The story of tsunamis

By National Oceanic and Atmospheric Administration, adapted by Newsela staff on 02.24.17

A tsunami is a set of very large ocean waves. It is usually caused by an underwater earthquake. Earthquakes cause giant waves when they happen underwater.

Tsunami waves can be 100 feet high. They can wipe out a town in minutes. Since 1850, more than 420,000 people have been killed by tsunamis.

Tsunamis usually hit places near the scene of the earthquake. They can also travel across the ocean if they are big enough. They can wipe out towns far from the earthquake, too.

Scientists cannot tell when and where the next tsunami will strike. But once one starts, they can track where it is going. That gives people time to move away from the shore.
Tsunamis mostly happen in the Pacific Ocean. A big one hit Indonesia on Dec. 26, 2004. After an earthquake, the movement of the sea floor caused a giant tsunami. Its waves were more than 100 feet high. More than 130,000 people were killed. The tsunami then began to spread across the ocean. Within two hours, it had killed 58,000 people in Thailand, Sri Lanka and India.

**Scientists Can Track Tsunamis**

Scientists keep track of underwater earthquakes. If a big one happens, they know a tsunami is possible. They then announce a tsunami warning. Once a tsunami forms, scientists can track it. They can see where it is going. They can also see how strong it is.

It is very hard to say how strong a tsunami will be in a particular place, though. The shape of a coastline can make a big difference. So can the depth and shape of the nearby ocean floor.

**Teaching People About Tsunamis Can Save Lives**

Several things can help save lives when a tsunami hits.
First, people along the Pacific coast should be taught about tsunamis. Second, a good warning system is needed. It lets people know a tsunami is coming. Third, a good evacuation plan is very important. It helps get people away from the coast as quickly as possible.

The stories of two different towns hit by tsunamis help us understand these points.

In 1993, the town of Aonae, Japan, was hit. People there had been taught about tsunamis. A warning was given. The town had a good evacuation plan.

In 1998, a tsunami hit Warapa, Papua New Guinea. People there were not taught about tsunamis. There was no warning system. There was no evacuation plan.

Many more people died in Warapa, then in Aonae. Planning ahead made all the difference.