



Nature's Notebook Workshop at Mission Garden

Saturday, March 9, 2018. 9:00 am until noon

Agenda

Workshop goals:

1. Teach participants to make accurate observations using *Nature's Notebook* scientific protocols
2. Introduce participants to the Mission Garden
3. Share species marked for observation, which are part of a regional study designed to document changes in phenology in the Tucson Basin.
- 4. Recruit volunteers to help take quality photos of the missing species on the observation list**
- 5. Recruit volunteers able to return to the Mission Garden on a regular basis to help document the changes in phenology throughout the seasons**

9:00am - 9:15am Welcome and Introductions

- Orientation, bathrooms, etc
- Welcome by Kendall
- Intro of new people outside of cohort

9:15am - 9:30am Overview of *Nature's Notebook* Citizen Science Program, and USA-NPN; Tucson Phenology Trail and Mission Garden Phenology Program

- Have Docent/MN share details about monitoring at garden

9:30am - 10:00am Ice-breaker and Garden Stroll using the Map

- Phenophase scavenger hunt - 20 minutes
- Tour of Garden using Jenny's GIS map
- Return to big group, spell out PHENOPHASE, reflect on activity. Questions on cards retrieved include phenophase definitions and reflective questions.

10:00am - 10:45am Intro to Data Collection and the *Nature's Notebook* Protocols

- Participants collect data using phenophase photo guides, use day-by-day data sheets
- Orientation to printed day-by-day data sheets
- Locate marked individuals in garden using map

10:45am - 11:30am Introduction to Measuring Intensity Introduction to Animal Search Methods

- Hand out full phenophase definition sheets, with intensity measures
- Hand out worksheet with intensity measure and search methods, Freemont cottonwood datasheet
- Describe both, questions (10 minutes)
- Conduct search for animals in packet and practice measuring intensity of canopy for Freemont cottonwoods. Reference Freemont cottonwood datasheet.



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11:30am – 11:55am Review data (utilize data printed with vis tool phenology calendar and two local sites on the Tucson PHenology Trail with varied data collection)

Next Steps

- In groups, review the calendar comparison between MG and Tohono Chul
 - What do you notice, why? What can a master naturalist do as a leader to assist?
- Discuss potential program planning for site, how can volunteers help?
- Creating photo guides, sample blank photoguide, ask for photo contributions

11:55- Noon Wrap up - Brief Evaluation

- Reason grid on evaluation is set up with current vs past (on right) is because we would like for you to think about your experience you've had today, first, and then reflect on what you knew prior.
- Questions?

Workshop Learning Outcomes:

- Identify species selected for observation based on unique characteristics
- Locate marked individual plants on a map of Mission Garden
- Identify and describe individual phenophases for plants marked for observation; distinguish between phenophases for similar life cycles
- Collect accurate and detailed phenological observations for 3 species at Mission Garden
- Explain the importance of observing phenology in the Sonoran Desert
- Explain how the data collected for *Nature's Notebook* are being used locally and nationally

If time permits can do a second data collection activity - would need another 45 mins.

Time: 45 minutes

Data Collection, Part 2

Photography Activity

- Collect data on rest of species, using full protocol. Locate individuals in garden with map
- Take pictures of the species that we don't have photoguides for yet.
- Note the phase and plant so we can upload to our SmuMug photo database