Teacher's Guide

Predator & Prey: Adapt to Survive

NATURE Science Education Series

Grade Levels:
7-12

Subject Areas:
Life Sciences
Biology

Synopsis:
This fascinating study of predators and prey features animated cross-sections that highlight the physiological adaptations that certain animals have made to be successful hunters and to defend themselves against predators. Segments portray the rattlesnake's heat sensors and the ground squirrel's behavioral defenses; the power of wildebeest anatomy versus that of the lion; the talon-tipped feet of golden eagles versus the sharp turns of a jackrabbit; termite numbers versus anteater appetite; and the speed of a cheetah versus that of a gazelle. The theme of the episode is that in spite of adaptations and avoiding predators, vigilance is the key to an animal's survival.

Learning Objectives: Students will:

- Provide several examples of adaptations that make animals effective predators.
- Provide several examples of animal defenses that enable them to avoid predators.
- Understand that predation is the rule, rather than the exception, in the animal kingdom.

Vocabulary:
primal, venomous vipers, loreal pits, evolutionary arms race, heat profile, physiological adaptation, raptors, thermal currents, microclimate, pheromone, pangolin, elongated

Pre-Viewing Discussion:
What animals come to mind when the word "predator" is mentioned?

What makes these animals successful predators while others become prey?

What birds are predators? How are these birds equipped for their lives as predators?

What defenses do some animals use to avoid predators?

Post-Viewing Discussion:
Which example of an animal defense did you find the most interesting or unusual?

How did the cross-sections and animations help you understand why lions and cheetahs are such successful predators? How did they help you understand how wildebeests, jackrabbits, and gazelles have adapted to escape their predators?

What animal defenses were illustrated in the segment on termites versus anteaters? How long does the termite queen remain productive? How many eggs does she lay in an hour?

What is the key to survival in a predator versus prey situation? What examples of vigilance were given in this program?

Further Activities
Research the ways other raptors, such as falcons, are equipped to be successful birds of prey.

Find further information about heat profiles and how predators are sensitive to the body warmth of suitable prey.

Find further examples of how herbivores have adapted to avoid the attacks of predators.

Find other examples of predatory insects and the adaptations that make them successful predators.

Related New Dimension Media Titles:
Biological Classification in the Animal Kingdom
Big World of Insects, Spiders, and Bugs (series)
Marine Predator/Prey Relationships
Sharks: Species and Survival
Venomous Marine Adaptations
Yellowstone Bears' Ecosystem