STUDENT GUIDE
EXPLORE 1 LESSON 16

Food and Agriculture Center for Science Education

Part 1: Our Motivation

Record what we were trying to figure out that led to this investigation.

Part 2: Analyzing Data on Changes to Biodiversity

How could you determine if biodiversity is changing in an area?

You will use a spreadsheet to create a mathematical model to determine how the biodiversity of plants and animals changes as wild areas get converted to monocultured or dairy-farmed lands. You will do this using the Lesson 16 Plant and Animal Counts in Different Fields spreadsheet and the instructions from the Lesson 16 Handout Monoculture Crop vs Undisturbed Land.

After completing your computational model, analyze the values for Simpson's Biodiversity Index that you find between the two locations. What patterns of biodiversity exist between the two locations? Use evidence to support your response.

What impact does human activity have on biodiversity? Why? Use evidence from your spreadsheet calculations to support your response.

How did creating the spreadsheet model help you reveal patterns in biodiversity?