BI 101

Can Animals Predict Natural Disasters?

<http://www.pbs.org/wnet/nature/episodes/can-animals-predict-disaster/video-full-episode/268/>

**Answer the following questions as you view the film:**

1. Why do some people think that animals avoided the tsunami in December 2004, i.e. what evidence suggests this might have occurred? List a few examples.
2. In the 4th century B.C. what animals were said to make a mass exodus when Heliki disappeared into the ocean during a violent earthquake?
3. What do pet owners in California say about the behavior of dogs prior to an earthquake?
4. James Berklend uses what technique to “predict” earthquakes?
5. Has the scientific community supported his technique? Why or why not?
6. Dr. Mojito Ikeya of Japan tested a possible explanation for animal sensitivity by testing specific rocks: \_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_, which he found give off \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ precursor waves to stress.
7. Did he find any animals that could detect such changes?
8. Some of the scientific community is quite skeptical about the extraordinary nature of animal abilities, but yet some astonishing examples exist within the animal kingdom of keen sensory abilities. In the list below briefly list each animal’s special perception abilities:
   1. Sharks:
   2. Owls:
   3. Dogs:
9. How have humans used some animals’ keen senses to assist in our needs?
10. What is “infra-sound”?
11. What behavioral observation did the researcher named Caitlin see in elephants in Namibia that gives us pause about the ability of animals to detect seismic infrasound? Comment on your opinion of the proposition.

**After viewing the film, answer the following questions:**

1. Critical thinking means to judge information before accepting it. When you think this way, you move beyond the content of the information to look for underlying assumptions, evaluate supporting statements and, and think of possible alternatives. There are 5 basic questions you must answer as you evaluate information. Briefly answer these questions regarding the information provided in the film:
   1. What message am I being asked to accept?
   2. What evidence supports this message and is it valid?
   3. Is there another way to interpret the evidence?
   4. What other evidence would help me to evaluate the alternatives?
   5. Is the message the most reasonable, based on the evidence presented? In other words, does the ideas and research presented in the video follow the steps of the scientific method and was the evidence collected done so following what you have learned about appropriate experimental design?
2. Imagine that you are asked to design an experiment to test animals’ sensitivity to barometric changes that could give an indication of violent storms such as tornadoes.
   1. What animals would you choose to monitor?
   2. What equipment would you need to test your hypothesis?
   3. State your hypothesis in a cause and effect statement.