

CLASSROOM STUDIES

The following activities have been designed for use in the classroom. They cover various concepts in the biology and ecology of peregrine falcons, raptors in general, as well as exercise in math, science, geography and writing. They were designed to be adaptable to a broad range of age levels, and many of the activities or follow-up questions can easily be modified to meet specific objectives. Students can use this website, or links provided on this site, to obtain detailed information on peregrine falcons as an aid in completing the activities. Format includes an introduction followed by the activities and a series of follow-up questions.

THE SCIENCE OF SPEED

Introduction

Falcons are designed for speed. They have a stream-lined body with narrow, pointed wings (all adaptations that help reduce drag.) Falcons are considered to be the fastest of all birds. They can reach speeds of more than 175 miles per hour when diving for prey. The hunting dive is called a "stoop." The stoop is a near vertical dive achieved when the falcon tucks in its wings and plummets toward a bird flying below.

Falcon Gliders

This glider design is from the Science Museum of Minnesota's Hunters of the Sky Educational Resource Guide.

1. Using 8.5" x 11" paper have your students create "Falcon Gliders" based on the following design and instructions.
2. Have the students test fly the gliders by having them hold them above their head with their arms fully out-stretched and the glider pointing down at an approximately 45 degree angle. Have them test fly them several times observing the flight pattern each time (this design replicates a falcon's normal non-hunting flight.)
3. Now have the students modify the glider design by taping down or completely folding the wings against the body of the glider. Once they have completed this have them repeat the flight tests as above once again observing the flight pattern (this design replicates a falcon in a stoop dive where the wings are tucked against the body reducing drag and allowing the falcon to plummet rapidly.)

Have your students answer the following:

- Why do you think the glider dropped rapidly when the wings were tucked against the body?
- How would tucking the wings against the body help a falcon to hunt other birds?
- If you wanted to make your glider stay in the air longer how might you change the wings?