



Educational Activities 2016-2017

Bosque Ecosystem Monitoring Program (BEMP-South)

Science, Education, & Stewardship

In partnership with Mesilla Valley Bosque State Park

◆ - in the classroom ♣ - in the field

~* a classroom visit time of 1- 1.5 hours is recommended *~

◆ River of Change

Great introductory lesson about the Rio Grande and the bosque. Learn how the middle Rio Grande watershed has changed over the last 2000 years with this hands-on **Bosque Education Guide (BEG)** modeling activity. We will take your students on an in-class journey to see the changes from the historical Rio Grande to its more managed form today.

- ~ *focus on:* ecosystem dynamics, flooding disturbance, human influences on the Rio
- ~ *appropriate for grades 3-12 (see CCSS and NGSS grid for more details)*
- ~ *Paper copies of BEG curriculum are available in binders through me or you can obtain free pdf copies at <http://www.nmnaturalhistory.org/educational-resources/sections/bosque-education-guide>*

◆ The Incredible Water Journey

This is an interactive learning game from Project Wet where role of the dice takes students through a water journey throughout the classroom; followed by statistical reporting of their journey and thought filled ideas about what it means to journey through the water cycle as a water droplet. An additional visit could be to build a water aquifer.

- ~ *focus on:* the water cycle and water distribution; and building a water aquifer
- ~ *appropriate for grades k-12*



◆ Fauna of the Floodplain

Explore who the native animals of the bosque are. We will discuss food webs; physical, and behavioral adaptations; and examine bio-artifacts such as skins, skulls, scat, and tracks. Grades K-6 can take an in-depth look at birds by dressing-up a student like a bird!

- ~ *focus*: adaptations, animal classification, migration, reproduction, and diversity
- ~ *appropriate for grades K-12*

◆ Creepy Crawly Critters

Learn common characteristics of arthropods (bugs!). According to grade level, activities may be to sort, identify, and record arthropods; understand why BEMP sets pitfall traps; and practice insect classification with hands-on lab activities.

- ~ *focus*: identify local insects, actively journal data, ID, sort, and record bugs
- ~ *appropriate for grades K-12*

◆ Bosque Botany Bonanza

Learn about native and exotic plants of the bosque. Discuss concepts of trophic levels: producers, consumers, etc. Discuss how exotic plants came to the bosque; and share freshly picked bosque plant species to make individual field journal entries, tapings, rubbings, and lists of scientific descriptions for future field expeditions.

- ~ *focus*: cottonwood, willow varieties, salt cedar, creosote bush, and screwbean mesquite
- ~ *appropriate for grades K-12*

◆ Dabbling in Data

Students will get a hands-on experience by graphing and examining actual groundwater table data (collected by BEMP students). We review the water cycle to show the relative amount of freshwater on Earth. We then discuss monthly monitoring collections & graph data from an actual BEMP field site, to show the relationship between groundwater and river flow (volume).

- ~ *focus*: shallow groundwater table, graphing, comparison of data points
- ~ *appropriate for grades 4-12 (see CCSS and NGSS grid for more details)*



♣ Mesilla Vally Bosque State Park (MVBSP) Study Trip

Visit Mesilla Valley Bosque State Park for a 1-day Study Trip (an academic filed trip) and discover our bosque up-close and personal. We will learn about the ecology of the bosque and how seasonal changes affect the plants and wildlife in this riparian ecosystem. We will collect data for Nature's Notebook, a national science project with the National Phenology Network. Another focus is how students in Southern New Mexico can help protect the bosque and its special inhabitants!

- ~ students should bring a pencil & packed lunch to picnic in the park
- ~ students should dress appropriately for varying seasonal conditions & hiking
- ~ state park fees are \$15 per bus and \$5 per vehicle
- ~ best transportation arrival & departure times are 9:00am & 2:00pm, however, *we are flexible* (group **limit is ~70** students per trip)
- ~ *appropriate for grades 3-12*



Please contact Ruby Estrada to schedule your classes
ruby.estrada@bosqueschool.org ~*~ 575.888.7960
www.BEMP.org/bemp-south/

BEMP'S MISSION:

Science, education, and stewardship of the Rio Grande and its watershed through long-term, hands-on, student research of ecosystem response to inform public policy.