Footprints in the Sand

The changing sea reveals the devastating impact of human activity buckling under the weight of our demands. Footprints in the Sand illustrates how the critical species that first crawled out of the sea to inhabit land. The ocean is what transformed Earth into the livable, blue planet it is today. As Birth of an Ocean reveals, we are just beginning to understand the complexity of the ocean and the immense influence it has on the planet and our own survival.

No Other Versions Available

Birth of an Ocean

75535 DVD
44 min IS 2010 Canadian Broadcasting Corp.

More than four billion years ago, the most important event in Earth’s history took place: the ocean was born. It completely transformed the planet, creating a watery oasis that gave rise to the air we breathe, our climate, and a stunning array of life, including the critical species that first crawled out of the sea to inhabit land. The ocean is what transformed Earth into the livable, blue planet it is today. As Birth of an Ocean reveals, we are just beginning to understand the complexity of the ocean and the immense influence it has on the planet and our own survival.

No Other Versions Available

Black Dawn - the New Pandemic

74557 DVD
54 min IS 2005 Canadian Broadcasting Corp.

What would happen if the World Health Organization declared we had long been expected and feared: human-to-human transmission of the avian flu virus? Black Dawn is a docudrama featuring leading epidemiologists, doctors and emergency planners who imagine the impact avian flu would have as it spreads around the globe. Although fictional, the scenario is very much grounded in scientific fact and inspired by the research and pandemic preparedness efforts of the world’s leading thinkers on the subject. Some predict the coming pandemic will be more lethal than all of the world’s previous plagues.

No Other Versions Available

The Changing Sea

75533 DVD
44 min IS 2010 Canadian Broadcasting Corp.

It’s hard to imagine that humans could ever alter something as vast as the ocean, but that’s exactly what we’re doing. Over the past 200 years, we’ve poured more than two trillion metric tons of carbon dioxide into the atmosphere. As The Changing Sea vividly illustrates, that carbon dioxide isn’t just changing the climate on land; it’s transforming the ocean in ways that haven’t been seen for millions of years. Scientists around the world are in a race to understand these changes and what they’ll mean for thousands of species, including ours.

No Other Versions Available

DNA and Dollars

74082 DVD
47 min IS 2002 National Film Board of Canada

DNA and Dollars takes the viewer behind the scenes in clinics and laboratories to meet some of the major players in Canadian genetic research and into the homes of patients who have donated their DNA in the hope of finding treatments or cures for diseases. In the midst of this hope, nagging questions remain as to the ownership and patenting of human genetic materials.

No Other Versions Available

Footprints in the Sand

75534 DVD
44 min IS 2010 Canadian Broadcasting Corp.

Today, two billion people live along or near a coast. By 2025, nearly all ocean shoreline will be inhabited and in use. Overfishing, pollution, over-population, and overdevelopment of our coasts are having deadly consequences. The ocean that once seemed inexhaustible is buckling under the weight of our demands. Footprints in the Sand reveals the devastating impact of human activity on the ocean, focusing on the Mediterranean’s contentious bluefin tuna fishery and the Gulf of Mexico’s massive deoxygenated dead zones. It also celebrates our successes with sustainable practices, like “no take” conservation projects managed by locals in Zanzibar, as well as the extraordinary turnaround in New Zealand’s coral reefs.

No Other Versions Available

The Ghost in Your Genes

74672 DVD
50 min IS 2005 Mcnabb/Connolly Films

What if our hereditary characteristics were not simply the product of our genetic code but of the way our parents and grandparents lived their lives? This film explores the ghost world in your genes—the hidden layer of inheritance that lies in every cell of our body. From IVF treatment, to post-traumatic stress disorder, to the food our grandparents ate, the controversial science of epigenetics could change the way we think about inheritance forever. At the heart of this new field is a simple but contentious idea: the idea that our genes have a memory. That the lives of your grandparents and great-grandparents the air they breathed, the food they ate, even the things they saw can directly affect you, decades later, despite never experiencing these things yourself. And that the things you do in your lifetime will in turn affect your grandchildren. Epigenetics represents a major shift in thinking from the conventional view that DNA carries all ourheritable information, and that nothing an individual does in their lifetime will be biologically passed to their children. It is a heresy to most scientists, calling into question the way we have viewed the DNA sequence the very cornerstone on which modern biology sits. But scientists have now found a whole new layer to our genes beyond the DNA. They have revealed how epigenetic switches control the genes themselves, and that these switches can be turned on and off by environmental factors like nutrition and stress. This report starts the startling first evidence that this can cause inheritable effects in humans.

No Other Versions Available

Human Genome

599.93/5 74624 DVD
52 min IS 2002 Teacher’s Media Company

Why do some people have brown eyes and others blue? Why are some people taller than others? The answers may lie in our genetic makeup. Learn how DNA can provide all the answers. A truly fascinating video that will help your students understand more about genetics. No Other Versions Available

Inside Animal Minds

76885 DVD
180 min IS 2013 McIntyre Films

Explores how animals understand the world around them through the eyes of three iconic creatures: dogs, birds, and dolphins. As we discover how scientists are pushing the animal mind to its limits, we'll uncover surprising similarities to—and differences from—the human mind.

No Other Versions Available

Intelligent Design on Trial

74989 DVD
112 min IS 2007 McIntyre Films

Judgment Day: Intelligent Design on Trial captures the turmoil that tore apart the community of Dover, Pennsylvania, ina landmark battle over the teaching of evolution in public schools. In 2004, the Dover school board ordered science teachers to read a statement to high school biology students about an alternative to Darwin’s theory of evolution called intelligent design, the idea that life is too complex to have evolved naturally and so must have been designed by an intelligent agent. The teachers refused to comply, and both parents and teachers filed a lawsuit in federal court accusing the school board of violating the constitutional separation of church and state. This dvd explores the arguments by lawyers and expert witnesses in riveting detail and provides an eye-opening crash course on questions such as “What is evolution?” and “Is intelligent design a scientifically valid alternative?”

No Other Versions Available
Outbreak - Why Wasn't the Ebola Outbreak One Ocean - Teachers Guide

The story of the war on cancer spans centuries and continents. It is a scientific story, but also a deeply human one: of doctors, researchers, and especially patients who—through courage, suffering, and occasional hubris—pushed the boundaries of knowledge. These people helped define cancer as the scourge of the modern age, and then mobilized the federal government and private industry to wage an all-out campaign against it—a campaign we are still fighting.

Cancer: The Emperor of All Maladies, based on the Pulitzer Prize-winning book by Siddhartha Mukherjee, tells the complete story of cancer, from its first description in an ancient Egyptian scroll to the gleaming laboratories of modern research institutions. At six hours, the film interweaves a sweeping historical narrative; with intimate stories about contemporary patients; and an investigation into the latest scientific breakthroughs that may have brought us, at long last, to the brink of lasting cures. 3 DVDs

No Other Versions Available

Medical/Health

Outbreak - Why Wasn't the Ebola Outbreak Stopped Before It Was

The largest Ebola outbreak on record began to devastate West Africa, why did it take so long for the world to respond? This film tells the vivid, inside story of how and why the Ebola outbreak in West Africa wasn’t stopped before it was too late, drawing on revelatory and candid admissions of failure from key government and public health officials, including the President of Liberia, the Director of the Centers for Disease Control and Prevention, and multiple top World Health Organization officials. From the jungles of Guinea to the slums of Monrovia, Outbreak exposes tragic missteps in the response to the epidemic.

No Other Versions Available

Reading the Book of Life

The human genome sequence, completed in 2003, was the object of another famous race in genetics, which culminated in an historic White House press conference. The leaders of this epic effort, including Francis Collins, Craig Venter, Eric Lander, John Sulston and Sydney Brenner, explain its origins, how it was done and what it revealed so far about our book of life. The major surprise was how few genes there actually are in the human genome. We compensate by using RNA splicing to create different proteins from the same gene. Having the complete sequence at hand has greatly simplified the search for new disease genes and created a whole new way to do genetics, through genomics and bioinformatics.

No Other Versions Available

Some New Tricks with DNA

The 1970s and 80s saw the invention of ingenious new ways to manipulate DNA, which remain the cornerstone of todays genetic revolution, including the Human Genome Project. We begin with a scientist/magician demonstrating six simple tricks with DNA. Using these as building blocks, the more complex technologies of DNA fingerprinting, DNA sequencing, and PCR (the polymerase chain reaction) are explained in an easy to understand way. The excitement of this fertile period is brought to life through the personal recollections of its leading innovators.

No Other Versions Available

Understanding the Book of Life

Reading the Book of Life was just the first step. The ultimate goal is to understand how it works. We are guided towards this new genetic horizon by Francis Collins and Craig Venter, the leaders of the two competing teams that first sequenced the human genome. The initial task is to separate out the genes from the other 98% or so of the genome that doesn't code for proteins, no easy feat since the genes themselves are split into even smaller bits (exons), which are also surrounded by DNA noise. Three different gene finding techniques are explained. One method uses an RNA message to tag the gene that produced it. The next task is to work out the function of the proteins produced by these genes. Since many different proteins can be derived from the same gene, this a daunting long term project. Protein function is studied using experimental techniques such as site-directed mutagenesis, which is explained by its inventor, Canadian Nobel laureate Michael Smith. The holy grail of genomics is to program computers to predict the function of a protein from the sequence of its gene - still a distant goal. Another challenge will be to work out which genes act together in networks to produce a complex trait. A key tool in uncovering these networks is the gene chip, which is explained in a visual, easy to understand way.

No Other Versions Available

Visualizing Cell Processes

Visualizing Cell Processes 3rd Edition DVD is a comprehensive program for teaching, learning, and understanding cell processes, with an additional Viruses module. The program consists of systematically arranged topics designed to take advantage of DVD technology, making it the ideal tool for mastering the concepts and vocabulary of cell biology for classroom and self-paced learning.

The Interactive Learning Guide on the DVD extends these lessons and covers the AP curriculum. Segments include: Overview of Living Cells; DNA Structure and Cell Division; Genetic Code and Protein Synthesis; Organic Molecules: Cell Movement & Transport; Photosynthesis; Cellular Respiration and Viruses.

No Other Versions Available

Science - Biology - Grade 11
It can seem as odd as it is frightening, how a virus that can be killed with a bit of bleach can be such an implacable and deadly enemy once it gets inside a human body. There, it invades cells, making replicas of itself that invade other cells, eventually destroying organs and blood vessels. Death is not inevitable. But it is likely. With the Ebola virus spreading across the globe, Tom Kennedy investigates how prepared Canada is to deal with the deadly pathogen. West Africa is currently losing the battle against Ebola, so countries like Canada are getting ready to react to an outbreak of their own.

No Other Versions Available

World Population
It can serve as a starting point for a closer examination of human population dynamics and their environmental and social impacts. It is recommended that "World Population" be shown two or three times to allow viewers to fully absorb the changes in population through history while noting the historic images on the screen. The majority of the video shows the growth in World population through lights flashing onto the World map from the beginning of humankind to the future, without narration during this illustration.

No Other Versions Available