

Dolphin/Echolocation Discussion Questions:

1. During the activity, what techniques worked best in order for the dolphin to catch the most fish?
2. In the game, how could the dolphin avoid tagging a rock?
 - a. Did the rock give off a different signal or echo than the fish? What was the difference? (talk about frequency)
 - b. Could the dolphin avoid being captured by a net?
3. What is it called when fisherman catch dolphins and other animals they don't intend to sell on the market as a result of casting their nets? *By-catch*
 - a. What happens to these dolphins and other animals? *They usually die*
4. Studies done with trained dolphins have shown that they can determine an **object's distance, direction, speed, density and configuration** using echolocation. During the game could you as a blindfolded dolphin determine these things? Which ones? Can you tell that the Dolphin sense of hearing is better than humans?

Their ability to distinguish between different objects is so good that they can tell one species of fish from another, even though they may be exactly the same size. This is very impressive also since sound travels four and a half times faster in water than in air

5. Since, many animals develop certain capabilities over time to adapt to their environment in a process called evolving, why do you think dolphins have developed their echolocation abilities? How do these abilities help dolphins?

Bottlenose dolphins have very good eyesight and can see quite well both above and below the water. Vision, however, does little good in murky or deep water where light from the surface can not penetrate. To compensate for this dolphins rely heavily on sound to sense their environment.

5. Are dolphins Mammals or Fish? How are dolphins similar to humans?

Mammals, dolphins reproduce sexually and must surface to breathe air, etc.