THE WORLD OF SEISMOLOGISTS

Seismologists are scientists who study **earthquakes** – a powerful type of **natural disaster**. They study the forces inside planet Earth that cause earthquakes, the effects that they have on surrounding areas, and ways of staying safe during them.

Seismologist
(size-MOL-uh-jist)

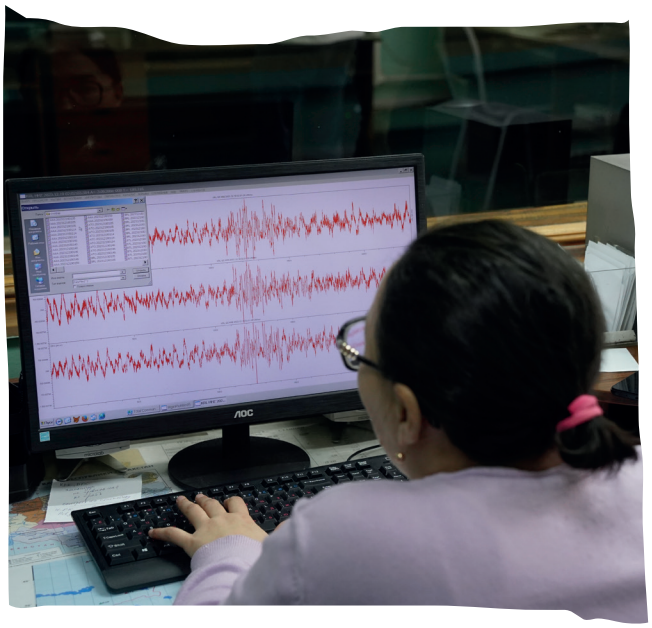
*If they are doing fieldwork, seismologists need to wear **sensible clothing**, like strong boots, to walk over uneven ground. Their equipment can include **sensors** and **seismometers** to record the shaking of the ground and measure how strong an earthquake was.*

WHAT DO SEISMOLOGISTS DO?

The work of seismologists can tell us a lot about earthquakes and the incredible forces that cause them to happen.

LAB WORK

Seismologists spend a lot of time working in the lab. Their work here includes monitoring **sensors** from all around the world, and developing **early warning systems** that give people enough time to brace themselves if an earthquake starts to happen. Other work includes studying Earth's inner layers to understand how **tectonic plates** and **fault lines** work.



FIELDWORK

As part of their fieldwork, seismologists may set up new sensors and collect samples of rock and **soil** to learn about how an earthquake would affect a particular area. They may also examine the damage caused after an earthquake has happened, to see what lessons can be learned to keep people safer if another one happens in the future.

WHO DO SEISMOLOGISTS WORK FOR?

Seismologists can work for a range of organizations, including universities and governments, where they study and monitor tectonic plates, seismic activity, and earthquakes. They can also work alongside engineers to construct buildings and other pieces of **infrastructure,** like bridges, that can withstand an earthquake's shaking.

FAMOUS DISCOVERIES

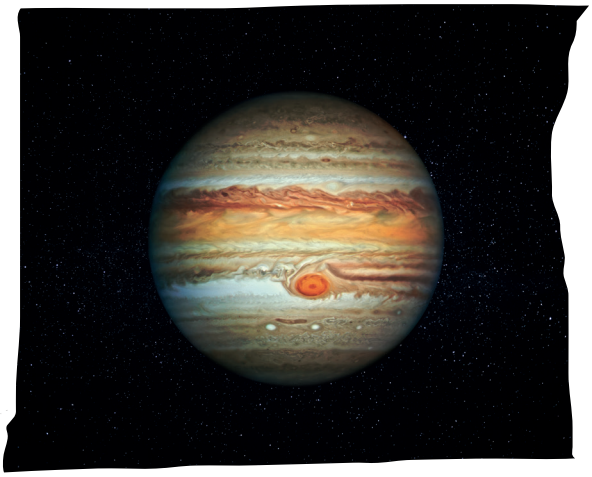
Seismologists have made so many amazing discoveries that have changed our understanding of earthquakes. Here's just a few of the biggest and best!

GLACIAL EARTHQUAKES

In the early 2000s scientists discovered a new type of earthquake, caused by huge chunks of ice falling off **glaciers** into the ocean! These have been recorded as being as strong as magnitude 5.0.

QUAKES IN SPACE

Jupiter and Saturn – the two largest planets in our **solar system** – have such strong **gravity** that they pull and stretch the moons orbiting them. This causes quakes that crack the moons' surfaces and cause landslides!



INTRAPLATE EARTHQUAKES

"Intraplate earthquakes" happen in the middle of **tectonic plates** rather than at the edges! They might be caused by old **faults** inside tectonic plates that have given way under incredible **stress**. Scientists are still studying them to find out for certain!

Seismologists are making discoveries all the time; who knows what they might discover next!

FAMOUS SEISMOLOGISTS

There have been so many clever seismologists over the years. Here's just a few of the most famous.

JOHN MILNE

British seismologist John built the first modern seismograph that could detect and record earthquakes! He also wrote the first guidelines to help engineers build stronger, safer buildings in countries that experience a lot of earthquakes.

INGE LEHMANN

Danish-born Inge studied how energy created by earthquakes travels through Earth as "seismic waves". It was through this research that she discovered Earth's **core** actually has two parts: a solid, inner core and a liquid, outer core!

LUCY JONES

American seismologist Lucy Jones works with members of the public to raise awareness of things that can be done to stay safe during and after an earthquake. She also researched ways of predicting the chances of a **foreshock** being followed by a much larger earthquake.

These are just a few of the many scientists who have made a huge difference to the study of earthquakes.

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