

2013 Pima Master Gardener Training Course
LoriAnne Barnett, USA-NPN Education Coordinator
Phenology Class Outline

I. Introduction

- A. Tradition and folklore – ethnobotany
 - Use local examples when possible
 - Share traditional planting calendars – plant peas when forsythia and daffodils bloom, eastern tent caterpillars hatch when crab apples bloom
 - Beaver moon; oak before ask, in for a splash; etc.
- B. Group discussion – seasonal indicators: list items that occur during each season. What reminds you of each season?
- C. Define phenology, a big picture concept that ties everything together
- D. History and phenology
 - Nature journaling, traditional record keeping
 - Robert Marsham, Thomas Jefferson, Henry David Thoreau, Aldo Leopold
 - Cloned lilac program, spring index

II. Climate and Life Zones

- A. Weather vs. Climate - define
- B. Plants and Climate:
 - a. USDA planting zones, Sunset planting guide (for west coast) – show local zones
 - *Why is climate important to Master Gardeners?*
 - *Why is weather important to Master Gardeners?*
 - b. Precipitation and growing degree days affect seasonal growth
- C. Phenology application
 - ✓ Life-cycles
 - ✓ Seasonal changes and planting guides

III. Species and Diversity

- A. Biology and Ecology – Sunshine, light energy, systems, oh my!
 - *What does Biology and Ecology have to do with MGs?*
- B. Species classification and organization
- C. Biomes and biogeography
- D. Life-cycles of plants and animals
- E. Botany Review – You are experts!
 - Plant, flower, fruit and seed structure
- F. “Phenophases” - measurable, reoccurring, observable stages in an animal or plant life-cycles
- G. Phenology Application
 - ✓ Vegetative development
 - ✓ Plant physiology

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IV. Phenology

- A. Overview of USA National Phenology Network and *Nature's Notebook*

V. Master Gardeners and Phenology

- A. If you've already done **any** gardening, you are a phenologist!
- B. Landscape plant maintenance – Healthy and balanced gardens are a must!
 - ✓ Phenology Application
- C. Integrated Pest Management (IPM) – Long-term prevention using a mix of techniques, including phenological indicators!
 - ✓ Phenology Application
- D. Desert landscape plants – Knowing what is appropriate for our zone, until it changes!
 - ✓ Phenology Application
- E. Home & Landscape Water Use – Study the effects of water use in the garden vs. naturally occurring plants
 - ✓ Phenology Application
- F. Propagation – Plants are replicated for monitoring across the US to determine phenology, based strictly on environmental conditions.
 - ✓ Phenology application
- G. Vegetable and Fruit Trees – What's in your garden?
 - ✓ Phenology Application
- H. *Nature's Notebook* in your Garden!

VI. Future Applications

- A. "Hypotheses" for Gardeners – What do **YOU** want to know?
- B. Class assignments for **course credit**: Data collection for the remainder of the MG session. Phenology will return on **April 23rd**, so have your data entered and be ready to discuss what we found in the garden!