

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Class: \_\_\_\_\_

## 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 sense 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!**