

# Satellites and Your World

About 40 years ago, the world became a much smaller place. It didn't actually shrink, but it suddenly became possible for people half way around the world to talk to each other.

On July 26, 1963, a satellite named Syncom was launched into space. Syncom was small, weighing only 78 pounds or about the weight of a 10-year-old child. But once this little object reached orbit more than 22,000 miles over the Atlantic Ocean, it changed how we communicate.

A satellite is something that goes around a larger something, like the Earth or another planet. Some satellites are natural, like the moon, which is a satellite of the Earth. Other satellites are made by scientists and technologists to go around the Earth and do certain jobs.

Before Syncom existed, only about 136 phone calls from the United States to Europe could be made at any one time. Syncom changed that, and today satellites let hundreds of millions of people talk to each other almost anywhere in the world.

Today's satellites are a lot bigger than Syncom was. Today's satellites can weigh about 10,000 pounds, which is as heavy as a medium-size truck. And they do a lot of important jobs. Most importantly, they help people communicate with other people, wherever they are in the world.

Satellites also send and receive television signals. The signal is sent from a station on the Earth's surface. The satellite receives the signal and sends it back to other places on the Earth. With the right number of satellites in space, one television program can be seen all over the world.

Today, there are more than 227 man-made satellites (you could think of them as the children of Syncom) orbiting the Earth 22,000 miles high. They do things like connecting people to the Internet, letting them call around the world on a cellular phone, or giving you the choice of hundreds of television channels to watch.

## What Else Does a Satellite Do?

- A satellite can carry a camera as it travels in its orbit and take pictures of the whole earth. Map-makers can use these pictures to make more accurate maps. Satellite pictures can also help experts predict the weather, because from the satellite, the camera can actually see the weather coming. When you watch a weather forecast on TV, you are seeing pictures of the Earth taken by a camera riding on a satellite.

- A satellite can connect your telephone call across the country or to the other side of the world. If you decide to telephone your friend in Mexico City, your call can be sent up in space to a satellite, then relayed to a ground station in Mexico and sent from there to your friend's telephone.

- A satellite can relay your computer message, fax message, or Internet data as well. With the help of satellites, we can send faxes and e-mails, or download information from the Internet anywhere in the world.

- A satellite can transmit your favorite TV program from the studio where it is made to your TV set — even if the studio is in Japan and your TV set is in California.

Thanks to Syncom and the hundreds of satellites that have followed, we can now simply watch our favorite television shows, talk to our friends by using a cell phone or sending them an email, or explore what is happening all over the globe.

