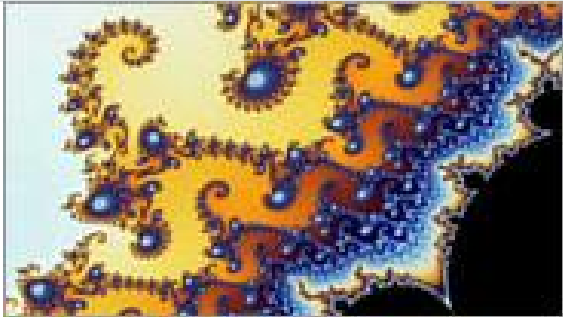


WATCH THE PROGRAM

This one-hour program is divided into five chapters. Choose any chapter below and click the link to begin viewing the video. If you experience difficulty viewing, it may be due to high demand. We regret this and suggest you try back at another time.

Chapter 1



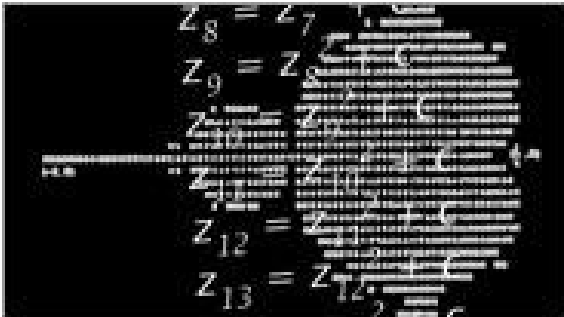
watch chapter 1

FRACTAL BASICS

They're odd-looking shapes you may never have heard of, but they're everywhere around you—the jagged repeating forms called fractals. If you know what to look for, you can find them in the clouds, in mountains, even inside the human body.
running time 11:05

<https://pbs.wmod.llnwd.net/a1863/e1/general/windows/wgbh/nova/fractals-3514-c01-350.wmv?v1st=8A9DD94AB38FD74&vsdomain=pbs>

Chapter 2



watch chapter 2

THE MANDELBROT SET

In 1958, Benoit Mandelbrot begins using computers to explore vexing problems in math. They help him to understand repeating patterns in nature in an entirely new way. He coins the term fractal to describe them and develops the Mandelbrot set in 1980.
running time 9:51

<https://pbs.wmod.llnwd.net/a1863/e1/general/windows/wgbh/nova/fractals-3514-c02-350.wmv?v1st=8A9DD94AB38FD74&vsdomain=pbs>

Chapter 3



ON THE DEFENSE Though many colleagues initially scorned Mandelbrot's work, his mesmerizing fractal images launched a popular culture fad. More importantly, his book *The Fractal Geometry of Nature* explained how his ideas could be applied in the real world. Mandelbrot's ideas inspire an ever-increasing number of applications, including the fractal antenna.

running time 10:40

watch chapter 3

<https://pbs.wmod.llnwd.net/a1863/e1/general/windows/wgbh/nova/fractals-3514-c03-350.wmv?v1st=8A9DD94AB38FD74&vsdomain=pbs>

Chapter 4



FRACTALS IN THE BODY

Fractal patterns turn up everywhere in biology, from the irregular rhythm of the heart to basic eye function. The fractal nature of such physiological processes, which obey simple mathematical rules, offers hope of better diagnosis and treatment of problems as well as new insights into how such processes work.

running time 10:15

watch chapter 4

<https://pbs.wmod.llnwd.net/a1863/e1/general/windows/wgbh/nova/fractals-3514-c04-350.wmv?v1st=8A9DD94AB38FD74&vsdomain=pbs>



NATURE'S FRACTAL NATURE

With carbon dioxide levels around the world rising, a team of American scientists travels to a rain forest in Costa Rica. They employ fractal geometry to analyze how much CO₂ the rain forest can absorb.

running time 7:52

watch chapter 5

<https://pbs.wmod.llnwd.net/a1863/e1/general/windows/wgbh/nova/fractals-3514-c05-350.wmv?v1st=8A9DD94AB38FD74&vsdomain=pbs>