

# Family Phenology Fun



**Tell us where you see it, when you see it - from indoors**

## What is phenology?

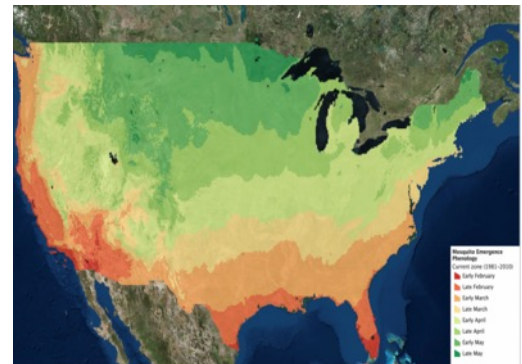
Phenology is the study of cyclic and seasonal events in the lives of plants and animals- and how those events are influenced by climate. This activity investigates the phenology of mosquitoes.

## How do I get started?

- Download the app for free on Android or iOS from the GLOBE Observer site, [observer.globe.gov](http://observer.globe.gov).
- Register to participate
- Get a thermometer to be able to measure the air temperature.

## Do I need to be an expert on mosquitoes?

No. But here are the basics: mosquitoes are sensitive to environmental conditions such as air temperature. Even without an invitation, mosquitoes will move right into your home! Once there, a female mosquito will look for a place to lay her eggs. She only needs a 1/2" deep source of standing water. Think about where she might find that bit of water; where should you look for larvae? Possible sites include under sinks (due to water dripping from leaks), unused floor drains common in laundry rooms or basements, shower drains in bathrooms that are rarely or never used, and in sump pump pits. For a list of other locations, download the entire activity here: <https://www.globe.gov/web/mission-mosquito/overview/resources>



Map 1: Map of projected first appearance of mosquitoes, based on monthly minimum temperature data. Map data from Anthony Arguez, Imke Durre, Scott Applequist, Mike Squires, Russell Vose, Xungang Yin, and Rocky Bilotta (2010). NOAA's U.S. Climate Normals (1981-2010). [Monthly Minimum Temperatures]. NOAA National Centers for Environmental Information. DOI:10.7289/V5PN93JP [Accessed December 2018]. Courtesy Andrew Clark, IGES





### What do I need to do?

- Hang up your thermometer in the location you are looking for larvae.
- Take and record the temperature in your Mosquito Notebook. Download it here: <https://www.globe.gov/web/mission-mosquito/overview/resources>
- Use the app to record and photograph the locations you looked for larvae. Use your smart device to photograph it, count any larvae and eliminate the water if you are able to.

### Why would I do this?

Your data, both air temperatures and mosquito sightings, are unique to your location. And along with observations from thousands of people all across the country your data shows a change over time, your work supports that of scientists who monitor changes both on the local and regional levels. Your observational data is available to scientists who build and refine disease forecast models – what it could look like in the future.

### How do I join this Family Phenology Fun?

The seasonality of mosquitoes will vary from place to place across the country.

Join our team, code: **GLIDEMTE**

Create a family GLOBE Team to keep track of your observations. Share the code with others in your family and watch your observations grow. Instructions are here: <https://www.globe.gov/globe-community/globe-teams>

Having a team of investigators provide data from lots of different places would add to the scientific value (and the fun!) of your project. So why not invite friends and family to join your investigation? Recruit team members from places far away from you, to see first-hand how mosquito season varies from place to place. Challenge your team members to take a few minutes each day to step into their front yard and gather two pieces of data: a daily temperature reading and a mosquito (adult, larva, pupa) sighting.

If you have a family video calling platform, use it to not only check-in with each other but to present and compare your research data.

Hold a meeting of your phenology team now to share these instructions, go through the app, and set your team goals!



*Image 1: This Brownie scout is checking a pool on her porch as part of her Girl Scout Think Like a Citizen Scientist Journey under adult supervision. Photo credit: Tassia Owen.*