



**Cabrillo  
Marine  
Aquarium**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Worksheet: The Great DDT Debate

1. What is the difference between bioaccumulation and biomagnification?
2. Which group of plants and animals is most susceptible to problems from DDT: primary producer, primary consumer, secondary consumer, or tertiary consumer? Why?
3. Suppose a Brown Pelican eats 300 g of fish per day. The fish tissue consumed by the pelican has an average DDT concentration of  $0.1\mu\text{g/g}$ . How much DDT is the pelican consuming in one day?
4. Now suppose a Bald Eagle also eats 300 g of food per day. But, the Bald Eagle also eats California Sea Lion carcasses that have washed up on the beach. The Sea Lion had eaten fish-eating fish (a Kelp Bass) with  $1.0\mu\text{g/g}$  DDT in their tissue. Much of the Sea Lion's body is made of blubber (a fatty substance) and the DDT bioaccumulates in the Sea Lion. So, the Sea Lion has  $2.0\mu\text{g/g}$  DDT in its tissue. If the Bald Eagle eats 300 g of Sea Lion, how much DDT does the Bald Eagle consume in one day?
5. Taking all factors into account, rank the following for likelihood of bioaccumulation: Bald Eagle, Brown Pelican, California Sea Lion, and Kelp Bass.

