

2011/12



MEDICAL & SCIENCE MEDIA

Botany & Zoology DVD

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<http://www.msmedia.com.au/botany-zoology-dvd.php>

[Cat #: BM-1D](#)**The Biology of Lakes, Ponds and Wetlands DVD****45 minutes**

This DVD presents a series of field trips in aquatic micro-space where students learn to recognise the common forms of micro-life, and explore their ecological relationships. Includes the following:

- About the Small Life of Wetlands What to look for in weedy shallows: Hydras, brown and green, Dugesia (Planaria), A predatory flatworm, Rotifers, Stylaria and Chaetogaster, Copepods and Amphipods, Insects, Bryozoans, Micro-algae, Vorticella and Stentor, Amoebas, Heliozoans.
- What to look for in open water: Open water environment, Daphnia, Other Planktonic arthropods, Planktonic rotifers, Volvox and its relatives.
- What to look for in bottom detritus: The bottom environment, Tubifex, Rat-tail maggots, Ostracods, Bacteria, Flagellated protists, Ciliated protists, Gastrotriches, nematodes, and water bears.
- Other wetlands habitats: Vernal Pool
- Picture key identifications (still frames): Identifying protozoans, Identifying algae, Identifying rotifers, Identifying other micro-invertebrates.

(2006)

[Cat #: BM-2D](#)**The Biology of Seashores DVD****35 minutes**

Provides 28 video modules that utilise the sea shore to focus on basic concepts of biology. This program makes a fine introduction to the major kinds of invertebrate animals.

Conditions on the Seashore

Introduction to Life at the Sea's Edge (01:29)

Tides (01:16)

Hazards: Wave Shock and Abrasion (00:41)

Hazards: Fresh Water, Temperature and Drying (00:36)

Competition for Space (01:07)

Production on the Shore (00:35)

Food: Plankton and Detritus (01:21)

Adaptations for Intertidal Life

Adaptations for Wave Shock (01:20)

Defence: Stinging Cells, Chemicals and Warning Coloration (02:26)

Defensive Structures (01:02)

Defence: Escape Responses (01:40)

Feeding: Filtration (00:53)

Feeding on Detritus (00:54)

Feeding: Rasping and Grazing (00:37)

Feeding: Predation and the Role Of Chemicals (01:02)

Symbiosis (00:28)

Reproduction: Asexual Reproduction (00:35)

Reproduction: Fertilization (01:05)

Reproduction: Echinoderm Development (01:06)

Reproduction: Planktonic Larvae (01:12)

Life Cycles and Parental Investment (01:12)

Seashore Habitats and Inhabitants

Intertidal Zonation (01:34)

Rocky Shores: High Intertidal Zone (00:56)

Rocky Shores: Mid Intertidal Zone (01:19)

Rocky Shores: Low Intertidal Zone (01:03)

Sandy Beaches and the Meiofauna (01:37)

Mudflats and Estuaries (02:16)

Docks and Pilings (01:19)

2006

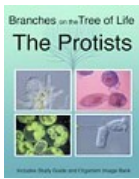
[Cat #: BM-3D](#)**Exploring Vernal Pools DVD****19 minutes**

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, ostracods, waterfleas, copepods, clamshrimp, fairy shrimp, tadpole shrimp, and aquatic insect larvae.

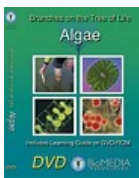
You may also be interested in the microscope slide set Microscopic Life in the Water, Part 1 Slide Set.

To visit the page click on the following link.

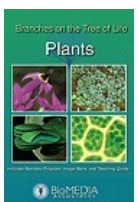
<http://www.msmedia.com.au/microscopic-life-in-the-water-slide-set-part-1.php>

[Cat #: BM-5D](#)**The Protists DVD****45 minutes**

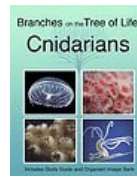
The goal of this program is to show a representative sample of the great diversity of protists, and to show why they need a new classification reflecting our growing understanding of their long evolutionary history. The protists shown can be found in habitats such as: roadside puddles, park duck ponds, aquariums, birdbaths and in the gut of termites. We hope that these observations will encourage students to collect pond water samples and see for themselves this amazing hidden world. (2004).

[Cat #: BM-7D](#)**The Biology of Algae DVD****20 minutes**

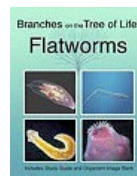
The term "algae" is a catch-all for several evolutionary lines of photosynthetic organisms: Red Algae (plastids with chlorophyll A), Brown Algae (with chlorophyll A and C), and Green Algae (Chlorophyll A and B). These photosynthetic organisms play vital roles in aquatic and marine ecosystems, providing oxygen, food and shelter for vast communities of living things. (2006)

[Cat #: BM-8D](#)**The Biology of Plants DVD****18 minutes**

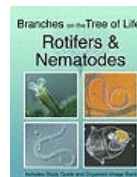
Clear graphics and succinct narration describe the molecular level mechanisms of photosynthesis. The taxonomy section introduces the nonvascular plants (mosses and liverworts), primitive vascular plants (ferns and horsetails), gymnosperms and flowering plants - with emphasis on life cycles in each group; a good general introduction to the green kingdom. (2008)

[Cat #: BM-9D](#)**The Biology of Cnidarians DVD****20 minutes**

The program begins with an in-depth study of *Hydra*; its feeding methods, stinging cells, reproduction by budding, and its sex life. *Obelia* illustrates a two - stage cnidarian life cycle, with asexually-reproducing polyps and free swimming sexual medusae, a characteristics shared by most members of Class Hydrozoa. The beautiful jellyfish of Class Scyphozoa pulse or drift through the open sea. Members of Class Anthozoa, sea anemones, hug the intertidal rocks trapping crabs and other small animals. Corals, their warm sea relatives, create one of the oldest and richest ecosystems on earth - the coral reef. (2008)

[Cat #: BM-10D](#)**The Biology of Flatworms DVD****20 minutes**

Flatworms, with their three clearly defined cell layers and bilateral symmetry, represent an important advance in early animal evolution. This program provides detailed observations on structure, behaviour and life cycles of planarians and other free-living flatworms, some so small they can only be studied with a microscope (Class Turbellaria). It examines the bizarre life cycles of flukes (Class Trematoda) and tapeworms (Class Cestoda) with revealing shots of these parasites at home in the organs of their vertebrate hosts. (2007)

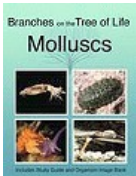
[Cat #: BM-11D](#)**The Biology of Rotifers and Nematodes DVD****20 minutes**

The diversity of rotifers is stunning, and this program shows many different species. Planktonic rotifers have special adaptations for open water life. Nematodes (round-worms) include a number of important human

parasites, seldom seen but easily found. Tree moss, leaf litter, and compost piles swarm with nematodes. (2007)

[Cat #: BM-12D](#)

The Biology of Molluscs DVD

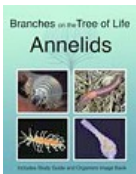


15 minutes

The phylum Mollusca is filled with wonderfully adapted soft-bodied creatures that make up four major classes. Class Polyplacophora (with detailed observations on chitons), Class Gastropoda (snails, limpets, nudibranchs, and slugs), Class Pelecypoda (clams and mussels), and Class Cephalopoda (squid and octopus). In each group the emphasis is on: structure, behaviour, larval development, and the kinds of adaptations that allow these amazing creatures to live in virtually all aquatic habitats. (2006)

[Cat #: BM-13D](#)

The Biology of Annelids DVD

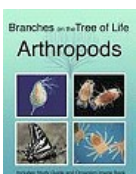


15 minutes

Phylum Annelida is made up of segmented worms divided into three classes: Subclass Oligochaetes (earth worms and aquatic worms such as *Tubifex*), Class Polychaetes (*Nereis* and thousands of other species that live in almost all marine habitats), and Leeches. Their segmented bodies, similar internal anatomy (seen in action through revealing new micro/macro imaging techniques), and developmental stages unite these diverse worms. (2006)

[Cat #: BM-14D](#)

The Biology of Arthropods DVD



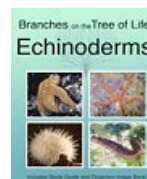
25 minutes

They are armoured creatures with jointed legs and they have developed elaborate behaviour patterns that assure survival. They are also the most successful

phylum in the animal kingdom - phylum Arthropoda. This program explores the major classes of arthropods through dramatic photography of living examples: The Crustaceans (including all major crustacean groups) The Class Arachnida (including whip scorpions, scorpions, spiders, ticks and mites), and the Uniramians (including centipedes, millipedes, and insects). The program highlights important details of structure and behaviour, incorporating both familiar and unusual examples (such as forehead mites and barnacles) that will serve as memorable insights into Arthropod biology. (2006)

[Cat #: BM-15D](#)

The Biology of Echinoderms DVD



23 minutes

They have spiny skins, internal skeletons and elaborate hydraulic systems used in locomotion and food getting - and they all live in the sea. Examining echinoderm life-styles shows that seastars (Class Asteroidea) are predators, brittle stars and basket stars (Class Ophiuroidea) are detritus feeders, urchins and sand dollars (Class Echinoidea) are herbivores, sea cucumbers (Class Holothuroidea) feed on detritus and plankton. (2005)

[Cat #: BM-16D](#)

The Biology of Fungi DVD

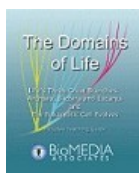


21 minutes

Fungi join with bacteria in breaking down dead organic material. In this program, the various types of fungi are recognized by their structures and life cycle stages. Certain fungi (mycorrhizae) form symbiotic relationships with plants. Their help in absorbing nutrients and water probably aided vascular plants in colonizing the land.

You may also be interested in the microscope slide set Fungi and Lichen Slide Set. To visit the page click on the following link.

<http://www.msmedia.com.au/fungi-and-lichens-slide-set.php>

[Cat #: BM-17D](#)**Life's Three Great Branches:****Archaea, Bacteria and Eucarya DVD****31 minutes**

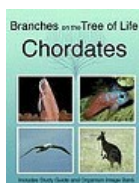
CONTENTS: The Domains of Life updates the five kingdoms classification scheme with the latest understanding of life's organization based on DNA, fossil, and biochemical evidence, reorganizing all life into three great branches: Archaea, Bacteria, and Eucarya. Concise animations and superb microscope footage of primitive cells show events that shaped life as we know it today. (2006)

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

Student Learning Guide:

- Students explore the information and concepts discussed in The Domains of Life program.
- Notes on clarification & extension of concepts
- Vocabulary words hyperlinked to the glossary
- Quizzes for self-study, vocabulary, and concepts
- Password-protected teacher section includes background, overhead templates, assessment tools, and answer keys

[Cat #: BM-19D](#)**The Biology of Chordates DVD****21 minutes**

Phylum Chordata evolved in ancient seas over 530 million years ago as shown by fossils (*Pikaia*) discovered in the Burgess Shales. The unique features

of this group: a supporting rod, a hollow dorsal nerve cord, post-anal tail, and pharyngeal gills are investigated in modern animals - tunicates, lancelets (*Branchiostoma* or *Amphioxus*), hagfish, cartilaginous fish and the other groups of vertebrates. Key adaptations leading to the diversification and proliferation of the modern vertebrate groups, from fish to mammals, are explored through fossil evidence, living examples and animation. (2006).

[Cat #: BM-28D](#)**The Biology of Sponges DVD****19 minutes**

Sponges are one of the more colourful and abundant groups of animals, yet they are generally poorly known by students of biology. One reason for this is the difficulty of observing anatomy and behaviour in these animals - features that exist at the microscopic level, and processes that take place over extended periods of time. This program reveals many of the difficult conceptual aspects of sponge biology through microscopy, animation, and time-lapse microscope photography. (2005).

[Cat #: BM-41D](#)**The Biology Classics****Paramecium, Hydra, Planaria, and Daphnia DVD****31 minutes**

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. (2006)

Paramecium

Observations show how Paramecium moves, feeds, digests, assimilates nutrients, achieves water balance, deploys defensive weapons, reproduces, and engages in the sexual exchange of genetic material. The narrated observations utilize state-of-the-art microscopy-techniques to present a compelling new picture of Paramecium's life.

Hydra

Observations of Hydra show feeding behavior, detailed microscopy of stinging cells used in capturing prey, two digestive processes (cellular and extracellular), locomotion, reproduction by budding, development sex organs, and symbiotic guests, both external and internal.

Planaria

The cross-eyed flatworm, Planaria, is both scavenger and predator depending upon opportunity. Observations show food-seeking behavior, the flatworm's feeding method, locomotion (produced by a carpet of cilia), internal anatomy, and reproduction through the remarkable process of regeneration.

Daphnia

Daphnia is a classic study in arthropod behavior and anatomy. In living subjects we examine: eye, brain, jaws, intestine, swimming legs with gills, its beating heart, and two kinds of eggs: those that hatch directly into female daphnia, and resistant eggs that carry the species through periods of freezing and drying.

Cat #: AVP-11D**Fungi and Bacteria DVD****10 minutes**

The importance of fungi and bacteria in industry, health and society. Structure and function of fungal hyphae and bacteria. Harmful and beneficial effects of bacteria and fungi.

Cat #: AVP-12D**Photosynthesis and Leaf Structure DVD****9 minutes**

The conversion of light and energy into chemical energy by photosynthesis. The gas exchange system in the leaf. Leaf types. The transport of assimilates from the leaf.

You may also be interested in the microscope slide set Budget Microscope Slides - Botany - Leaves. To visit the page click on the following link.

<http://www.msmedia.com.au/botany-leaves-microscope-slides.php>

Cat #: AVP-14D**Reproduction in Flowering Plants DVD****9 minutes**

Structure of the stamen and anther. Pollination. Development of the zygote and fate of floral structures in fruit. The importance of sexual reproduction in terms of adaptation and diversity.



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