

Using the Outdoor Classroom



Today's Agenda

9:00 - 9:15 **Check In**
Staff Entrance/Education Classroom

9:15 - 10:00 **Why Teach Outdoors?**
Education Classroom

- Welcome and Introductions
- Outline the Day
- Teaching Outdoors
- Wildlife at the Tar Pits

10:00 - 10:15 **Break 1**

10:15-10:45 **Tools for Teaching Outdoors**
Education Classroom

- Camera Traps and Bat Detectors
- Nature Journaling
- Insect Netting and Identification
- iNaturalist

10:45 - 12:15 **Observing and Recording Nature**
Pleistocene Garden

- Hands-on exploration of the Pleistocene Garden
- Try out some of the new skills you've learned

12:15 - 12:30 **Break 2**

12:30 - 1:00 **Wrap Up**
Education Classroom

- Connections between Outdoor Learning and the NGSS
- Outdoor facilitation tips
- Group discussion

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Supplies & Resources

Bug Catching

- **Student Insect Net**
<http://www.bioquip.com/search/DispProduct.asp?pid=7112NA>
- **Plastic Snap-Top Vials**
<http://www.bioquip.com/search/DispProduct.asp?pid=8905>

Field Guides

What makes a field guide good often comes down to personal preference. We recommend thumbing through a few at a bookstore to know what you and your students will find useful. These are a few we think are worth taking a look at:

- **Insects of the Los Angeles Basin**, *Charles Leonard Hogue*
 ISBN-10: 0938644327 | ISBN-13: 978-0938644323
- **A Field Guide to Western Reptiles & Amphibians**, *Stebbins and Peterson*
 ISBN-10: 0395982723 | ISBN-13: 978-0395982723
- **A Californian's Guide to the Trees Among Us**, *Matt Ritter*
 ISBN-10: 159714147X | ISBN-13: 978-1597141475
- **Birds of the Los Angeles Region**, *Garrett, Dunn and Morse*
 ISBN-10: 0964081059 | ISBN-13: 978-0964081055

The diversity of plants and shrubs in the L.A. area is vast and there is not a single guides we can recommend. Here are some great publishers that have many guides to choose from, based on where you are looking for plants:

- **California Native Plant Society**: http://www.cnps.org/cnps/publications/index.php#cnps_press
- **University of California Press**: <http://www.ucpress.edu/subject.php?sc=natpla>
- **Timber Press**: <http://www.timberpress.com/books/tag/reference>

Other Recommended Items

- **Hand-Held Magnifier**. There are many great options available. Two big aspects to consider going into a purchase is sturdiness and size. Generally we recommend looking for something with a glass lens (plastic lenses typically are poor at magnification and scratch easily) in a small to medium size (too small is frustrating to use, too big is clunky and difficult to handle).
- **Binoculars**. Like above, two important aspects to consider are size and quality. Choose a size that is comfortable for you and your student to hold, and comes with a strap to wear around the neck. Consider investing in a slightly more expensive pair if you can, they tend to hold up longer and generally have a better quality image.
- **Nature Journal**. If purchasing a pre-made journal, choose one that can be personalized. We recommend something with large blank pages and spiral binding for ease of use. If students make their own, again we recommend using a design that maximized page space and has the ability to add pages as journaling continues.

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Tips for Nature Observation

Carefully Consider the Obvious

We often make instant assumptions about something we see without realizing it. This means slowing down and looking closer is extremely important. Have students note the relative position, size, shape and height of characteristics (and color too, but be cautious with this) How many legs does an invertebrate have? What are its wings like? Is the body symmetrical? How so? In what way do a leaf's veins form a pattern or splits from the branch? How big is a bird's beak relative to the size of its head? What is the overall shape of the body?

Use The Senses

When it is safe to do so, go notice more than what something looks like. Have students consider how a specimen sounds or what it smells and feels like (these last two tips are more applicable to plants than animals—but in some instances can be used in both)!

Think about the Context

An animal or plant is closely connected to its environment. Note *where* an organism is found —broadly (e.g. Coastal Sage Scrub, Santa Monica Mountains) and specifically (e.g. under a rock in an area with full sun). What time of day or year is it? What is the weather like? There can be two nearly identical seeming animals are easiest to identify by their habitat or behavior, not how they look.

Note the Action

Take the time to consider behavior—it might not be possible to know exactly what an animal or plant is doing, but note how or where it is moving and how it sounds. A lack of activity is important to note as well, so there is always something to describe. In a plants case, notice where it growing or blooming in relation to other plants around it.

Record, Record, Record!

Jot down what is noticed — draw a picture, write key words, sketch the habitat, whatever helps jog the ol' memory back at home or the classroom. Keeping record of observations will not only help students recall what was noticed, but will also help them begin to notice more in the future. Photos are great, but are not as good as your own eyes, ears and nose!

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Tips for Teaching Outside:

- **Dress for success.** Remind students to wear appropriate clothes for the experience. It can be helpful to keep a classroom set of sunscreen, hats and water bottles; essential items for even 15-30 minutes outdoors.
- **Review expectations inside.** Go over behavioral expectations and learning expectations inside so students know what is expected of them before it is too exciting to listen.
- **Choose and practice call and response.** Choose a simple phrase you can yell loud and clear that means 'come to attention'. This is useful when you need to stop and do a head-count or give instruction mid-activity.
- **Bathrooms.** Like a long bus ride, go before you go. Outline bathroom conditions at the site you are going to so students know what to expect.
- **Be the most uncomfortable.** Put yourself in the sunniest, windiest, wettest spot so that students can focus on you, not their discomfort. It's hard to pay attention with sun directly in your face!
- **Be seen and heard.** Find space big enough for the whole group to stand or sit in a circle or use a hill as a natural amphitheater. Keep in mind, comfort trumps perfect group space.
- **Set clear spatial boundaries.** Verbalize visible boundaries for students during activities, choose an area you are comfortable yelling or moving across quickly.
- **Acknowledge emotional needs.** Many people are not comfortable outside for a number of personal reasons, value and respect both the positive and negative responses to being outside.
- **Transfer and Debrief.** Help students apply the skills or knowledge they learned in the classroom to the outdoor activity. Debrief and reflect on the experience to strengthen connections.
- **Be Safe.** Carry a first-aid kit, be aware of allergies and symptoms of heat (or cold) fatigue and illness. Never approach or touch wildlife you are unsure of.
- **Be Courteous.** "Leave nothing but footprints and take nothing but memories" Handle plants and animals respectfully. Clean up any trash and gently replace displaced rocks or vegetation. Return wildlife back to it's home (a few feet for a person might seem like miles to small animals).

Also Check Out

Nature Bridge: <http://www.naturebridge.org/get-outside-teaching-tips>

Audubon: <http://education.audubon.org/tips-teaching-outdoors>

Project Learning Tree: <http://www.plt.org/every-student-learns-outside>

