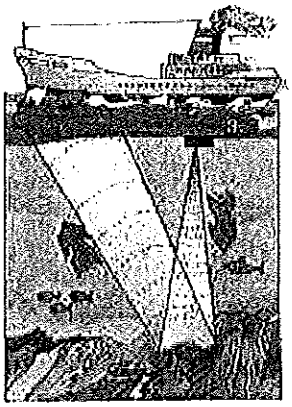
Day 5

What Can Echoes Do?

A look At Echolocation...

How does sonar use echoes to locate objects?

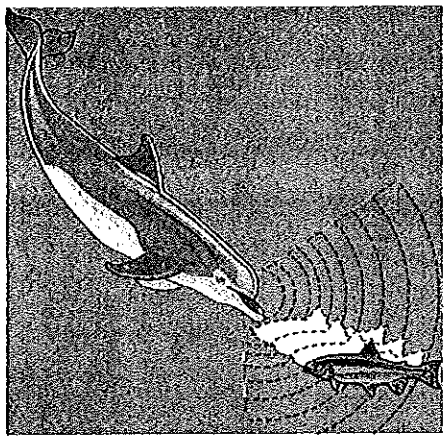
Sonar, or sound navigation and ranging, uses sound waves to detect objects far away.



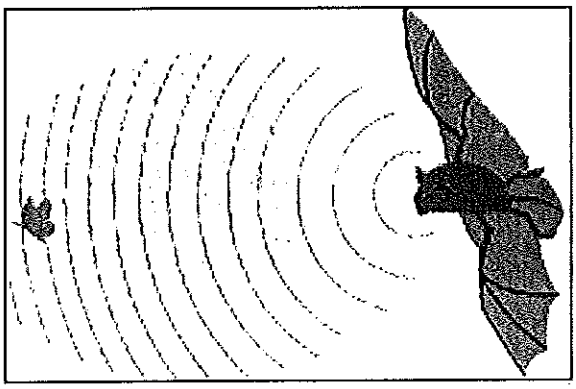
Sonar technicians send out sound waves and measure the time it takes for their echoes to return.

Some animals make and hear ranges of sound vibrations different from those that humans can make and hear. Many animals find things around them with a form of sonar called echolocation.

Whales and dolphins bounce sound waves off objects to find out how far away they are. Bats are able to live in dark caves because they use a form of echolocation rather than sight to navigate. Bats send out high pitched squeals and clicks into the air toward their prey. Their large forward pointing ears pick up the echoes.



A dolphin using sound waves to find its food.



Bat using echolocation to locate its prey.

Echolocation - is how bats and dolphins "see" around them in the dark or underwater.

hertz

Species	Approximate Range (Hz)
human	64 - 23,000
bat	2,000 - 110,000
beluga whale	1,000 - 123,000
porpoise	75 - 150,000