

Mice and Other Rodents

Biological Classification Series

Grade Levels:

Grades 5-10

Subject Areas:

Science

Life Sciences

Biology

Synopsis:

Live-action film footage introduces the characteristics of rodents such as mice, voles, muskrats, and gerbils, highlighting the single pair of upper and lower incisors, which distinguish rodents from non-rodents such as hedgehogs, rabbits, hares and bats. Close-up photography of the chisel-shaped incisors of the Norway rat reveals that all rodents have to gnaw constantly to keep their teeth from growing too large. Rodents are shown to be prolific and widespread with species ranging from the common North American gray mouse, to gerbils that live in arid regions or maras that inhabit the southern tip of South America.

Learning Objectives: Students will:

Understand that their single pair of upper and lower incisors distinguishes rodents from non-rodents.

Understand that there are over 2,000 species of rodents making up almost half the world's mammals.

Understand why rabbits, hedgehogs, shrews and bats are not rodents.

Vocabulary:

prolific, humid, preference, incisors, chisel-shaped, colonies, dormouse, vole, diurnal, shrew, insectivore, muskrat, embankments, nutria, mammals, arid, gerbil, mara, marmots, woodchucks, African mole rate

Pre-Viewing Discussion:

Have you ever had a mouse in the house? How did you feel about this? Why was the mouse a worry? What was the mouse eating? Was there one mouse only?

What is the broader name given to mice and their relatives? Who are these relatives? Is a bat a rodent? Is a rabbit a rodent?

In many cartoons, there are sequences about mice gnawing through walls and creating holes. Is it true that mice gnaw their way through openings in the walls of houses? Will they gnaw furniture? Why are mice constantly gnawing?

Post-Viewing Discussion:

Why does the gray mouse choose to live in a human environment? How many babies can one couple produce in a year?

Why does the Norway rat have to gnaw constantly?

Are all rodents nocturnal? What common rodent is not?

Is a shrew a rodent? Why or why not?

How do rabbits and hares differ from typical rodents?

Further Activities:

Find out which of the five major classification groups mice and other rodents are in (i.e. Kingdom, Phylum, Class, Order, Family). Chart the relationships of animals in the largest to the smallest taxonomic groups around them. What characteristics make this group similar to and different from the other groups to which they are related? Then, pick one species from the program and determine its genus and species name, writing them in the proper scientific terminology. Find out why the genus and species name is written the way it is.

Further investigate the habits of the African mole rat. In particular find out how females challenge one another for supremacy and how the colonies live like social insects.

Observe gerbils in captivity. In their daily activities, how do they exhibit characteristics of rodents? Chart these behaviors over a period of two weeks. Also investigate the best ways to care for these animals as pets.

Are rodents carriers of disease? Trace this question historically explaining why and when they have been a danger to human beings. Also question if rodents are a threat to human health and welfare today. Give examples of how they are being controlled or not controlled worldwide.

Related New Dimension Media Titles:

Animal Babies Born Wild series

Habitats series

Biological Movement series

