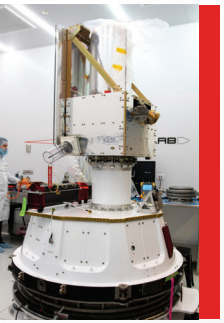
WHAT DO WE USE SATELLITES FOR?

Everyone around the world uses and relies on satellites. They help us to talk to each other and stay connected; they provide important information about our planet by monitoring weather and climate change; and they help us travel safely in our cars, ships, and planes.

Here are some examples of the types of satellites used every day across the world.

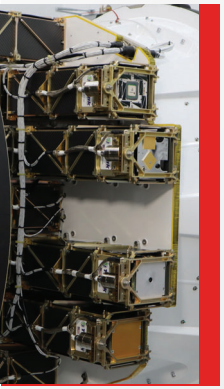


COMMUNICATIONS

Communications satellites act like mirrors in space. They receive signals sent from satellite dishes (ground stations) on Earth and then bounce them back down to a second ground station somewhere else. A lot of communications – like telephone calls, internet data, and radio and TV broadcasts – are sent by radio waves, which shoot out in straight lines. By sending and receiving radio waves from Earth into space, these communications satellites solve the problem of relaying these straight-line radio waves around our curved Earth.

What do we use these satellites for?

- Telephone calls
- Internet data
- Radio broadcasts
- TV broadcasts



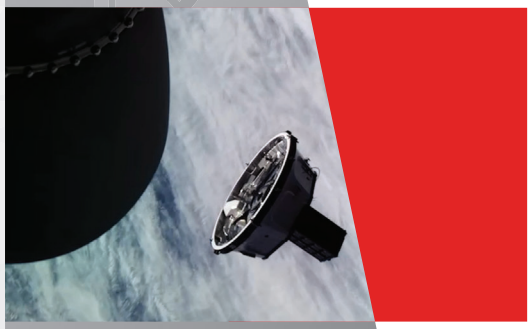
SCIENCE & TECHNOLOGY DEMONSTRATIONS

Inventors, scientists, researchers, and students all use satellites to test out their ideas in space. This might be testing a new type of satellite, experimenting with how different materials survive in space, or testing a new capability like improved cameras and radars to help us see even more of the Earth from space.

Because small satellites are cheaper, easier, and faster to build than ever before, they're more likely to be used to conduct all kinds of tests and research in space that will help humanity achieve great things.

What do we use these satellites for?

- Giving students the experience of learning how to build, launch, and operate a satellite
- Figuring out if new technologies for future upgrades work
- Testing a way to do something that's never been done before



NAVIGATION

Some of our ancestors once used the stars to guide their way and in today's modern society, we also use the heavens to help us get to our destinations – but this time, with satellite technology!

Navigation satellites keep track of the planes in the sky and the ships in our oceans. They tell us what the quickest path is to take to our friend's houses, and how to get to places likes businesses and restaurants outside of our neighbourhood. Apps on your phone like Uber or Google Maps wouldn't work without these satellites – especially the Global Positioning System (or GPS) satellites used every day to find our way.

What do we use these satellites for?

- GPS
- Sat-Navs in our cars
- Tracking endangered animals and wildlife
- Ship tracking across the oceans
- Airplane tracking across our skies

IMAGING, MONITORING AND SURVEYING

Some satellites these days are packed with miniature equipment and tiny cameras which, despite their small size, can help us see and measure tiny changes across the world. Satellites like these provide important data to help people predict and keep track of what is happening all around us.

Farmers, for example, use satellite images to figure out when the best time will be to harvest their crops or move their cattle so that they can provide you with the very best food for your table. Engineers use satellites to monitor the way the ground moves so that the roads and bridges we travel on every day remain stable and safe to use. Scientists and researchers use satellites to monitor things like the weather, climate change, and the effects of natural disasters like volcano eruptions, hurricanes, and tsunamis.

What do we use these satellites for?

- Farming
- Weather
- Climate change
- Natural disasters
- Keeping an eye on ground movements