"Pesticides" Case Study Worksheet 7
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.

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

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

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

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

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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.

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

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

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

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

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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?

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

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(Omit M-P)

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

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

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