

# Bird Migration



**Migration is the seasonal movement of animals between geographically separate places**



**Painted Bunting on breeding grounds in Texas**

**Migratory birds of the western hemisphere breed in the United States and Canada but winter in México, the caribbean islands, and Central and South America**

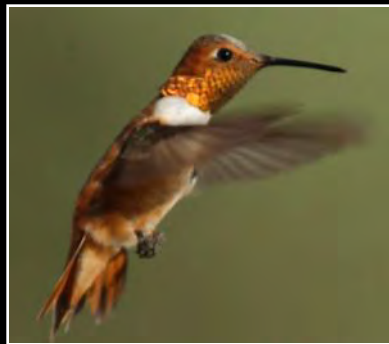


**Birds that breed in the United States and Canada but winter in México, the caribbean islands, and Central and South America are called Neotropical migratory birds**





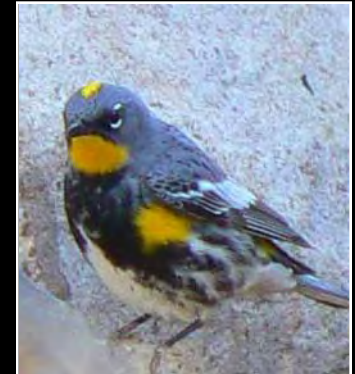
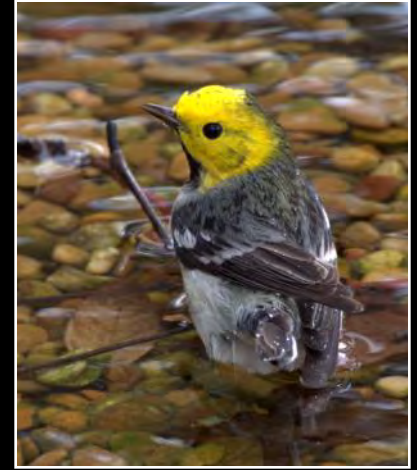
# Neotropical Migratory Songbirds



**Birds (left to right, top to bottom) Dickcissel, Orchard Oriole, Painted Bunting, Eastern Kingbird, Common Yellowthroat, Scissor-tailed Flycatcher, Rufous Hummingbird, Prothonotary Warbler, Indigo Bunting**

# Neotropical Migratory Birds

- nearly three fourths of North American birds migrate
- wood warblers are the largest group of Neotropical migratory birds
- the Golden-cheeked Warbler is a wood warbler



# Golden-cheeked Warbler (GCWA) breeding and wintering grounds





# Golden-cheeked Warbler breeding and wintering grounds and migration route





# Why do birds migrate?



# Birds migrate to areas where food is more abundant





**Birds like the Scissor-tailed Flycatcher have  
less competition for nesting places in the  
United States and Canada**





**Birds migrate to find a milder climate  
and longer days for hunting food**





# Do birds have flyways or highways?



Upper Texas Coast Along the Central Flyway



# Four major flyways of North America



Pacific Flyway  
Central Flyway  
Mississippi Flyway  
Atlantic Flyway





**Do birds fly long distances across seawater?**






**Ruby-throated Hummingbirds fly up to 600 miles non-stop across the Gulf of Mexico to reach their wintering grounds**

**Baird's Sandpipers fly over water several thousand miles from the Arctic Circle to the tip of South America**







**Do birds migrate  
during the night?**

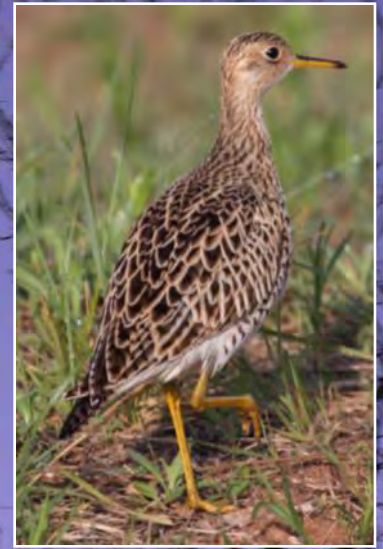
**Do birds migrate  
during the day?**



**Strong swift fliers like pelicans, gulls, swallows, nighthawks and raptors all fly during the day**





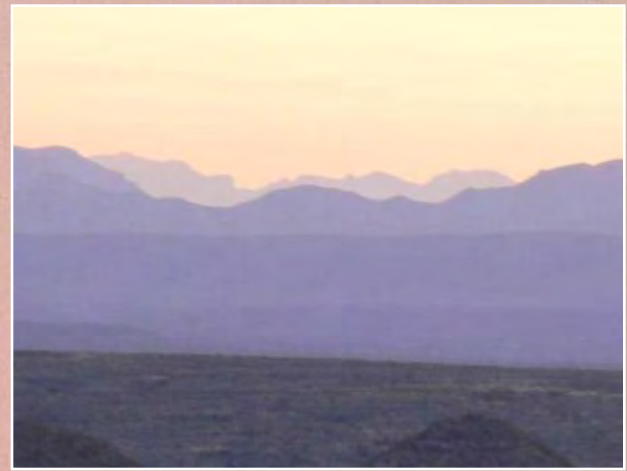


Many shorebirds, flycatchers, sparrows, vireos,  
orioles, thrushes & warblers fly at night





**Birds navigate  
using the sun,  
stars, rivers,  
valleys,**



**mountain ranges,  
coastlines and  
even the earth's  
magnetic field**





**Funding to develop these instructional resources was provided by Texas Parks and Wildlife Department contract #409330 and U. S. Fish and Wildlife Service Section 6 grant TX E-133-R**

**Snow Geese and Pintails on wintering grounds on Texas coast**

**Photos by Pat and Nicole Merkord, Gil Eckrich, and USFWS**



# Alignment

Alignment is provided to the Texas Essential Knowledge and Skills (TEKS) for English Language Arts and Reading, Mathematics, Science and Social Studies where applicable and color-coded for each grade level.

**Grade 3 (red)**

**Grade 4 (blue)**

**Grade 5 (green)**

**Grade 6 (purple)**

English Language Arts & Reading student expectations: **3, 4(A,B); 1, 2(A,B), 13(B); 1, 2(A,B), 13(B); 1, 2(A,B), 12(B)**

Mathematics student expectations: N/A

Science student expectations: **3(A), 9(A,C); 3(A); 3(A), 9(A); 3(A), 10(C), 12(E,F)**

Social studies student expectations: **4(A), 5(C,D), 17(C,E); 6(A), 7(C), 21(A-C), 22(A); 6(A), 7(B,D), 24(A-C), 25(A); 3(A-C), 4(D,F), 6(B), 21(A-C), 22(A)**

*Funding to develop these instructional resources was provided by Texas Parks and Wildlife Department contract #409330 and U. S. Fish and Wildlife Service Section 6 grant TX E-133-R*