across the site. If you would like to observe two adjacent but distinct habitats, please document them as separate sites. For example, a wetland adjacent to or surrounded by a drier grassland or forest should be documented as a separate site from the grassland or forest.

Appropriate size: A site should be **no larger than 15 acres** (6 hectares or 250 x 250 meters), a square with sides the length of 2 1/2 football fields. A site can certainly be smaller than this, and larger areas can be divided into multiple sites. [More...](#)

Proper permission: If you do not own the property where the site is located, you must get permission from the landowner before marking any plants or reporting the site location information (such as latitude/longitude coordinates). [More...](#)

[Return to Previous Page](#)



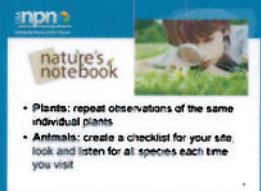
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Select plant and animal species

Choose one or more species from our [list of plant and animal species](#). For plants, we encourage you to select at least one plant calibration species. For animals, we recommend that you select several species that occur in your local area or in your state. [More...](#)

Make sure that you have correctly identified the plant and animal species at your site before reporting your observations for those species online. [More...](#)

[Return to Previous Page](#)



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[View Plant and Animal List](#)

Select individual plants

At your site(s) select one or more individuals of each of your chosen plant species to observe. Choose plants that appear to be healthy, undamaged, and free of pests and disease. If you want to observe several individuals of the same species, try to select individuals that are **not direct neighbors**, but are still growing in a **similar environment**. [More...](#)

For annuals (which only survive one growing season) and biennials (which survive for two growing seasons), avoid choosing the first or the last seedling to emerge in the spring since they may not be representative of the larger population at your site. [More...](#)

If your plant grows in a large mass where it is difficult to distinguish or mark individuals, you can choose to monitor the plant as a "patch". [More...](#)

[Return to Previous Page](#)

[Add or Edit Plants](#)



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Mark your site and individual plants

Regardless of whether you are observing only plants, only animals, or both, you will make your observations repeatedly at the same site(s) over time. You will want to somehow mark your site(s) so that you can find it again in the future. [More...](#)

Because plant monitoring requires that you **observe the same individual plants or patches repeatedly**, you will also need to mark each plant so that you can find it on each visit. We recommend that you mark each individual plant or patch with a **unique label**. For example, you could mark pieces of flagging tape with "red maple-1", "red maple-2", etc. and then tie them to each of the red maples you are observing. [More...](#)

Remember that if you do not own the property where your site is located, you must get permission from the landowner to put up any markers.

[Return to Previous Page](#)

[Add or Edit Plants](#)



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Get organized

To make your phenology observations you will need the following items:

- **Phenophase definitions and instructions:** Check the profile page for each of your selected plant and animal species to see the list of phenophases for those species and instructions on how to recognize them.
- **Datasheets, clipboard, pencil:** You can download and print a datasheet for each of your plant or animals from the profile page for that species, or generate a personalized datasheet packet for your Nature's Notebook Home page. [More...](#)
- **Binoculars** (optional, helpful for observing animals as well as phenophases in tall trees)
- **Marking equipment for first trip:** Flagging, markers, stakes, plastic tags, popsicle sticks

[Return to Previous Page](#)

[Create Datasheets](#)

Record your plant and animal observations

Visit your site(s) as often as possible. **At least once a week** is good, but several times a week or even once a day is even better during times of the year when things are changing quickly (for example, spring and fall). [More...](#)

For plants: Visit each of your individual plants or patches and check their phenophases. For each visit when you make an observation, record the date and time on your plant phenophase datasheet, and for each phenophase, circle one of the following choices:

- **Yes (y)** – if you saw that the phenophase *is* occurring
- **No (n)** – if you saw that the phenophase *is not* occurring
- **Uncertain (?)** – if you were **not certain** whether the phenophase was occurring
- Do not circle anything if you **did not check** for the phenophase

It is very important to record this information, even if nothing has changed since your last visit! Knowing when a plant is **not** in a given phenophase is just as important as knowing when one is. [More...](#)

For most plant phenophases you can also **report on the intensity** (or abundance) that you observe, like the percentage of open flowers you see or how close to full size the new leaves have grown.



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Phenophase intensity choices vary by species and can be found on the profile page for each species. [More...](#)

For animals: Look and listen for all of the species on your animal checklist. You can do this by one of four methods:

- **incidental** (chance sighting while not specifically searching)
- **stationary** (standing or sitting at a single point)
- **walking** (a single pass or transect through your site)
- **area search** (multiple passes through your site, possibly crossing the same point more than once)



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If you are using one of the last three search methods, try to spend about the same amount of time looking for animals at each visit. We recommend three minutes as a standard, but you can spend as much or as little time as you like. You will probably not see most, or any, of the animals during each visit, which is ok. [More...](#)

For each visit when you make an observation, record the amount of time you spent looking and which of the four methods you used (there is no need to report time for incidental sightings). Record whether or not you saw or heard each animal species on your animal checklist, and for each animal you did see or hear, you will need to fill out the animal phenophase datasheet. On this datasheet record the date and time, and for each phenophase, circle one of the following choices:

- **Yes (y)** – if you saw or heard that the phenophase *is* occurring
- **No (n)** – if you saw or heard that the phenophase *is not* occurring
- **Uncertain (?)** – if you were *not certain* whether you saw or heard that species or that phenophase
- Do not circle anything if you *did not check* for the species or phenophase

It is very important to record this information, even if you did not see a particular animal species! Knowing when an animal is *not* present, or when an animal is *not* in a given phenophase is just as important as knowing when it is. [More...](#)

For most animal phenophases you can also **report on the intensity** (or abundance) that you observe, like the number of individuals you see feeding or the degree of overlap in frog calls. Phenophase intensity choices vary by species and can be found on the profile page for each species. [More...](#)

If a phenophase, like flowering or nest building, begins and ends while you were not observing, you can **make a note of it** in the comments section. [More...](#)

If you are watching for a phenophase and it does not seem to be starting when you expect it would, **continue to watch for it and record that it is not occurring**. This could mean the phenophase is occurring later or not at all in a given year, and this could be very valuable information. [More...](#)

Once a phenophase has ended you should **continue to look for it and record whether or not it occurs again**. Sometimes phenophases will occur a second or third (or more) time in a season, whether because of rain, pests, or changing climate. [More...](#)

If there are phenophases and/or intensity measures on which you do not want to report for a species because you find them too difficult to observe, **just ignore them**. You can cross them out on your datasheets, and do not circle or enter anything for them when you enter your data online.

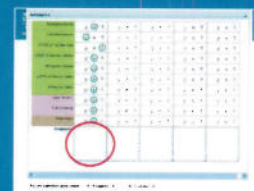
[Return to Previous Page](#)

[Enter Observations](#)

Enter your observations online

As you collect data during the season, log in to Nature's Notebook and enter the observations you have recorded.

Create your account: To create an account on Nature's Notebook, click on the link to the [Nature's Notebook](#) online interface in the upper right corner on all USA-NPN pages and follow the instructions to create a new account.



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Once you have created an account, you will be able to log in to Nature's Notebook and access your personal Nature's Notebook home page. From this page, you will be able to register a site and individual plants, create an animal checklist, and enter your observation data. These key functions in Nature's Notebook are listed in the [top navigation menu](#).

Register your site: You need to start by registering a site. Click **'Add a New Site'** in the navigation menu, and use the map interface to locate your site. You can locate your site using an address, which will be automatically geo-located on the map, by selecting your site on the interactive map, or by typing the latitude and longitude into the boxes below the map. Fill out as many of the additional questions about your site as possible.



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Register your plants: Once you have successfully registered a site, you can add plants to that site. Click **'Add or Edit Plants'** in the navigation menu. To register a plant at your site, first select that site in the 'Site' dropdown box at

the top. Then click the 'Add new plant' link and begin to type the name of your species in the 'Plant species' box. Click on one of the suggestions that drops down and then fill in the answers to the remaining questions. Once you have successfully registered a plant to your site, your plant will appear on your Nature's Notebook Home page.

Create your animal checklist: After successfully registering a site, you can create a checklist of animals to look and listen for at that site. Click '**Add or Edit Animal Checklist**' in the navigation menu. To add animals to your checklist, first be sure that the proper site is selected from the dropdown menu at the top. Then, select animal species from the 'Species Available' window on the left. You can filter the animals in this list using the 'State', 'Species group', and monitoring 'Partner' dropdown menus. Click the 'Add to Checklist' button in the middle to add the species to your list. **Be sure to save your checklist before you switch any filter choices.** Once you are finished adding animals to your checklist, click the 'Save checklist' button in the lower left corner of the screen. This list should then appear on your Nature's Notebook Home page.

Enter your observations: Once you are ready to submit observations online, return to your Nature's Notebook Home page, select the site for which you would like to enter observations, and click '**Enter Observations**' in the navigation menu. Click on the expandable blue menus to access the data entry interface for each of the items on your Cover Sheet and each of the plants and animal species you have registered to this site.

Each column represents a visit's worth of observations. Enter the date and time of your visit at the top of a column, and type in the Cover Sheet items for that visit. Then for each of your plants and animals, click 'y', 'n', or '?' for any phenophase for which you made an observation. If you did not check for a particular phenophase, do not click any of the choices. You can report intensity or abundance for any phenophase for which you clicked 'y' or '?' by selecting a value from the "What value?" dropdown menu, or entering a number in the "How many?" box. When you are finished, click the 'Submit observations' button in the lower left corner of the screen. [More...](#)

Sort your plants and animals: If you would like to change the order in which your plants and animals appear for each site, go to your Nature's Notebook Home page and click on the '**Sort Plants & Animals**' button. On the Sort Plants & Animals page you can move your plants and animals by clicking on them and then using the 'First', 'Up', 'Down' and 'Last' buttons to the right.

[Return to Previous Page](#)

[Enter Observations](#)

Much of the value of phenology data is in observations from the same sites and plants over many years,
so please come back next year!

Thank you for participating in Nature's Notebook!

We appreciate your feedback.