Ultrasonic Sensor Pre-Quiz Answer Key

1. How do humans sense distance?
   
   Humans estimate distance using their eyes, which is usually not a very accurate method.

2. How do bats sense distance?
   
   Bats send distance using sound. They emit sound waves and receive back reflected waves. The time it takes to receive the waves back provides them with a very good estimate of the distance.
   
   This is exactly how the ultrasonic sensor estimates distance.

3. Provide an example “stimulus-sensor-coordinator-effector-response” framework using the bat?

   For bats: calls made by mouth > ears hear reflected waves > brain decides what to do > wing muscles move > flight path changed, as needed
   
   Bats use this same method to catch mosquitoes, too!