



Professional Development Opportunities

Join Willow Bend's Director, Sapna Sopori, for these informative, hands-on learning sessions! Each program is geared towards adult audiences interested in learning more about northern Arizona's unique natural history, including geology, hydrology, botany, and more. You can also choose to emphasize our community's sustainable living aspects, from the 3 R's to alternative building methods. Finally, for groups that work with children, we offer education theory classes designed to enhance learning experiences for both students and educators in formal and non-formal settings. We can also create a professional development opportunity based on your needs; call to discuss the various options. Sessions can be held at Willow Bend Environmental Education Center for no additional fee, or Sapna can come to you (mileage fee may apply).

To Schedule:

Based on instructor availability; call 779-1745 or email sapna@willowbendcenter.org.

Natural History: 1 hour, \$100 each

Alien Plant Invaders
Downtown Flagstaff Geology
Erupting Earth
Fire Ecology
Grand Canyon Geology
Groundwater in Flagstaff
Starry Skies
Sunwise

Sustainability: 1 hour, \$100 each

BioBug and Alternative Energy
Clean and Green
Everybody Counts
GMOs and Seeds
Food and Fossil Fuels
Living within Your Climate
Secret Life of a Plastic Bag
Secret Life of a Shoe
Water Quality

Field Opportunities:

Fire Ecology Field Trip (Fall 2010; 1.5 hours, \$150)
Flagstaff Recycling Tour (1 hour, \$100)
New Frontiers Tour (Fall 2010; 1 hour, \$100)
Water Quality Field Trip (1.5 hours, \$150)
Willow Bend Sustainable Living Tour (1 hour, \$100)

Education Theory: 2 hours, \$250 each

Child Development & Environmental Education
Multicultural Education

About the Instructor:

Sapna Sopori is the Director of Willow Bend Environmental Education Center and has been teaching in various education centers across America for the past 10 years, including the Cuyahoga National Park, Desert Botanical Gardens, and the Aspen Center for Environmental Studies. She holds a Bachelor of Science in Ecology and Evolutionary Biology from the University of Arizona and a Master of Arts in Environmental Science Education from Prescott College.

Professional Development Opportunities Descriptions

Education Theory Opportunities

Child Development and Environmental Education: Based on education theories from Piaget, Vygotsky, Gardner, and more, participants will better understand the developmental stages of children, from early childhood through adolescence. This workshop is hands-on and interactive, so participants should leave their inhibitions behind!

Multicultural Education: Creating a sense of place for our students through cultural lenses: Through video clips and activities, participants will explore the cultural lenses that influence student and instructor experiences in the classroom. By increasing awareness of gender, language, race/ethnicity, and socio-economics as cultural identifiers, educators can help students create a stronger sense of place in their schools. Introspection and discussion are the main vehicles for this eye-opening process, and participants should come prepared to share their own experiences.

Natural History Opportunities

Alien Plant Invaders: Alien plants are invading! Learn the history of invasive plants in Coconino County, why land managers are concerned about this “growing” problem, and how each community member can help.

Downtown Flagstaff Geology: Discover the history of Flagstaff through the geology of its historic buildings made of local stone.

Erupting Earth: Learn about the history of the 4 different volcano types found in northern Arizona including shield volcanoes, cinder cones, strato volcanoes, and lava domes.

Fire Ecology: Are forest fires always a bad thing? We’ll take a look at the role of fire in our ponderosa pine ecosystem and how land managers use fire to maintain and create wildlife habitat.

Grand Canyon Geology: Explore the layers of the Grand Canyon through time, how uplift and erosion formed the Canyon, and why it is such a unique treasure.

Groundwater in Flagstaff: This program uses a groundwater model to help the audience visualize and understand where much of Flagstaff water comes from and how our community uses it.

Starry Skies: Audience members will feel the awe-inspiring power of our galaxy through this informative introduction to astronomy. Learn how to read a star chart and understand how the rotation and revolution of the earth affect which constellations we see in northern Arizona throughout the year.

Sunwise: Because we live in a high altitude desert, this program is a must for all community members venturing outdoors! Audience members will learn about the detrimental health effects of the sun's rays and how to dress for sun success! This program is approved by the Arizona Dermatological Society.

Sustainability Opportunities

BioBug and Alternative Energy Sources: Using the Willow Bend BioBug as an example, the audience will explore the main sources of energy in our world today and evaluate the sustainability of alternative energy sources for transportation.

Clean and Green: Learn to identify common household products that are hazardous to the health of people and the earth and discover alternative, non-toxic substitutes for common cleaning supplies.

Everybody Counts: Join us for an introduction to population dynamics, with a focus on doubling and exponential growth, world population trends, and human resource use and allocation.

Food and Fossil Fuels: Through this timely and provocative program, explore the often *unexplored* world of fossil fuels use in food production.

GMOs and Seeds: Through a slide show and hands-on activity, audience members will discover the pros and cons of genetic modification of foods and the effects on farmers and the environment.

Living Within Your Climate: from Pueblo times to modern times: Join us to learn more about the history of sustainability and human habitats in Flagstaff with a case-study look at Wupatki and Walnut Canyon National Monuments and Willow Bend Environmental Education Center.

Secret Life of a Shoe: Your shoe has been all over Earth! Join us for an eye-opening look at the manufacture and production of shoes, and consider consumer choices and sustainability.

Secret Life of a Plastic Bag: Learn about the life cycle of a plastic bag, the effects these everyday items have on our planet, and the importance of reduce, reuse, and recycle.

Water Quality: Learn the basics of water quality testing, including pH and dissolved oxygen, while understanding our community's needs and how to meet them with water treatment.

Field Opportunities

Fire Ecology Field Trip: *Note: this field trip is conducted at the Gus Pearson Preserve on Ft. Valley Road.* This interactive field trip offers learners the chance to get up close and personal with forest restoration and management practices. *(Suggested pre-trip programs: Fire Ecology)*

Flagstaff Recycling Tour: *Note: This field trip is conducted at the Materials Recovery Facility on Babbitt and Butler.* Enjoy a guided tour of the City Recycling Center where you will view materials as they are processed, learn more about the conservation of natural resources, and ideas about how to reduce waste.

New Frontiers Tour: Ever feel confused at the grocery store? What is the difference between organic and all-natural? What is local and why does it matter? We will answer these questions through a tour and hands-on activities at Flagstaff's natural food store, New Frontiers. *(Suggested pre-trip programs: Food & Fossil Fuels and GMOs & Seeds)*

Water Quality Field Trip: This field trip focuses on watershed management through water quality testing. Participants will conduct pH, DO, Nitrates/Phosphates, and other water quality tests at the Rio de Flag Ponds. Depending on the season, there may also be an opportunity for macro invertebrate testing! *(Suggested pre-trip programs: Water Quality)*

Willow Bend Sustainable Living Tour: Join us for a tour of how we “walk the talk” with our passive-solar building, BioBug, rainwater harvesting system, and more!