

The Sea Turtle: An Animal with Built in GPS

Sea turtles ability to return to their hatching home is a mystery that has baffled scientists for years. Sea turtles travel thousands of miles each year to lay their own eggs, and miraculously, they are able to find the exact location where they, themselves, were hatched. Sea turtles are unique creatures because they use something call geomagnetism, which is the earth's magnetic force, to guide them back to their original birthplace.

To begin, geomagnetism is a powerful and invisible force within the earth. Electrical currents radiate from the Earth's core to create a strong magnetic road map. According to the article "Sea Turtles Are Natural Ocean Navigators," one end of the magnet, or pole--the North Pole--is in the Arctic. The other end--the South Pole--is in Antarctica. When travelers use a compass to find north, they rely on geomagnetism." The needle of a regular compass is attracted to the North Pole just like anything metal is attracted to a magnet. The closer the magnet gets to the metal, the stronger the attraction becomes. To further clarify, picture a giant bar magnet in the Earth. This bar magnet is constantly shifting its position over time. In the article mentioned above it states, "Everything on Earth reacts to geomagnetism in a different way, and the particular way each things reacts is know as its magnetic signature." In other words, some objects will be more attracted to the magnet than others, and this magnetic signature can change in strength and direction at any time.

Therefore, sea turtles can use geomagnetism to sense the magnetic signature of their birthplace. This helps guide them home just like when people use GPS systems to guide them to unfamiliar destinations. As the magnetic signature of their birthplace changes, they can adjust their so called "GPS" to find their desired location. The article "Sea Turtles Are Natural Ocean Navigators" states, "As the geomagnetic field shifted, the turtles went to different nesting sites. It proved that sea turtles can sense magnetic signatures." This means that sea turtles can use that magnetism to guide themselves over thousands of miles. How cool is that? However, researchers don't yet understand how sea turtles do this, but they have their theories. Scientist J, Roger Brothers said, "Most likely they have tiny magnetic particles in their brains or in their bodies that act like a compass." What's even more puzzling is that sea turtles don't just rely on geomagnetism. If the land has changed or is unavailable, the turtles know they need to build their nests somewhere else.

To summarize, geomagnetism is an amazing guidance system used by sea turtles to guide them back to their original birthplace where they lay their eggs. This is a phenomenon that is not completely understood by scientists, but it is assumed that the sea turtles sense where they need to go due to magnetic energy. Strangely, these turtles find their birthing beach and lay their eggs, they are probably thinking, "There's no place like home!"