Wk 5 : "Pesticides" Case Study
Read the case study (pg 52-57) and complete the following questions.

A. Decide under what circumstances, if any, each organism in **Figure 1** could be considered a pest.

B. Speculate about how the removal of one of the pests might affect the food web.

C. List three possible short-term benefits of using pesticides?

D. Why might chemicals taken from plants create a much a lower risk for humans and ecosystems?

E. How would a chart showing the concentration of toxins differ from a biologist pyramid of biomass for the same food chain?

F. Vultures and some species of beetles feed on the dead bodies of animals from several tropic levels. Predict how these animals might be affected by bioamplification.

G. Why is the fact that other countries have not banned DDT of concern to Canadians?

H. Breast milk contains fat. Speculate about how breast-feeding might affect the concentration of DDT in a mother and in her baby.

I. Why are the new pesticides less harmful to ecosystems than DDT and related compounds used in the 1950 and 1960s?

J. Speculate about how less competition for food helps increase the reproductive success of the remaining insects after a pesticide is applied.

K. According to **Figure 6**, in which decade was there the greatest increase in the number of species that became resistant to pesticides? What might account for this dramatic increase?

L. Speculate about why the spruce budworm hasn't been eliminated after 40 years of spraying.

(Omit M-P)

Q. Explain why insecticides such as DDT would pose a greater threat to freshwater ecosystems than the newer, water–soluble pesticides.

R. Why would female eagles have slightly lower levels of toxins than male eagles? Compare egg laying in eagles with breast-feeding in humans.