



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2009 Volume IV: How We Learn about the Brain

How the Heightened Senses of the Sea Turtle, Elephant, and Eagle Are Evident in the Brain

Guide for Curriculum Unit 09.04.01

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What is the relationship between form and function in an animal's brain? Specifically, I believe different species of animals rely more heavily on one particular sense; with each heightened sense, specialized areas of the brain must control them: the female Green Sea Turtle uses magnetism to lay her eggs in the same beach where she hatched; the African Elephant has the amazing ability to create and hear infrasonic sounds too low for humans to hear; and the Bald Eagle uses its acute sense of sight to spot prey from hundreds of feet in the air. Each of these animals has an amazing ability directly caused by a heightened sense. The behaviors of these animals suggest that a major part of their brain must control that sense. Furthermore, if an animal has a heightened sense of smell, I expect that the area of the brain that controls smell, the olfactory lobe, will be larger in size or more developed with respect to the other, less dominant areas. I expect that by the end of the unit, students will be able to answer the initial question.

(Recommended for Science, grades 3-12; and Computer Technology, grades 3-6)

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