



Balcones Canyon Lands National Wildlife Refuge
24518 FM 1431, Marble Falls TX 78654
(512) 339-9432 X 70, jennifer_brown@fws.gov
Cell: (830) 220-9254

USING A FIELD GUIDE

VOLUNTEER DIRECTIONS

Need to Know

1. Your station, **Using a Field Guide**, will teach students how to identify birds visually using size, bill shape, shape and posture, behavior and habitats. This is further reinforced at the What is a Bird (station #1) as students learn size and body shape of families and species of birds then at How to Use Binoculars (station #2) they put it all together to identify birds using these similar concepts.
2. You **must include something about the Golden-cheeked warbler and Blackcapped vireo into this program (a section in this guide book has more on both birds)**. After all, these birds are the reason there is a refuge near Austin.
3. Furthermore, all of the resource management and public use management plans on the refuge must consider how these birds will be affected by man induced impacts.
4. The section in these directions called "Organism and Environments" is a specific science TEK requirement. **Get to know the Organism and Environments TEKS and be ready to share this with the students.**

A section in this guide book titled Inherited and Learned TEKS has more information. Another Science TEKS for this station is: *Adaptations may increase the survival of members of a species: a. Compare the adaptive characteristics of a species that improve their ability to survive and reproduce in an ecosystem, and b. Analyze and describe the adaptive characteristics that result in an organism's unique niche in an ecosystem.*

5. **A map** of the stations is in this guide book to help you direct your group to the next station. They go clock-wise in number order. Please be ready to direct your group to the next sequential station.

Sequence of Stations in Bridges to Birding

1. What is a Bird?
2. **Using a Field Guide**
3. How to Use Binoculars
4. Songs and Calls
5. Building a Home (different shapes of nests)
6. Habitat
7. Migration



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GOLDEN-CHEEKED WARBLER (GCW)

HABITAT: Old Forests with big trees; shady, dense forests in steep-sided canyons & slopes as well as drier, flat hill tops. Requires Ashe Juniper (“cedar”) bark to construct nest.

Spanish Oak, Live Oak, cedar foliage provides insects, caterpillars, spiders, beetles for food.

TERRITORY: 5-20 acres to forage;

NEST TERRITORY: 3-6 acres/ nesting pair

Female constructs Cup nest in old cedar and Hardwood (oak, elm) trees at least 15' high. All nests require cedar bark. Bark is woven with spider webs.

Nest is tucked in forked vertical limb & camouflaged. Warblers usually nest only once/season unless accident or predation.

Male stays nearby singing & defending during incubation.

3-4 eggs are hatched in 12 days & fledge 8-9 days later. Parents care for them for 1 month.

They migrate to pine/oak habitat of southern Mexico & Central America in July-mid-August & return in mid-March.

BLACK-CAPPED VIREO (BCV)

HABITAT: Dense, shrubby, broad-leaved (shin oak, hackberry, sumac, agarita, persimmon, Texas Mountain Laurel) young forest. Patchy habitat with 30-60% cover interspersed with open grassland.

Shrubby vegetation reaching from ground level to 6- 7' high.

TERRITORY: 1-16 acres NEST

TERRITORY: 2-4 acres

Male & female select nest site between 3-'6' off ground (door knob height) in dense cover. Pendulous Cup Nest is made by female from grasses and spider webs and is suspended from its rim in the fork of a branch. Nest is completed in 2-3 days.

They may nest more than once /year building a new nest each time.

Incubate 14-17 days and this work is shared by male & female (as well as fed by both). Fledge in 10-12 days.



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They arrive in mid-March to mid-April and stay until mid Sept. They spend their winter in western Mexico.

ORGANISM AND ENVIRONMENTS

There are complex and important relationships that organisms have with their environment. There are systems and cycles within environments.

Organisms live and survive in their ecosystem by interacting with the living and nonliving components.

Organisms undergo similar processes and have structures and behaviors that help them survive within their environments.

Example of an Interaction with the Environment

Golden-cheeked warblers require cedar bark to build their nests for successful nesting here in Texas in the spring. The removal of cedar trees for development and grazing has resulted in the Golden-cheeked warblers having less natural environment in which to build nests and the species chances of survival have been reduced. The refuge provides an area where the cedar trees are protected which in turn protects the Golden-cheeked warbler.

Getting Ready

Use the laminated activity station sign to identify your table (in the guide book).

Materials List

Plastic bin containing 6 Kaufman Field Guides (students will pair up to share a book).

Laminated photos of other common field guides and explanation of how they work.

Bird Sleuth Game Cards of 36 familiar birds (emphasis birds are marked with a green star in the upper right corner. Laminated pictures of Emphasis Birds
City Slickers Bird ID Challenge – copies to give to the teacher

Taking Flight!



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The goal of this station is to introduce field guides without overwhelming them with too much information. For these students, you will be using the *Kaufman Field Guide to Birds of North America*.

Give each person in your group a field guide or divide the participants into groups of 2 or 3. Begin by giving them just a few moments to browse through the field guide. Get them started by asking if they notice any patterns to the way in which the birds are organized in the field guide. Some common answers you may hear are that the birds are organized by size, that they are in alphabetical order, or by color. You will need to be familiar with the field guide(s) you provide, because several methods are used.

You may continue your exploration of this field guide by:

- Use the picture cards in the bin and have the students tell you the name of the bird.
- Be sure each group goes through the emphasis birds, the Golden checked warbler and the Black capped vireo.

Ask the group to do one or more of the following:

- Find the bird species in the field guide
- Determine in what family the bird species belongs
- Read the description of the species • Find the bird's size
- Find some of the identification tips
- Try to read the scientific name

Spending time with field guides and learning what they provide will help participants feel more comfortable using them. Advanced topics can be easily added. You may want to teach students how to use the index or discuss the variety of field guides available (pictures of different field guides are available in the binder).

Station #4 is How to Use Binoculars. Help the students understand that the field guide and binoculars are 2 of the most important tools used to identify birds. What they learn at this station will be used at station #4.

Tips & Options

This activity can be easily converted into a fun relay race. Set aside a 50 meter long area and place a staff person, two field guides, and two sets of species cards at the



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far side. Divide the group into two teams. Begin by having a person from each team run to the opposite side, pick a card, and find the species in the guide. That person then races back to the end of the line, and the next person goes. The first team to finish wins.

Getting Ready

Quiz Your Guests

1. What are some ways to identify a bird (size, shape, color, field markings, behavior, habitat, bill shape, posture)?
2. What are two tools important to use to identify birds (a field guide and binoculars)?

Take Away

Give the teacher the Celebrate Urban Birds handout for the students to take home and use.