

SCIENCE
TECHNOLOGY
MEDICINE

DOCUMENTARY
30 MIN.

VERSIONS

English, Spanish: 15 x 30 min.

Arabic: 12 x 30 min.

French: 13 x 30 min.

RIGHTS

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ORDER NUMBER

26 2634 | 103-106, 113-115,
122-127, 132, 133

English, Spanish

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132, 133

Arabic

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French



Science Workshop

The series is designed to show viewers how scientific research can affect our everyday lives. The emphasis is not on dogmatic certainties but on the struggle to extend the frontiers of knowledge. This “workshop atmosphere” is intended to give the viewer a better understanding of scientific research and make it clear that even the most complex subjects can be broken down into a logical sequence of small, individual steps.

103 Expedition into Nanoland SD

Nanotechnology – science on the border of the perceptible. Tiny particles and molecules are giving growth in research and industry an undreamt-of boost. This film presents some of the most interesting projects; for example, how nanoparticles hunt viruses, how nanominerals dispel toothache and how nanoglass makes the sun shine more brightly.

104 Healing with Molecules SD

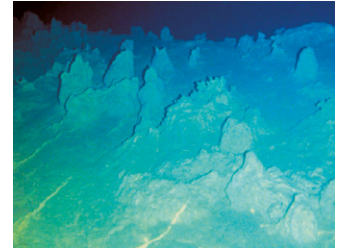
Medicinal drugs cure disease and save lives. But a new drug usually takes twelve years to develop, often at a cost of more than 500 million euros. Cooperation between university hospitals, biotechnology firms and the research departments of pharmaceutical companies is of vital importance. This film traces the development of a medicinal drug and explains what Germany – and Europe as a whole – has to do to regain its place among the world’s elite.

105 Intelligent Plastics SD

Polymers, plastics obtained from petroleum, are more versatile than virtually any other type of material. They are replacing conventional materials in more and more areas of application. The advantage of polymers is that they are light, have a long service life and can be recycled. These are outstanding prerequisites for becoming the leading materials of the future. And now plastics are revealing an entirely new capability: they are starting to organize themselves...

106 Concerns, Inventors, and Innovations SD

This film takes an exciting journey through the research laboratories of major concerns and organizations. Optical data networks, the world’s starchiest potato, the fastest rail vehicles, outer space in the classroom, the digital motor car, air traffic logistics of the future – and time and again the question of whether firms in Germany, and Europe as a whole, are equipped for global competition.



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On a Research Trip in the Pacific

Off the coast of Central America scientists on board the German research vessel “Meteor” are studying oceanic regions where tectonic plates are pushing against one another. They want to find out more about processes which influence the genesis of earthquakes, volcanic eruptions, and tsunamis. The following three parts of this mini-series not only take the viewer down to unknown depths, they also provide a look behind the scenes of a modern research ship.

113 A Look into the Depths [VoD](#) [M](#) [SD](#)

In this film an ROV submersible descends to a depth of up to two thousand meters in search of gas vents, bacteria mats, and samples of sediment.

114 Change of Staff [VoD](#) [M](#) [SD](#)

We experience a final dive on board the ROV submersible before heading for the port of Caldera. The exhausted scientists leave the ship with their “booty” to be replaced by a new team equipped with a deep-sea drill.

115 Messages from the Mud [VoD](#) [M](#) [SD](#)

In this film, as the Scottish team go into action with the deep-sea drill, geologists on board tensely await the first samples. But then the computer crashes...

122 How the Brain Learns [SD](#)

The human body is controlled by twenty billion nerve cells. Each nerve cell is linked to thousands of others, transmitting and receiving impulses via contact points called synapses. When we learn, scientists believe, the number and strength of the synapses change.

123 Perceiving Space – The 3-D-Puzzle of the Neurons [SD](#)

How does the brain perceive the spatial world? And what questions arise when this phenomenon is researched? In their efforts to learn more, neuro-scientists are making only slow progress. It is an issue that also interests biologists, engineers and philosophers.

124 Marine Research – Searching for Clues in the Deep [SD](#)

Studying the oceans, which cover 70 percent of the earth’s surface, is no easy task. For thousands of years mankind was blind to life in the depths. Yet processes take place there that have a decisive influence on life and death on land. Researchers are trying to assess the dangers arising from these processes and to find solutions in the deep to the major problems facing mankind – like climate change.

125 Cool Beauties – Focus on Cold-Water Corals [SD](#)

The sea off the coast of Europe, especially the continental shelf, is a paradise for coral. It is a world ruled by cold water corals, which feed on small crustaceans. Unlike their tropical relatives, these corals need neither sunlight nor algae. Only one location seemed too adverse for cold-water corals: the Mediterranean. So an expedition was mounted to find out why. The surprising result of this research is that the corals also inhabit the Mediterranean. It is just that their presence is cleverly concealed.

126 Synthetic Aperture Radar Reconnaissance [SD](#)

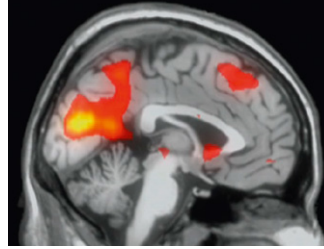
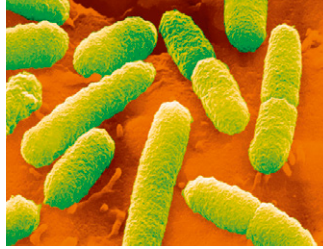
The synthetic aperture radar reconnaissance system (SAR) does not operate with normal photographic methods. Instead it utilizes radar technology which enables it to see through cloud cover and take pictures even in the dark. Developed in Germany, the SAR process yields high-resolution images from a height of approximately 500 kilometers. The system can monitor the entire globe.

127 Quantum Computers [SD](#)

Quantum computers are microscopically small and need comparatively little energy, but in terms of computing power they are to present-day computers as a rocket is to an ox-cart. Quantum computers still belong to the realm of science fiction. But researchers are already working on the fundamentals of these computers of tomorrow.

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132 The Big Bang – The Quest for Our Beginnings [SD](#)

The European Organization for Nuclear Research (CERN) near Geneva houses the world's largest and highest-energy particle accelerator, the Large Hadron Collider. It's here that astrophysicists hope soon to simulate the Big Bang and the conditions that followed it, in order to answer at last some of the most fundamental questions about the beginnings of the world and the universe.

133 The World's New Eyes [SD](#)

New advances in perception have been made thanks to the advent of raster electron microscopes, extreme high speed cameras and neutron tomography. These devices enable us to see things in the world that would otherwise remain invisible.