

Technology and Modern Life

BEFORE YOU READ

In the last section, you saw how the American economy changed in the 1990s.

In this section, you will learn how technology has changed Americans' lives.

AS YOU READ

Use the chart below to take notes on the technological changes described in this section and how these changes have affected your life.

TERMS AND NAMES

- information superhighway** Popular name for a proposed computer network
- Internet** Worldwide computer network
- telecommute** The ability of people to work out of their homes
- Telecommunications Act** Controversial law to reform the communications industry
- genetic engineering** Method of changing the genes of living cells

CHANGES	EFFECTS
Information superhighway	<ul style="list-style-type: none">Internete-mail

The Communications Revolution (pages 876–878)

How have new technologies affected communications?

President Clinton wanted to create an **information superhighway**. This would be a computer *network* that would link people around the world. The network would link cable, phone, and computers to provide entertainment and information.

Clinton appointed Vice-President Gore to oversee the government's role in creating the informa-

tion superhighway. They wanted private *entrepreneurs* to build the network. But they believed the government should protect people's rights to use it.

Most people took part in the information superhighway through the **Internet**, a worldwide computer network. By 2000, experts expected that 97 million Americans regularly used the Internet to send e-mail—electronic notes and messages.

New technologies let many Americans **telecommute**, or work out of their homes instead of going to an office every day.

The changes in communications caused the growth of many communications companies. Congress passed the **Telecommunications Act** in 1996 to make sure people would receive good service. The law allowed telephone and cable companies to enter each others' industries. One of the results of the law was an increase in *mergers*. This cut the number of competing companies.

Congress passed the Communications Decency Act as part of the Telecommunications Act. Congress called for a "*V-chip*" to be placed in television sets. This computer chip would allow parents to block TV programs that they do not want their children to see.

The communications industry liked the Telecommunications Act. But some people believed that the law allowed a small number of people to control the media. Civil rights activists thought the Communications Decency Act limited free speech. Parts of these laws were struck down in court.

1. How did the Internet and cable television affect Americans?

Scientific Advances Enrich Lives

(pages 878–881)

How does technology affect daily life?

In addition to telecommunications, great progress was made in robotics, space exploration, and medicine. Visual imaging and artificial intelligence were combined to provide applications in industry, medicine, and education. Flight simulators helped train pilots. Doctors have been able to better explore within the body. Architects and engineers have used virtual reality to build visual models of buildings and structures.

In space, *Pathfinder* and *Sojourner* transmitted live pictures from the surface of Mars. Shuttle missions began building the *International Space Station (ISS)*. The Hubble Space Telescope was used to discover new planets.

Enormous progress was made in the field of biotechnology. The Human Genome Project announced in 2000 that it had mapped the genes of the human body. Molecular biologists hoped this genetic map of DNA would help them to develop new treatments for inherited diseases. But the applications of this new information or "biotechnology" was controversial. Many people were concerned about animals that were cloned from single cells. The use of **genetic engineering**, the artificial changing of the molecular biology of organisms' cells to alter an organism, aroused concern. Scientists used genetic engineering to alter food crops like corn. Consumer groups resisted the practice, and it was restricted in some places.

Applications of technology helped medical progress. New treatments for cancer and AIDS helped many patients. The use of magnetic resonance imaging (MRI) helped doctors with medical diagnoses.

Environmental concerns rose through the decade. People looked for ways to reduce the use of fossil fuels and the production of acid rain. Americans also improved recycling efforts.

2. What were some important technological advances in the United States?