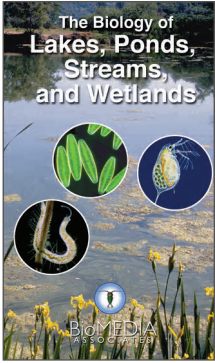


# BOTANY & ZOOLOGY DVD

## Cat.# BM-1D - THE BIOLOGY OF PONDS, STREAMS AND WETLANDS



**The Weedy Shallows:** Hydras, planarians, annelids, aquatic insects, rotifers, and protists, all interesting organisms that provide food for fish and other vertebrates.

**Open Water Environments:** Adaptations are observed in Daphnia and other cladocerans, copepods, rotifers, and planktonic algae.

**Bottom Environment:** Explores bacterial decomposition, recycling of materials, and ecological relationships in the bottom community.

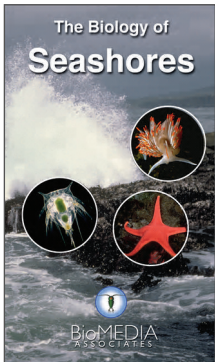
**Stream Life, Inhabitants, and Adaptations:** This section takes a revealing underwater look at the highly specialized organisms that live in rapids, under rock communities, and in slower waters.

**Wetlands:** Investigates adaptations for life in wetland environments.

© 2006 Closed Caption - 45 minutes



## Cat.# BM-2D - THE BIOLOGY OF THE SEASHORES



**Abiotic and Biotic Factors:** Tides, wave shock, desiccation, and food.

**Adaptations for Wave Shock:** The variety of body forms and structures found in an environment ripped by waves.

**Defense:** Examines structural, chemical, and behavioral adaptations that protect animals in this crowded environment.

**Feeding:** Looks at adaptations used to harvest the abundant food sources of the shore.

**Reproduction:** Examines asexual and sexual strategies and the importance of larval development in the plankton.

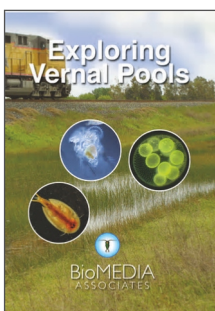
**Rocky Shores, Sandy Beaches, Mudflats, Docks:** Reveals complex webs of life living in these accessible habitats.

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## Cat.# BM-3D - EXPLORING VERNAL POOLS



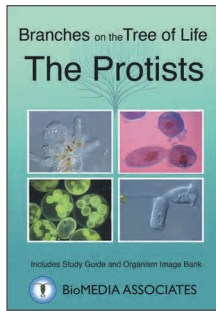
The Seasonal temporary wetlands, commonly known as vernal pools, are a menagerie of diverse and fascinating organisms. This program contains two parts: a non-narrated observation section and a fully narrated instructional section, including tips on how to collect and examine live organisms in the classroom or lab.

It examines a diversity of vernal pool species from several groups: protozoans, bacteria, rotifers, flatworms, ostrocods, waterfleas, copepods, clam shrimp, fairy shrimp, tadpole shrimp, and aquatic insect larvae.

© 2010 Closed Caption - 19 minutes

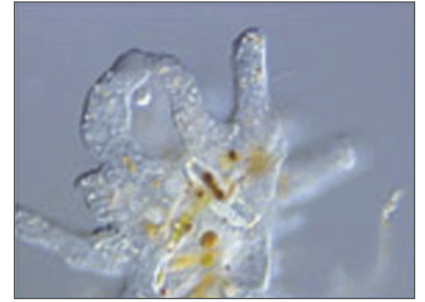


## Cat.# BM-5D - THE BIOLOGY OF PROTISTS



The term protist covers a wide range of microscopic organisms formerly clumped into “Kingdom Protista.” New molecular analyses show that the protistan lines of evolution go so far back in time they can be considered as different kingdoms of life. Through stunning photography of living protists, students are introduced to amoebas, flagellates, algae, and the elegant ciliated protists in ten learning modules. The DVD offers 22 minutes of additional observations allowing detailed study of these fascinating single cell life forms.

© 2004 Closed Caption - 45 minutes

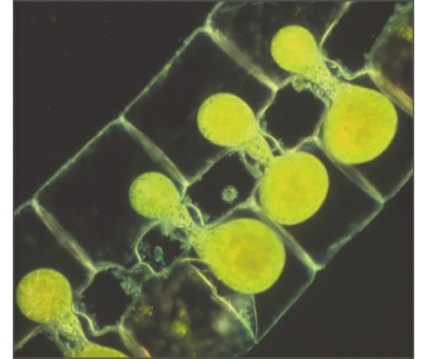


## Cat.# BM-7D - THE BIOLOGY OF ALGAE



The term algae is a catchall for several evolutionary lines of photosynthetic organisms: dinoflagellates, red algae (plastids with chlorophyll A), diatoms, yellow-brown algae and brown algae (chlorophylls A and C), and green algae (chlorophylls A and B). This program explores the diversity, structure, ecological roles, and modern classification of these vital primary producers.

© 2006 Closed Caption - 20 minutes



## Cat.# BM-16D - THE BIOLOGY OF FUNGI



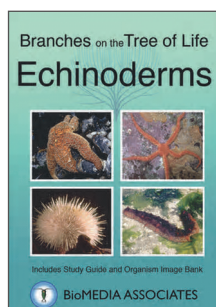
Fungi explores the structure, life cycles, ecology, classification, and evolutionary relationships of four major lines of fungi: Chytrids, Zygomycetes (various molds), Ascomycetes (yeasts, cup fungi, and most lichens), and Basidiomycetes (rusts and mushrooms). Emphasis is on adaptations and reproductive mechanisms.

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## Cat.# BM-15D - THE BIOLOGY OF ECHINODERMS



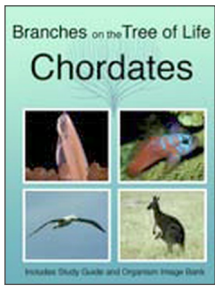
Echinoderms are one branch of the deuterostome line of animal evolution, the branch to which Chordates also belong. Narrated modules cover phylum characteristics and key biological details for five classes: sea stars, brittle stars and basket stars, sea urchins and sand dollars (including developmental stages), sea cucumbers, and crinoids (feather stars).

© 2005 Closed Caption - 23 minutes



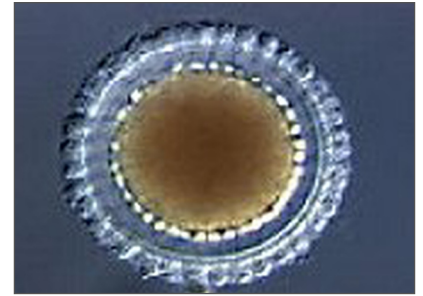


## Cat.# BM-19D - THE BIOLOGY OF CHORDATES

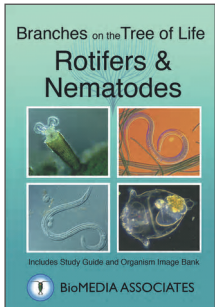


The Phylum Chordata includes tunicates, sea lancelets, hagfish, and all familiar vertebrate animals. This program explores how these seemingly diverse animals evolved and how the group is unified by four characteristic structures: a hollow dorsal nerve chord, a supportive notochord, gill slits, and a post-anal tail. Key milestones in vertebrate evolution included improvements in swimming and feeding, the evolution of paired fins and a primitive lung, movement onto the land, and the amniotic egg.

© 2006 Closed Caption - 21 minutes

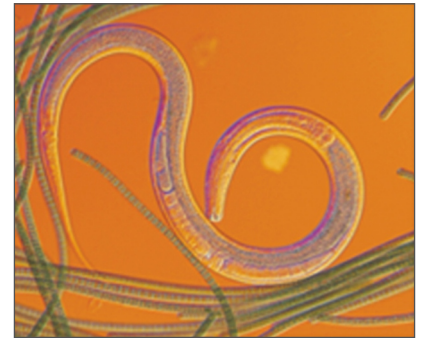


## Cat.# BM-11D - THE BIOLOGY OF ROTIFERS AND NEMATODES



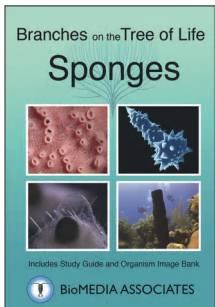
The diversity of rotifers is stunning, and this program shows many different species. Planktonic rotifers have special adaptations for open water life. Nematodes (roundworms) include a number of important human parasites, seldom seen but easily found. Tree moss, leaf litter, and compost piles swarm with nematodes.

© 2007 Closed Caption - 20 minutes



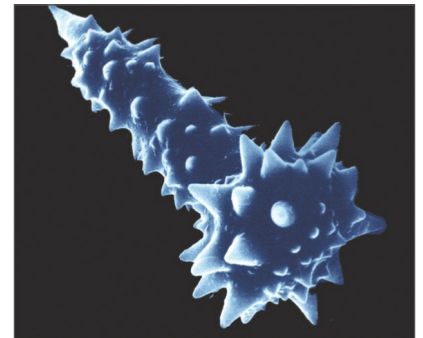
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## Cat.# BM-28D - THE BIOLOGY OF SPONGES

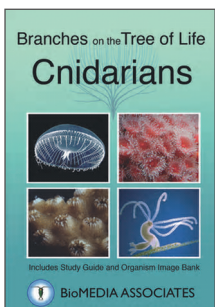


Imagine an animal with no mouth, no digestive system, no excretory or circulatory organs, no brain nor nervous system, and no movement as an adult. In spite of their simple nature, sponges are actually one of the most fascinating animal phyla, when viewed in developmental, ecological, and evolutionary terms. Through animations and timelapse microscopy, this program clarifies the structure, function, classification, and ecological roles of sponges.

© 2005 Closed Caption - 19 minutes



## Cat.# BM-9D - THE BIOLOGY OF CNIDARIANS

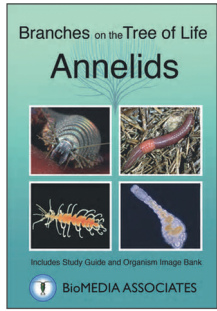


The program begins with a remarkable series of observations on Hydra including: habitat, structure, feeding, nematocyst discharge, locomotion (by looping), and its sexual and asexual reproductive strategies. Obelia illustrates the two-stage life cycle found in many cnidarians. Examining the biology of jellyfish (class Scyphozoa), sea anemones, and corals (class Anthozoa) rounds out our treatment of phylum Cnidaria.

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Cat.# BM-13D - THE BIOLOGY OF ANNELIDS

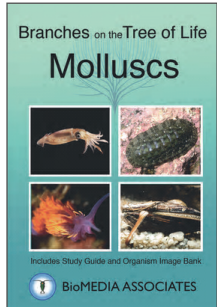


Worms with segmented bodies make up the Phylum Annelida. This program explores the three classes of annelids: Class Polychaeta (feeding, locomotion, and larval stages), Class Oligochaeta (lifestyles, feeding adaptations, and anatomy of freshwater oligochaetes and earth worms), and Class Hirudinea (leeches, crayfish, and worms show adaptations for commensal, parasitic, and scavenger lifestyles). DNA evidence places annelids close to the molluscs on the tree of life.

© 2006 Closed Caption - 15 minutes



Cat.# BM-12D - THE BIOLOGY OF MOLLUSCS



Phylum Mollusca is the second most diverse phylum of animals, with over 100,000 known species. First examined are the basic characteristics of the phylum - a soft body, muscular foot, mantle cavity with gill, and hard calcified shell. The four most familiar classes of molluscs (chitons, gastropods, bivalves, and cephalopods) are studied in depth, viewing structure, life history, adaptations, and ecological interactions.

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Cat.# BM-10D - THE BIOLOGY OF FLATWORMS

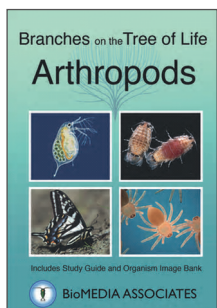


This program shows the structure, behavior, and life cycles of planarians and their free-living relatives (class Turbellaria). It illustrates the bizarre life cycles of flukes (class Trematoda) and tapeworms (class Cestoda) with detailed animations and revealing images of these parasites in action.

© 2007 Closed Caption - 20 minutes



Cat.# BM-14D - THE BIOLOGY OF ARTHROPODS



Phylum Arthropoda is the most luxuriant branch on the tree of life. This program covers phylum characteristics and three major arthropod classes: Crustaceans (copepods, waterfleas, branchiopods, decapods, and barnacles), Chelicerates (scorpions, pseudoscorpions, spiders, ticks, and mites), Uniramians (centipedes, millipedes, and insects). In each section the focus is on adaptations, life cycles, and evolutionary relationships.

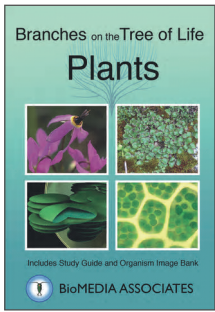
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Cat.# BM-8D - THE BIOLOGY OF PLANTS

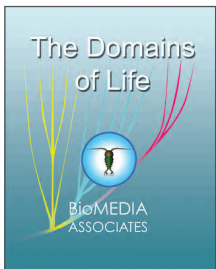


Clear graphic animation is used to describe the molecular-level mechanisms of photosynthesis including light-trapping by chlorophyll, how energized electrons are transported through proteins embedded in the thylakoid membrane, and how their energy fuels reactions that produce ATP and NADPH. Carbon dioxide feeds a cycle of reactions that form the simple sugar glucose, a basic cell fuel. Major plant groups are featured in this program including mosses, liverworts, ferns, horsetails, and the seed plants (gymnosperms and flowering plants). Observation section of living plant structures and Image Bank of 200 images of plant phyla, structures, and illustrations.



© 2008 Closed Caption - 18 minutes

Cat.# BM-17D - LIFE'S THREE GREAT BRANCHES ARCHAEA, BACTERIA AND EUCARYA



*The Domains of Life* updates the five kingdoms classification scheme with the latest understanding of life's organization based on DNA, fossil, and biochemical evidence, reorganizing all life into three great branches: Archaea, Bacteria, and Eucarya. Concise animations and superb microscope footage of primitive cells show events that shaped life as we know it today.

© 2006 Closed Caption - 31 minutes



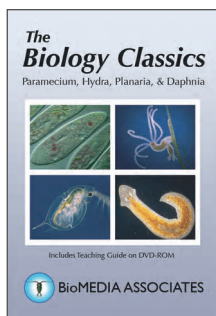
**TOPICS:**

- Self-Replicating Molecules Evolve
- The Archaeans: Earth's First Inhabitants
- The Rise of Bacteria
- Photosynthesis and Oxygen
- Nucleated Cells Get Their Start
- The Evolution of Mitochondria
- The Domains of Life
- The Eukaryotic Cell Evolves
- Motor Proteins Get Cells Moving
- Mitosis Assures Genetic Continuity
- Plastids Evolve Through Endosymbiosis
- The Red, Brown, and Green Lines
- The Invention of Sex
- The Origins of Multicellular Organisms



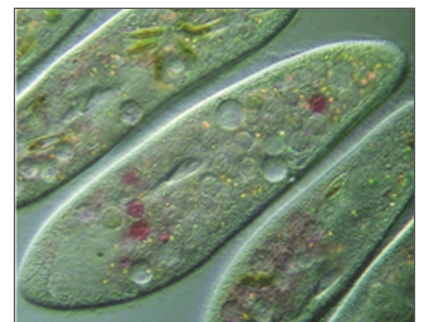
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Cat.# BM-41D - PARAMECIUM, HYDRA, PLANARIA, AND DAPHNIA DVD

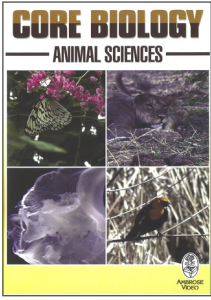


The classics acquaint students with four organisms often studied in biology. This program introduces students to four organisms we call the Biology Classics, which are featured in most biology textbooks. Studying these "classics" broadens our concept of what it means to be alive. Structure, behavior, feeding, reproduction, and ecology are observed in each organism, allowing students to compare them. Detailed study guides that can be printed for student use are provided.

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Cat.# AB-14D - CORE BIOLOGY: ANIMAL SCIENCES

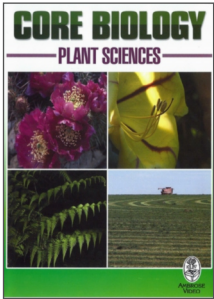


An exciting ride through the world of animal classification, physiology, behavior, and communication. Today the Animal Sciences, Zoology, form the knowledge basis for such diverse disciplines as human physiology and nutrition ... Genetics and animal breeding ... And the exciting field of wildlife ecology. For the first time the scientific discoveries that provide insight into the nature of animal classification, physiology and behavior are brilliantly brought together in one program. Arranged chronologically, each discovery is presented with clear graphics and brilliant High Definition footage.

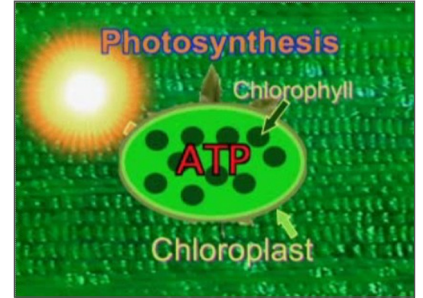


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Cat.# AB-17D - CORE BIOLOGY: PLANT SCIENCES



Jared Diamond's central thesis in his best-selling book, Guns, Germs and Steel, is that the fate of human societies has always depended upon their skills as farmers ... This is what the plant sciences have always been about. Plant sciences or botany! No biological science has transformed society more than the successive waves of agricultural revolutions - new ways of growing more food. It started with the domestication of cereal crops - wheat, rice and corn. And in the 20th century, the green revolution has allowed nearly 7 billion people to live on the planet. The story of botany leads from the founding of agriculture and medicinal plants to understanding plant physiology and reproduction to the founding of genetics to finally understanding the miracle of photosynthesis.



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