

# SCIENCE SCREEN REPORT

## VOLUME 26

### 1996/1997

#### **1** *Meteorology: Lightning - Nature's Fireworks*

The most frequent of natural phenomena, lightning strikes the earth one hundred times each second. This issue of SCIENCE SCREEN REPORT reveals what we know and have yet to learn about lightning as it shows how scientists go about studying this awesomely beautiful, powerful, and dangerous force of nature. The program features footage of various types of lightning, and NOAA safety tips for protection from lightning strikes. Running time: 17:18

#### **2** *Biology: Putting Algae To Work*

Since they began modifying Earth's atmosphere with photosynthetic by-products 2 1/2 billion years ago, algae have sustained life on our planet. This program explains the algae's significance to our world, and shows how science is today utilizing their unique qualities in cancer research, sewage and wastewater treatment, agriculture, and household products. Running time: 13:50

#### **3** *Earth Science: Deserts - Hostile Environments*

The word "desert" may bring to mind a parched sandscape devoid of life. While all deserts are arid, not all are sandy. Each is in some way unique, and hosts a diversity of life forms adapted to the habitats it provides. SSR visits some of the world's great desert regions to examine desert ecosystems and learn why, when, and how the deserts came to exist. Running time: 15:10

#### **4** *Mineralogy: Minerals - Our Precious Resources*

Minerals, whether as common as quartz and iron or as coveted as diamonds and gold, have always been important to humankind. They are contained in nearly every product manufactured today. This issue of SSR surveys the sources and uses of some of the minerals which have become most important to us, and looks at efforts to conserve and find suitable substitutes for these indispensable, non-renewable natural resources. Running time: 13:34

#### **5** *Biotechnology: Cleaning Up With Microbes*

SSR looks at the giant strides science is making in developing innovative techniques that use live organisms such as microscopic bacteria, fungi, and algae to clean up pollution and deal with waste by-products. Already used to treat sewage and wastewater and to consume oils and fats, microbes may soon be pressed into service neutralizing radioactive waste, leaching toxic waste from soil, and making our world cleaner and healthier in other ways we have yet to discover. Running time: 15:26

#### **6** *Ecology: Understanding Biodiversity*

The earth could be considered one enormous, yet fragile, ecosystem. Research indicates that the healthiest ecosystems are those with the greatest diversity of life forms. Many scientists are concerned about estimates by some biologists that one quarter of the thirty million species thought to live on our planet will be extinct in fifty years. SSR explains the concern, and shows how researchers are attempting to monitor global biodiversity in an effort to identify species most at risk. Running time: 16:27

#### **7/8** *Neuroscience: Seeing With Our Brains*

How we see depends not as much on our eyes as it does on our brains. This issue of SSR focuses on visual perception - the way that the eyes and brain work together to capture images and make meaning of them. Also featured are segments on tools that enable us to see beyond our visual limits, and attempts to develop neural network computers capable of image recognition and learning. Running time: 24:53