Comprehension

PCBs and the orca

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1. PCBs are synthetic chemicals. Their full chemical name is polychlorinated biphenyl.
2. PCBs were used for industrial products, such as heat exchange fluids, paints, plastics, and lubricants for electrical transformers.
3. PCBs stay in the environment for a long time. Aquatic ecosystems and species that feed on aquatic organisms are especially sensitive to the effects of PCBs. PCBs bioaccumulate and biomagnify and also have a long half-life.
4. PCBs become concentrated in the orca's blubber.
5. When salmon stocks are low, the orca's blubber is burned for energy. The PCBs are released into the orca's bloodstream and interfere with its immune system making it more susceptible to disease.
6. Diagram should be similar to Fig. 2.55 on page 95 of the student textbook. The pyramid should include the food chain for orcas and demonstrate the total PCB load that the orca is exposed to.

Assessment

Effects of bioaccumulation on ecosystems

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1. F **2.** D **3.** E **4.** B **5.** C **6.** A **7.** C **8.** D **9.** B **10.** C **11.** A **12.** D