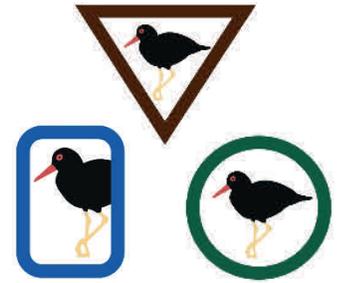




Earn the “In the Flyway Badge”

at a

National Wildlife Refuge



Contact a National Wildlife Refuge (NWR) near you to see if you can complete this badge. At the Sacramento NWR, call 530-934-2801 or email sacramentovalleyrefuges@fws.gov to reserve some of the activities below. Brownies are required to complete 4 activities and Juniors need to complete 6 activities.

1. Be A Birder (Brownie) and Honing Your Skills (Junior)

A birder is someone who likes studying birds. Binoculars are a great tool every birder uses when looking for or studying birds. They make it much easier to observe birds from a distance. Without binoculars or a spotting scope, you would need to be very close to the birds and they would likely fly away or change their behavior significantly. Using binoculars is a skill that takes practice.

At the Refuge:

Materials: borrow binoculars for everyone in your group, ask a staff member to help show you how to use binoculars correctly

Activity: go on a bird walk or on the auto tour to observe birds

2. A Long Trip (Brownie only)

Some birds travel, or *migrate*, at different times of the year. They go where the weather is better for them or where food is plentiful. Some birds travel over 12,000 miles in a single year! Choose one local bird that migrates that you can learn about. What time of the year does it live in your area? What is it doing during that time? Is it nesting, feeding or resting? Find out where it goes when it is not living in your area. How far of a trip does it take?

At the Refuge:

Activity: Do a migration simulation using Migration Madness activity.

3. Bird Behaviors (Brownie only)

Sit quietly for 5 minutes outdoors and watch birds (you can use binoculars if you have learned how). Pay attention to what the birds are doing. Are they flying? Eating? Walking around? Protecting themselves? Birds have many interesting behaviors. Share with a friend at least 3 behaviors that you observed. Can you think of any behaviors you were unable to see? Perhaps you *heard* some? Did you see or hear any behaviors similar to those that people do? Were there any that only birds can do?

At the Refuge:

Materials: borrow binoculars, bring paper, pens/pencils, clipboards

Activity: Have students observe birds for 5 minutes. During this time have them describe some of these behaviors by writing a description, writing a poem, drawing a picture, etc. Then have some of them share what they created.

4. Beaks and Feet (Brownie only)

The color, shape and size of a bird's body, beak and feet help it survive in the wild. These are called *adaptations*. Observe birds outdoors and look at pictures of birds to identify many of these adaptations. Can you figure out if a bird lives in the water or in the trees? Can you tell what a bird eats by looking at its beak? Do you think it catches fish, other birds or small animals? What color is it? Where would it be able to hide the best? In a tree, in the grass or somewhere else?

At the Refuge:

Materials: borrow beaks and feet or bird mounts (or ask for Chompers and Stompers program), paper, pencils

Activity: Talk about the different types of beaks and feet and why they are that way. Then have the students sketch the beaks and feet.

5. Fancy Feathers (Brownie only)

The color, pattern, and layers of feathers on a bird are called the *plumage*. Some birds change their feathers once or twice a year! Changes in plumage are pretty cool. Learn when and why some birds change their plumage. Get creative and make your own special plumage with which to proudly strut about. Create a "feather" crown and special tail "feathers" from strips of colored construction paper.

Materials: Bring strips of various colors of construction paper, strips of construction paper to be the headband and a shorter strip to be the base of the tail feathers, scissors, tape/glue/stapler, hole punch, paperclips

Activity: Talk about why birds have certain color feathers. (Males – to attract females, Females – to hide from predators with their eggs, Camouflage – to hide from predators). Have students create a feather crown and tail feathers. For the tail feathers, punch holes at the ends then paperclip them to their pants.

At the Refuge: view mounts, feathers, and wings

6. Bird Identification (Junior only)

As a beginning ornithologist (person who studies birds), you can learn to identify common birds by looking for identifiable characteristics or listening to their songs. Look at a book about birds or field guide. This helps you identify species of plants or animals. Look for birds of different color and size and with different shaped beaks, bodies, and feet, These are all identifiable characteristics. Take a walk and look for identifiable characteristics on birds you see. Try to identify 5 different kinds of birds and record them in your journal.

At the Refuge:

Materials: Borrow field guides from the Refuge. Observe the bird mounts in the visitor center.

Other Activities To Do At The Refuge To Complete The Badge:

- Bird Tracking (Junior only)
- Journal It (Junior only) (make before you visit)
- Bird Tracking (Junior only)
- What's For Breakfast? (Junior only)
- Uninvited Guests (Junior only)
- Environmental Changes (Junior only)
- Poetry in Motion (Junior only)