

Teacher Information Sheet

4th Grade: Adaptations

Students will learn that the shape of birds' feet and beaks are adapted to how they live. By examining a bird's beak you can tell what and how it eats. Feet can tell you a lot about where a bird lives and what its behavior is like.

Take home materials:

1. Hand lens and a feather
2. Worksheet packet: Build your own Bird!
3. Parks for Birding
4. Pasadena Audubon Local Birds brochure

Lesson elements

1. Students watch videos a and b. Video c is offered as a bonus
 - a. Bird Beaks - What do Birds Eat? <https://youtu.be/xEbRZs1L59E>
 - b. Bird Feet Types – What Bird Feet Look Like. <https://youtu.be/izdoAhKuZ8E>
 - c. Bonus: Weird Beak Shapes and Why they work. <https://youtu.be/d86eS5nJikE>
2. Students watch BSP Video: Adaptations: SoCal Birds, Beaks and Feet: <https://youtu.be/OT4zq4tDjBI>
3. Activity: Build your own bird.
 - a. Students complete the worksheet, selecting habitat, beak shape and feet shape and then creating a bird of their own. Students are instructed to name the bird, make a drawing of the bird and then write up a description of where it lives, what it eats, any specific behavior.
 - b. Instruct students to go to Wall of Birds to explore different birds of the world. This mural is housed at the Cornell Lab of Ornithology and depicts one bird from each bird family in the world. The interactive tool allows students to access an online field guide with information about each bird species and family. <https://academy.allaboutbirds.org/features/wallofbirds/>
 - c. Instruct students to find a bird that is similar to the one they created. Answer the questions at the bottom of the worksheet: what bird did you find, where does it live, in what type of habitat, what does it eat. The answers to these questions can be found by clicking on the bird or by going to eBird.org/explore and entering the species name. Students can also look at Wikipedia for more information on the bird.
4. Bonus outdoor activity
 - a. Students practice using the hand lens on the feather. Then they go outside with their hand lens and examine flowers, leaves, rocks and whatever they find.
 - b. Students observe any birds they see. What kind of feet and beaks do they have? What are they doing, perching, flying, scratching the ground, eating, moving quickly through the trees? What kind of food might they eat?
 - c. Students use *Merlin Bird ID* to identify the birds they find. *Merlin Bird ID* can be downloaded for free onto any smart phone. Merlin allows the user to identify a bird by describing basic



features, like size and color. Using the GPS information along with date and time, the app will propose a short list of possibilities. The user may also upload a photo for identification.