

Animals Sensing Energy

Station 1

1. How do animals use echolocation?
2. How does echolocation work?
3. What is another name for echolocation?
4. What kind of animals use echolocation?
5. Give an example of when echolocation would be useful to an animal.
6. Do humans have echolocation capabilities?

Station 2

1. Where does the magnetic field that dogs use come from?
2. What information does Earth's magnetic field give to organisms that can sense it?
3. List 3 organisms that can sense Earth's magnetic field.
4. Give an example when sensing a magnetic field would aid in survival or a species.

Station 3

1. What are pheromones?
2. How do ants use pheromones?
3. What other organisms use pheromones to sense the world around them?
4. Do you think it would be helpful for humans to sense pheromones? Why?

Station 4

1. What type of waves are found in the electromagnetic spectrum (ES)? (transverse or longitudinal)
2. What section of the ES can humans sense?
3. Give an example of a low frequency ES wave.
4. Bees can sense ultraviolet waves, is this higher or lower frequency than what humans can see?
5. How do pigeons use the ES differently than we do?

Station 5

1. What is photomorphogenesis?
2. What is photoperiodism?
3. What is phototropism?

Station 6

1. What happens to the pupil of your eye when it gets dark?
2. What part of your eye gives it color?
3. What does the iris do?
4. What does dilate mean?
5. What size is the pupil?
6. What other response can make the pupils change size besides light?

Station 7

1. What is hibernation?
2. List 3 examples of animals that hibernate.

Station 8

1. Dogs can hear _____ times farther away than humans.
2. What is the highest frequency humans can hear?
3. What is the highest frequency a dog can hear?
4. Why can a dog hear better than humans?
5. What frequency can an elephant hear?
6. What frequency can a mouse hear?
7. What frequency can a cat hear?