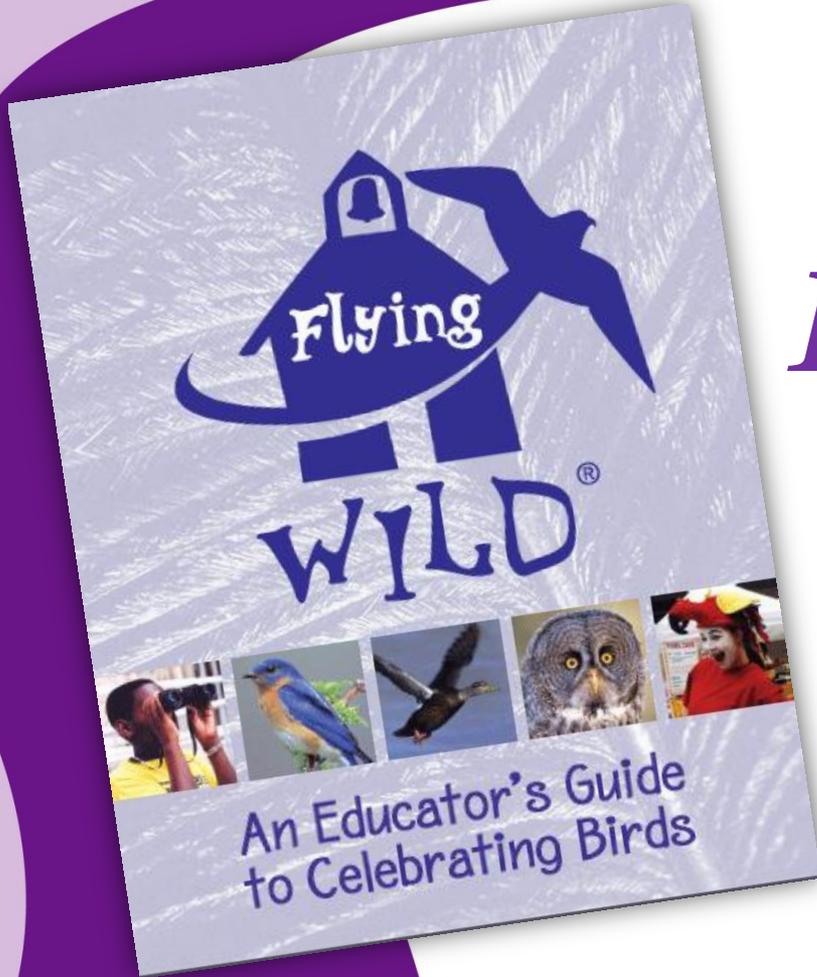




Flying WILD

Bird Education for Schools

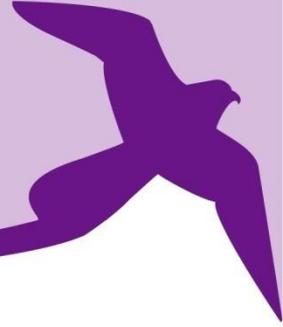


Welcome to Flying WILD





Flying WILD...



Purpose: To provide activities that teach middle-school students about birds, their migration, and what people can do to help birds and their habitats.

- ✦ Bird education targeting middle grades
- ✦ Addresses the needs of urban audiences
- ✦ Interdisciplinary
- ✦ Classroom-ready, hands-on, concept-based, activity-based, and uses simulation models
- ✦ Aligned to National Science Education Standards
- ✦ Service-learning Birding Festival emphasis and support



Flying WILD

Facilitator Training...

Goal: Create effective and entertaining Flying WILD Facilitators that are competent in their understanding of the Flying WILD curriculum and able to deliver engaging trainings .

- ✦ Model 10 Flying WILD activities.
- ✦ Receive detailed instruction on Guide setup, framework and activity types.
- ✦ Identify the role of FW birding festivals as a service-learning opportunity for the middle-school audience.
- ✦ Create educator-training agenda.
- ✦ Identify and model Best Practices in workshop facilitation through Learn One/ Teach one activity.



Flying WILD Sponsors

(2002) National Fish and
Wildlife Foundation
&
ConocoPhillips



(2004) First Edition
Distributed





Flying WILD...

National Partners

- 📌 American Birding Association
- 📌 Association of Zoos and Aquariums
- 📌 Cornell Lab of Ornithology
- 📌 National Wildlife Federation
- 📌 Partners in Flight
- 📌 Smithsonian Migratory Bird Center
- 📌 US Fish and Wildlife Service





Flying WILD

Distribution & Training



Council for Environmental Education

(National Office for Flying WILD)

Flying WILD City Partners

State Coordinating Partners

(state wildlife agencies or nonprofits)

Flying WILD Facilitators

Flying WILD Educators

Schools

Nature Centers

Zoos

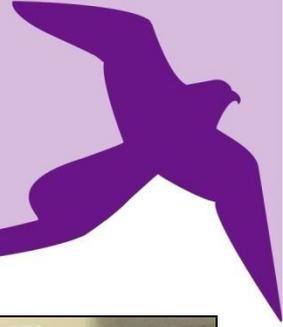
Museums

Youth Grps

Community Grps



Flying WILD Network



- 👤 Local, State National Organizations
- 👤 Bird Groups
- 👤 Audubon Chapters & Centers
- 👤 Zoos & Aquariums
- 👤 Businesses
- 👤 Conservation Organizations
- 👤 State Wildlife Agencies
- 👤 Project WILD Coordinators
- 👤 School Districts



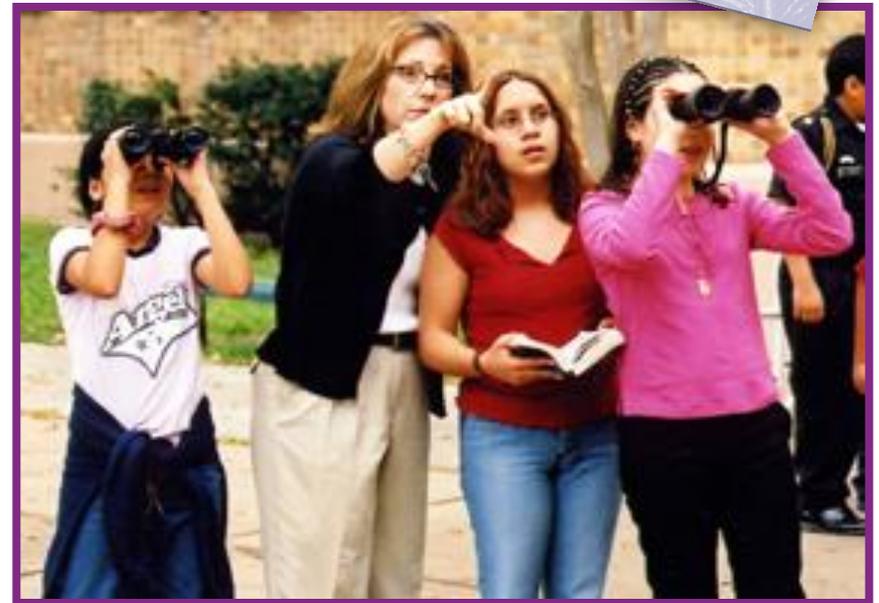
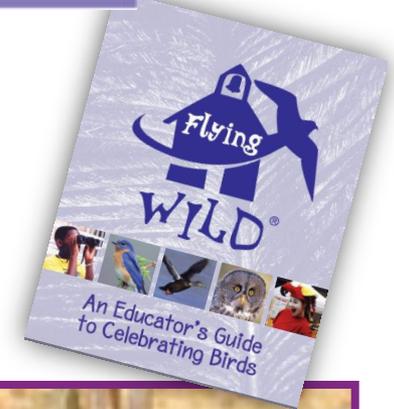


The Activities



Teacher-led Activities

- 👤 “Classroom” Activities
- 👤 Festival preparation
- 👤 Higher skill set
- 👤 More involved learning



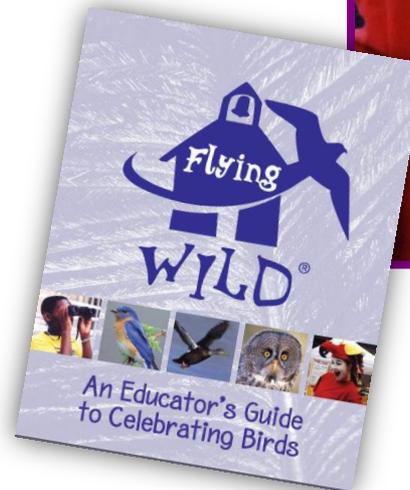


The Activities



Volunteer-led Activities

- 👤 Festival-designed
- 👤 Adult needed, but limited background required
- 👤 Quick-paced for large group/limited contact time



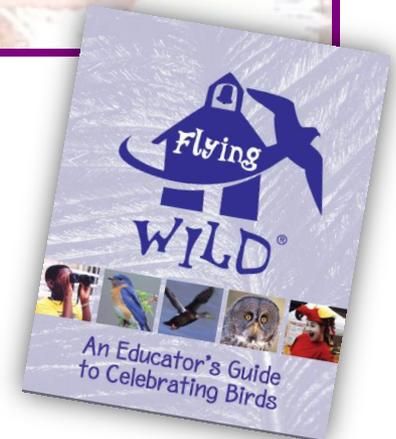


The Activities



Student-led Activities

- 📌 Short and Snappy!
- 📌 Designed for student planning, leading, assessment
- 📌 Special Activity format



Feeder Frenzy



OVERVIEW

By proposing and conducting bird feeder experiments, students engage in scientific inquiry to learn about feeding preferences of birds.

CONTENT AREA

Environmental Education,
Science, Math

PEOPLE POWER

Average-size class

SPACE REQUIREMENT

Preparation: Classroom
Activity: Outdoors

ACTIVITY TIME

Build bird feeders and set up feeding station: one 45-minute class to initiate; On-going daily observation; Discussion of final conclusions: 20 minutes

MATERIALS

- Bird Feeder Data Sheet
- Bird Feeder Designs
- Bird ID Posters (optional)
- Bird feeders or materials to make them
- Bird food, including sunflower seeds, cracked corn, thistle seed, and suet
- A field guide to birds, if available

SPECIAL GUESTS

Invite a local Audubon Society member, or owner of a store that specializes in equipment for bird feeding. Ask them to bring sample feeders and discuss the different types of food to use and the different birds to observe.

TERMS TO KNOW

Scientific inquiry,
problem-posing,
problem-solving, persuasion

Do all birds eat the same thing?

Learning Objectives

Students will identify common birds that are attracted to bird feeders; use scientific research methods; and conclude that different birds have different diets.

Background

Teaching About Science

The ways to teach about science have changed over the past few decades. In the recent past, all students were taught the explicit steps of the scientific method: observation, hypothesis formation, testing, and conclusions. These steps were presented as the way science is conducted. While each of those steps is still associated with inquiry, strict adherence to those steps is not always expected.

One current, leading method of teaching scientific practice is teaching about the “three P’s”—*problem-posing, problem-solving, persuasion*. Learning to ask good questions is fundamental to understanding the process of scientific inquiry. Scientific research with someone posing a significant question. Then researchers use their knowledge to make sense of the new “problem” posed by the question.

The next step is to try to solve the problem, which involves investigation and experimentation. People can ask any question, but the most outrageous; the challenge is to discover ways to answer those questions. In traditional science education, students are told to observe, collect, and analyze data, but the process is not there. In practice, if a researcher stopped without reporting the results, no additions would be added to the body of knowledge in the field. This process, called persuasion, is science: informing and convincing your peers about your findings. Persuasion is an ongoing process that occurs after posing problems, conducting investigations, and drawing conclusions.

Bird Feeding

Attracting birds to your school site is easy. You need food (seed or fat) and shelter from weather and predators. You can put the food out for several weeks prior to conducting the activity, so that birds have the opportunity to find and become accustomed to the feeders. Feeders are generally a supplemental

Food for the Brood



NEED TO GET

- 2 long tables or benches
- Flags or banners, for decoration
- 1 straw per team (plus extra straws, in case any are damaged)
- 2-5 paper, plastic, or ceramic cups (plus a few extras, in case any are damaged)
- 2-5 buckets (large enough for submerging a straw)
- Extra bucket or barrel of water (for refilling buckets as water is lost)
- A timer (a watch or clock, preferably with a second-hand, will work)

TIME

Preparation: 30 minutes
Activity: 20 minutes

TERMS TO KNOW

brood, nestling

This relay race gets participants up and running as they gain an appreciation for the parents' seemingly impossible task of satisfying the appetites of their impatient nestlings.

Need to Know

Being a parent is a demanding job, one that sometimes exhausts even the hardest mom or dad. Each species of bird exhibits its own unique way of raising young and has its own feeding habits. The young of some species require only a few days of attention, while others remain in the nest and totally dependent on their parents' care for several weeks. Many birds that nest on the ground, such as waterfowl and shorebirds, are born with their eyes open and a layer of down, so are able to leave the nest shortly after hatching. Other birds, including songbirds, which tend to have nests in trees, hatch with no down and closed eyes, so are practically helpless. Regardless of how long it takes, most bird parents typically share the responsibility of feeding and caring for the brood, or family of nestlings.

Feeding is a full-time job, one that requires not only speed but perseverance and teamwork. Bird parents do more than keeping young chicks fed during the nestling phase. They remain constantly “on-call” to feed, provide warmth and care, keep the nest clean, and protect against predators until their brood is ready to fly-off into the world to survive on their own. Sound simple? Give it a try! On your mark, get set...GO!

Getting Ready

1. To create a lively setting for this event, hang flags or banners in the area where the relay race is held. These can be purchased, borrowed, or made. Decorating the area in a flamboyant way attracts participants to this competitive, fun-filled race.
2. Position one long table or bench at both the start and finish lines, about 25-50 feet apart—the greater the distance the greater the challenge!
3. Place the “refill” bucket of water near the starting line table (but safely tucked away).
4. Place buckets at the starting line and, opposite each one, place cups at the finish line.

Most bird parents share the responsibility of feeding and caring for the brood.



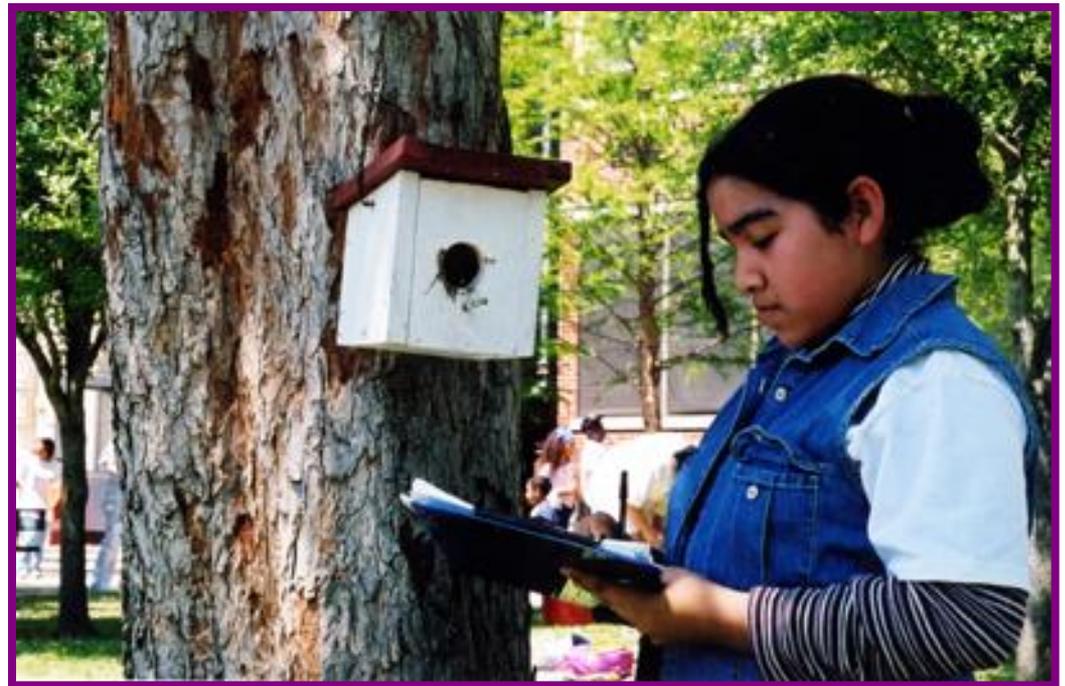


Service-learning



Student-led Activities

- 📌 Citizen Science & Bird Monitoring
- 📌 Schoolyard Habitat Projects
- 📌 Festival Planning & Production





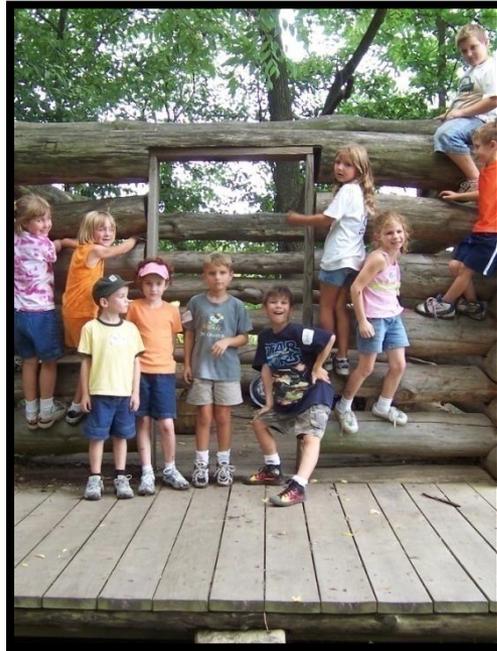
Stages of Environmental Education



Empathy

Ages 4-7

Cultivate connection
Animal relationships
Home is their world



Exploration

Ages 8-11

Asking “How”

Science investigations
Expanding boundaries



Social Action

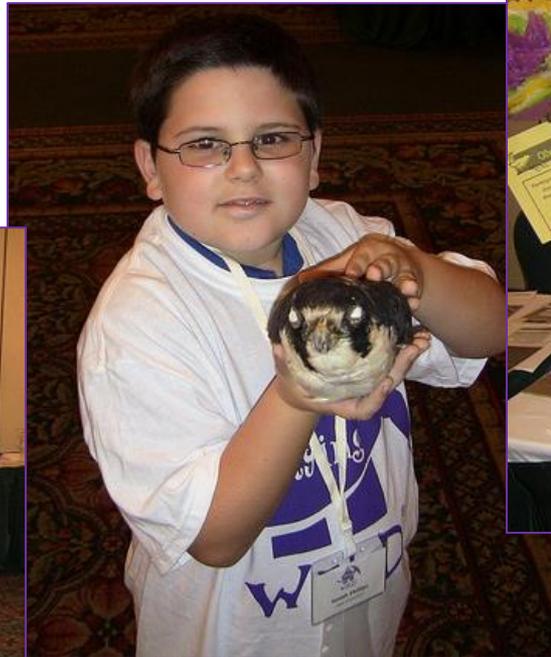
Ages 12+

Asking “How can I”

Place-based efforts
Social boundaries



Flying WILD... Bird Festivals



✈ Middle School Service
Learning emphasis creates the
perfect opportunity for School/
Community Birding Festivals



Flying WILD... Bird Festivals



✦ *Entire Section of guide dedicated to planning, delivery, assessment of festivals*



- ✦ *School Festival*
- ✦ *Community Festival*
- ✦ *Hybrid in conjunction with Flying WILD Training*





Flying WILD... Bird Festivals **Band Your Neighbor!**

