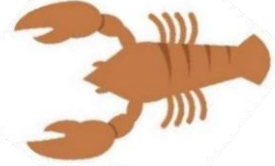




The Mystery of the Changing Crayfish Populations



Scenario: Scientists monitoring wildlife at Large Lake were alarmed when they observed different species of crayfish in the area. A historically popular fishing lake, the scientists and wildlife managers were concerned that the introduced species might be negatively impacting fish populations and biodiversity.

To discover how many of these new species were present, they trapped crayfish at different locations around the lake over several years. They also sampled for snails, fish, and amphibians to determine if there were changes in the numbers of organisms. At one monitoring location, they recorded the following numbers of organisms captured in one day.

Species	Year 1	Year 2	Year 3	Year 4	Year 5
Virile crayfish	10	9	6	3	1
Rusty crayfish	0	1	4	7	10
Red swamp crayfish	0	2	3	6	9
Snails per square meter	8,500	7,000	4,000	1,500	500
Bluegill sunfish	20	17	12	10	7
Eastern newts	16	14	10	6	2



Your Challenge:

1. Create a graph that shows the numbers of species collected over time.
2. Explain the data changes over time in writing. What might be causing them?

3. Brainstorm with a partner about how the changes might be causing problems in the freshwater ecosystem. Record your ideas in words and pictures on the back of this sheet or in science notebooks.
4. Research the roles that each of the organisms listed in the table play in the Great Lakes ecosystem. Going back to question 3, how do you think rusty crayfish and red swamp crayfish are impacting the other species? What evidence do you have? What other studies would you want to conduct to be more certain of your ideas?