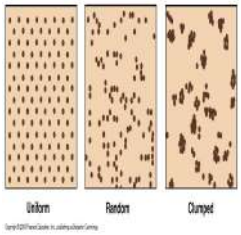
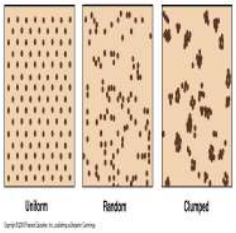
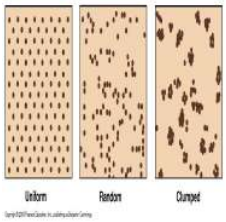
POPULATIONS **Name** _____

IDENTIFY THE FOLLOWING DISPERSION PATTERNS







_____ _____ _____

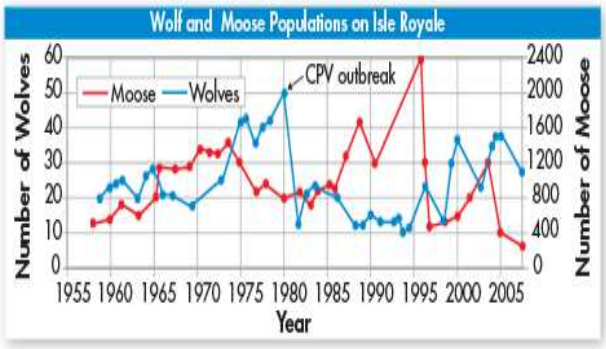
Which of these is most common pattern and may reflect a patchy distribution of resources ? _____

Which of these is typical of ecosystems in which organisms must compete for scarce a resource, like water in a desert? _____

LIMITING FACTORS	Definition	Examples
Density dependent		
Density independent		

When do density-dependent factors operate most strongly?

What is the usual response in the population size of many species to a density-independent limiting factor?



Use the graph at the left to answer the following:

What is the relationship between the moose and the wolves on Isle Royale?

What happens to the moose population on Isle Royale following years when the wolf population decreases? EXPLAIN WHY?

What happens to the wolf population on Isle Royale following years when the moose population decreases? EXPLAIN WHY?

Is the number of moose on the island a density-dependent or density-independent limiting factor for the wolf? Explain your answer.

A population continues at a stable size for many years. Suddenly, in a single season, the population size drops by half. Is the cause more likely to be density-dependent, density-independent, or both? Explain your answer.

A population of howler monkeys lives in the canopy of a tropical rainforest. Each howler monkey eats on average 1 pound of berries a day and requires 2 trees to build a nest. The rainforest produces 2,000 lbs of berries a

day and contains 1000 trees. What is the carrying capacity for howler monkeys of this rainforest?

Would the limited number of trees be considered a density dependent or density independent limiting factor? EXPLAIN your answer.

Modified by Kelly Riedell from Lesson 5.2 Workbook A from Pearson Education, Inc