

## Oral Reading Test

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- ▶ Rogue waves are also called freak, or monster, waves. They are so enormous and powerful that for a very long time, scientists didn't believe they existed. Stories about these monster waves used to be written off as myths. That's because rogue waves are truly incredible! They have damaged, overwhelmed, and even sunk the biggest and toughest ships. From immense cruise ships to sturdy oil rigs, no vessel is safe.

Rogue waves are often described as “walls of water” that come out of nowhere. They can be anywhere from fifty to one hundred feet tall. The crest, or the top, of a typical rogue wave rises like a steep mountain of water. The trough, or the hollow between two crests, is very deep. These characteristics make rogue waves almost impossible to ride over—and just a bit unbelievable.

Scientists think there are two main causes of rogue waves. One type usually appears during storms. A combination of strong currents and winds causes waves to pile up. They become a monster wave. A second cause is wave reinforcement. This usually happens on a clear day. When two or more waves come together, their height is added together. If dozens of waves interact and reinforce each other, the result is usually a rogue wave.

In the end, scientists proved that rogue waves are real. They used satellite images and special instruments designed to measure wave heights. They also recently discovered that the waves occur more frequently than first thought. Oceanographers originally guessed that rogue waves only appear once every century. In fact, some scientists estimate that ten rogue waves can be rolling through the world's oceans at any one time.