How do Salmon Navigate

- 1. https://www.usgs.gov/faqs/how-do-salmon-know-where-their-home-when-they-return-ocean
- 2. How do they know where their home is?
- 3. How do they navigate

Magnetism: Salmon have their own GPS device to navigate

A new study into the life cycle of salmon, involving magnetic pulses, reinforces one hypothesis: **The fish** use microscopic crystals of magnetite in their tissue as both a map and compass and navigate via the **Earth's magnetic field**. Findings were published in the Journal of Experimental Biology.

Lateral Line

The lateral line has been called a "sixth sense" for fish. It runs from gills to tail along the sides of the fish, right in the middle. You can see it when you catch a trout. A page from the <u>University</u> of <u>Minnesota Sea Grant</u> describes this amazing organ:

Sometimes referred to as the "sense of distant touch," lateral lines convert subtle changes in water pressure into electrical pulses similar to the way our inner ear responds to sound waves. Running lengthwise down each side of the body and over the head, these pressure-sensing organs help their owners avoid collisions, participate in schooling behavior, orient to water currents, elude predators, and detect prey.

Lateral lines are composed of neuromasts (**hair cells** surrounded by a protruding jelly-like cup) that usually lie at the bottom of a visible pit or groove. These hair cells — the same sensory cells found in all vertebrate ears — **convert mechanical energy into electrical energy when moved.** Presumably, auditory and lateral line pathways evolved in close association since they share many features. [Emphasis added.]





Sockeye



Coho

