

# Classroom Presentations 2010-11



Below are presentations the STRAW Faculty can provide for students. The STRAW Faculty presenter will contact the classroom teacher to find out what the class has been studying and where they are in their understanding of the topic. These hands-on lessons support a project-based curriculum, critical thinking and the California Content Standards. *If there is a presentation you'd like that isn't listed, please ask! The STRAW Faculty and Staff can usually develop what you need in your environmental studies!*

For scheduling a presentation, contact Kathleen Brown, Outreach Coordinator at [kbrown@prbo.org](mailto:kbrown@prbo.org) or by phone at (707) 763-4572.

PRESENTATIONS	DESCRIPTION
Aquatic Macro-invertebrates 3-5 6-8 High School	Younger students will review the insect life cycle, body plan & consider bugs as indicator species (What are they trying to tell us about the water quality?) Students will draw, identify & label living macro-invertebrates viewed in our creek water samples. For older students, class discussion will include advantages of metamorphosis & versatility of the exoskeleton. For the high school level, discussions include the need for monitoring our creeks & considerations in designing a monitoring plan. <p style="text-align: right;">50 min.</p>
Bacteria in the Creek 6-8 High School (lower level science survey classes)	This rates high on the "ick" scale! Take a trip through time, looking at sanitation practices & the connection to waterborne diseases. Students become epidemiologists in order to solve a medical mystery involving a cholera epidemic & then brainstorm ways to prevent water contamination. This presentation is an excellent bridge between watershed studies & a field trip to the sewage treatment plant & it gives students added insight into the need for safe disposal of pet wastes. <p style="text-align: right;">50 min.</p>
Bird Beak Buffet K-2 3-5 6-8 High School	Students role-play as if they were a specific species of bird & must use a mouth & gullet for feeding that is unique to that species. For older students, a number of concepts in ecology related to bird feeding strategies including resource partitioning & the principle of competitive exclusion are experienced. Students graph the data they collect. <p style="text-align: right;">60 min.</p>
Bird Walk K-2 3-5	Spot, identify & record the variety of birds on a walk at the Las Gallinas Valley Sanitary District. Young students learn "What makes a bird a bird?" & older students hone their skills in identifying birds & recording their activities. Bird walks are usually done in smaller groups and coordinates well with a rotation of related activities. <p style="text-align: right;">45-60 min. each group</p>
Geology 3-5	This two-part lesson introduces the scientific process through hands-on opportunities with rocks and minerals. Strategies used by geologists in determining what is a rock and what is a mineral are introduced. Students will be observing, questioning, testing & defining while working in investigative teams. <p style="text-align: right;">60 min. each lesson</p>

<p><b>Native Mammals</b> 3-5 6-8</p>	<p>What makes an animal a mammal? What mammals are native in your area? What role do they play in the local environment? Students are divided into mammal detective teams to solve mammal mysteries using clues and mammal characteristics. Older students are given a clue of a native mammal to connect them to a study team for further investigation, learn more about their mammal by watching a power point presentation on native mammals and fill out a related worksheet to summarize what they have learned. Teachers may want to use this as a starting point for a research project.</p> <p style="text-align: right;">60 min.</p>
<p><b>Bird Studies</b> K-2 3-5 6-8 High School</p>	<p>Students K-12 learn about bird conservation science &amp; responsible environmental stewardship in a variety of classroom &amp; field experiences. These include Neighborhood Field Studies &amp; in-class &amp; after-school workshops. Examples: Native Birds of S.F. Bay, Feathers &amp; Flight, Raptor Identification and Ecology, Nest Cycle of Birds, Seabirds &amp; the Marin Food Web, etc. For more information and to schedule, you can contact PRBO Conservation Educator Missy Wipf at (707) 781-2555 ext. 302.</p> <p style="text-align: right;">Times vary</p>
<p><b>Spring Bird Songs</b> 3-5</p>	<p>This presentation is appropriate for a class already studying birds and learning to recognize local birds. Students learn why birds sing in the spring &amp; have fun learning some of the local birds' spring songs.</p> <p style="text-align: right;">60 min.</p>
<p><b>Watershed Model</b> K-2 3-5 6-8</p>	<p>Where does water pollution come from? Where does it go? Join Nina at the Las Gallinas Valley Sanitary District Lab and learn about how pollution occurs, what happens to pollution when it rains &amp; ways to prevent pollution. This hands-on activity also helps inform students about bacteria, toxic substances, storm drains &amp; run-off. The enviroscape is used as one of the stations as part of this lesson. Another option is having Nina and some of her colleagues come to your school &amp; set up learning stations—a fabulous experience!</p> <p style="text-align: right;">45-60 min.</p>
<p><b>Water Quality</b> K-2 3-5 6-8 High School</p>	<p>For grades K-2, students will participate in an enactment of water pollution, perform a simple test for turbidity &amp; come up with ways to keep water clean. For grades 3-5, in addition to turbidity, students will learn about &amp; test for dissolved oxygen. In grade 6-8, students will test for nitrate &amp; dissolved oxygen, &amp; consider how these factors interact to lead to eutrophication. In grades 9-12, students will consider the interaction of nitrates, phosphates &amp; dissolved oxygen in a positive feedback loop leading to eutrophication &amp; will perform tests for these parameters. Each presentation will reinforce safety and procedures.</p> <p style="text-align: right;">50 min.</p>