

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.

THERMALS

The following activity was modified from The Science in Action Learning Series: Birds of Prey by the California Academy of Sciences.

Introduction

Many birds of prey take advantage of warm air currents called "thermals" during flight. Thermals are created when the sun heats up areas of the ground causing the air above to rise. The birds utilize these rising air currents to effortlessly move upward without having to flap their wings.

Making a Thermal: a classroom demonstration

Have your class observe the effects of a thermal current by conducting the following demonstration at a table or counter in front of the class. You will need a hot plate and feathers (they should be downy like pillow down). Plug in the hot plate. Once the hot plate has heated up place your hand approximately 12" above the plate. You should feel heat rising. Hold a feather approximately 12" above the plate and let go. The feather should float or move around on the rising warm air.

Have your students answer the following:

- If hot air rises what do you think happens to cold air?
- What are some features on the landscape that you think would be good at giving off heat? Why? (hint: think of different colors, and surface ability to absorb and radiate heat.)
- Explain how a hot air balloon works.