

# Maya's MYSTERIES

OUR HEARING IS AMAZING, BUT SOME ANIMALS HAVE **EXTREME** HEARING!



## NOW HEAR THIS

**M**y friends and I were hiking in the woods when we heard a high-pitched “SCREEECH!” Suddenly, a hawk zoomed above us. It was so awesome!

We heard tons of sounds that day, from the hawk to frogs croaking. So I looked up some cool facts about hearing. Sounds are really vibrations. When the hawk screeched, vibrations traveled through the air to our ears. Scientists can even figure out the number of vibrations per second—that’s a sound’s **frequency**.

It’s measured in **Hertz (Hz)**. The hawk’s high-pitched cry has a high frequency, but a bullfrog’s croak has a low one.

Most human speech is about 80–250 Hz, but people can hear sounds up to 20,000 Hz. Animals and humans have developed different kinds of ears and hearing based on our needs. Whether we fly, walk, or swim, careful listening is key to communicating and thriving.

## ANIMAL MATCH

Earth’s creatures have a wide range of hearing abilities. Match these clues and the animals below.

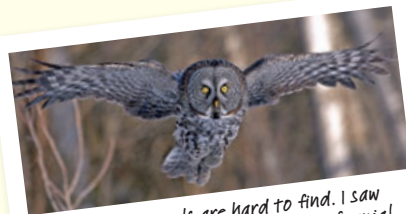
1 Swooping around at night to hunt, these creatures depend on their uneven ears that collect sound at different volumes and angles.

2 This marine animal has internal ears, with only holes visible on its head. The ears help them detect vibrations in the water.

3 300,000 Hz is the highest known frequency for an animal. These insects use it to communicate above the hearing level of their main predator—bats.

4 These animals have 32 muscles in each ear. They can move their ears independently and rotate them 180 degrees.

5 These creatures use **echolocation** to navigate, bouncing high-pitched clicks off of objects to build a mental map.



Great gray owls are hard to find. I saw this one in Yosemite Valley in California!



Aww, these elephants are so cute!

6 Before hatching, these babies call out to their mom, who hears them and digs the eggs out of the sand.

7 Songs of this enormous species travel over 1,400 miles (2,253 km). Even before the human voice, these creatures were heard on Earth.

8 These creatures communicate up to six miles (10 km) across the savannah, using infrasound, or frequencies below human hearing.

GREATER WAX MOTHS

CROCODILES

HUMPBACK WHALES

GREAT GRAY OWLS

SHARKS

CATS

ELEPHANTS

BATS