



## Table Rocks Curriculum Feathered Friends

**Objective:** Students will investigate characteristics of birds and how they interact with their environments by identifying, observing, and predicting bird species found in their school yard and on a Table Rocks hike. A comparison of common bird species from the two locations can then be made.

### **Benchmarks Targeted: 1 and 2 (Grades 1-5)**

#### **Oregon Standards:**

**Subject Area:** Life Science

**Common Curriculum Goals:** Organisms: Understand the characteristics, structure, and functions of an organism.

**Benchmark 1:** Recognize characteristics that are similar and different between organisms. Describe the basic needs of living things.

**Benchmark 2:** Group or classify organisms based on a variety of characteristics. Describe basic plant and animal structures and their functions.

**Common Curriculum Goals:** Diversity/Interdependence: Understand the relationships among living things and between living things and their environments.

**Benchmark 1:** Describe a habitat and the organisms that live there. Identify how some animals gather and store food, defend themselves, and find shelter.

**Benchmark 2:** Describe the relationship between characteristics of specific habitats and the organisms that live there. Describe how adaptations help a species survive.

**Subject Area:** Scientific Inquiry

**Common Curriculum Goals:** Forming the Question/Hypothesis: Formulate and express scientific questions or hypotheses to be investigated.

**Benchmark 1:** Make observations. Based on these observations ask questions or form hypotheses which can be explored through simple investigations.

**Benchmark 2:** Make observations. Based on these observations ask questions or form hypotheses which can be explored through scientific investigations.

**Common Curriculum Goals:** Collecting and Presenting Data: Conduct procedures to collect, organize, and display scientific data.

**Benchmark 1:** Collect data from an investigation.

**Benchmark 2:** Collect, organize, and summarize data from an observation.

**Length of Lesson:** 20-45 minutes (outdoors), optional 30 minute follow-up

#### **Materials:**

- ✓ Age-appropriate "Bird Observation Chart" one per student group (provided with lesson)
- ✓ Pencils and clipboards

- ✓ Binoculars (available for checkout from Bear Creek Watershed Education Partners at <<http://www.bcwep.org>>)
- ✓ Class sets of field guides available in the SOU/SEEC Bird Kit at 541-552-6876
  - National Geographic's Field Guide to the Birds of North America (Grades 3+)
  - Peterson's A Field Guide to Western Birds (Grades 3+)
  - Peterson's Backyard Birds/Field Guides® for Young Naturalists (Any age)
  - Stan Tekiela's Birds of Oregon: Field Guide (Any age)

**Key Vocabulary:** *chaparral, habitat, hypothesis, riparian*

**Background Information:**

See “Build a Table Rock Bird” lesson.

**Procedure:**

**Preparation:**

It is recommended you complete the “Build a Table Rocks Bird” activity to familiarize students with bird characteristics and adaptations before attempting this activity. This will provide background information about bird adaptations, hollow bones, webbed feet, talons, feather type, and colorations as well as bird characteristics such as bill shape, head markings, tail shape, and body size so they can better identify different species of birds in the field.

Divide students into small observation groups of two to three students. Provide each group with pencils, clipboards, an age-appropriate “Bird Observation Chart,” and field guides.

**Activity:**

While students walk around the school yard or park observing, watching, and listening for birds, have them fill out the “Bird Observation Chart.” Challenge them to observe three to five different birds in 20 minutes. Visit as many different *habitats* as possible. For example, a stream and vegetation along the bank is classified as *riparian habitat*; a cluster of tall trees with shade is forest *habitat*; an area with low shrubs, oaks, and full sun is *chaparral habitat*; and an open field area is grassland *habitat*. This will allow students to compare some of the adaptations birds have developed to survive in different environmental conditions. Students can see how the beak or bill shape might relate to the type of food available. Note that some birds are found in several different *habitats*. Provide students with an age-appropriate field guide that shows common birds to help them identify what they see (you may want to place tabs on pages with birds they are likely to see).

**Scientific Inquiry:**

**Grades 4-5** In the *hypothesis* column on the “Bird Observation Chart” have students record what birds they may see or have previously seen in the schoolyard or park they will be visiting. If they can’t name specific birds, have them describe birds they may have

seen in terms of shape, size, colors, and bill type. Complete this portion before going in the field. They can look in a field guide later to see if their *hypotheses* were correct as they identify actual birds sighted.

### **Follow-Up:**

Back in the classroom, gather students and compile a master class list of birds seen in the field. Use the discussion questions listed below as follow-up topics. Have each student draw and color a detailed picture of their favorite sighting, with adaptations (color, beak shape, leg length, foot type, etc.) and *habitat* labeled on the drawing.

**Grades 4-5:** After your Table Rocks field trip, compile a second list of birds seen on the hike. Compare the birds that live around your school or local park with those on the Table Rocks. Do you see many of the same species? If so, are these birds found in similar *habitats*, eating similar foods, or do you notice differences in their behaviors from one location to another? Have students generate a *hypothesis* to explain the ways different *habitats* affect bird activities. Refer to the BLM website and attachment for a list of common birds of the Table Rocks. Have students choose a bird from the website (or attached list) and write a short biography including favorite foods, where it lives, predators, etc., and how these factors may change with the seasons.

### **Extensions:**

Create a bird feeding station outside your classroom window. Keep a record of the birds seen at the feeder on a daily basis or on designated days each week. Compare the types of birds seen at the feeder during different seasons (especially during fall and spring migrations) and see which birds have adapted to survive the winter in the Rogue Valley.

### **Discussion Questions:**

**What kinds of birds did you see? How did this compare to your expectation/hypothesis?**

*Answer based on student's observations.*

**What were the most common birds seen? Find out if these birds are native to this area (or in some cases to this country).**

*Answer based on student's observations. Native and nonnative information can be obtained from range maps and descriptions in field guides or on the Internet.*

**How do nonnative birds, like Starlings and House Sparrows, affect native bird populations?**

*A major contributor to the depletion and extinction of native bird species, possibly second only to habitat loss, is the introduction of aggressive, nonnative birds such as Starlings and House Sparrows. Nonnative birds displace native species by out competing with them for nest cavities. The House Sparrow will actually take over an already inhabited nest by pushing out the eggs or the young of the native bird. The presence of Starlings and House Sparrows has been particularly destructive for native Swallows, Bluebirds, and House Wrens.*

**Which *habitats* did you visit? What makes these *habitats* different from one another?**

*Answer based on student's observations.*

**Did certain birds seem to prefer specific *habitats*? Why do you think that is?**

*Food availability and diet restrictions, shelter and cover from predators, nesting requirements, migration location, and general **habitat** preferences will determine where birds will be observed.*

**Did you hear any birds calling? Why do they call or sing?**

*Most birds sing more during the springtime. While migrating, song is thought to be a way of "keeping in touch" with their flying buddies. Once breeding begins, songs will be used for courtship. Male birds will try to show their superiority with song. Other birds may show the world the boundaries of their territory by flying to perches around the perimeter and proclaiming loudly in song, "THIS IS MINE!" Birds also call to warn mates and members of their community of danger. You can recognize these warning calls while hiking in the forest because they sound like an alarm.*

*Birds normally sing more frequently and longer in the early hours of each day; often they begin to twitter and chatter before the sun is up. Many bird species do not sing or call much during the late mornings or early afternoons, but the number and length of songs increases late in the afternoon until dusk.*

**What bird behaviors did you observe? What is the reason for their behavior?**

*Answer based on student's observations and explanations/hypotheses.*

## **References:**

Baughman, Mel, ed. Field Guide to the Birds of North America Washington, D.C.: National Geographic Society, 2002.

Bear Creek Water Shed Education Partners. 12 December 2007. 05 November 2007 <<http://www.bcwep.org>>.

Latimer, Jonathan. Field Guides for Young Naturalists/Backyard Birds. Boston: Houghton Mifflin, 1999.

Peterson, Virginia. A Field Guide to Western Birds. Boston: Houghton Mifflin, 2001  
Houghton Mifflin, 1999.

Table Rocks Environmental Education. 2007. USDI BLM. 05 November 2007 <<http://www.blm.gov/or/resources/recreation/tablerock/index.php>>.

Tekiela, Stan. Birds of Oregon: Field Guide. Cambridge, MN: Adventure Publications, 2001.

## Common Birds of the Table Rocks

- Anna's Hummingbird
- Western Meadowlark
- Lesser Goldfinch
- Pileated Woodpecker
- Acorn Woodpecker
- Spotted Towhee
- Black-headed Grosbeak
- Violet-green Swallow
- Lark Sparrow
- Lazuli Bunting
- Chipping Sparrow
- Turkey Vulture
- Blue-gray Gnatcatcher
- Common Raven
- Western Tanager
- Yellow-rumped Warbler
- Western Bluebird
- Western Scrub Jay
- Oak Titmouse
- Robin
- Rufous Hummingbird
- Northern Flicker
- Red-tailed Hawk
- Ash-throated Flycatcher
- Pacific-slope Flycatcher
- California Towhee
- White-breasted Nuthatch
- Purple Finch
- Vaux's Swift

# BIRD OBSERVATION CHART

## Grades 4-5

<b>SIZE</b> (compare to a Robin =10 in.)	<b>SHAPE</b> (head, beak, body)	<b>HABITAT</b> ( <i>chaparral</i> , forest, <i>riparian</i> , grassland)	<b>BEHAVIOR</b> (flying, eating, singing, calling, resting, solitary, social)	<b>COLOR</b> (distinct markings)	<b>BIRD                      NAME</b> (book ID)	<b>HYPOTHESIS</b> (List five birds you may see based on habitat)

**BIRD OBSERVATION CHART**  
**Grades 1-3**

<b>SIZE</b> (small, medium, large)	<b>SHAPE</b> (beak, head, body)	<b>HABITAT</b> (forest, near water, grass)	<b>BEHAVIOR</b> (flying, eating, singing, sitting, alone, with others)	<b>COLORS</b> (red, blue, gray)	<b>BIRD NAME</b> (book ID)