

Name: _____

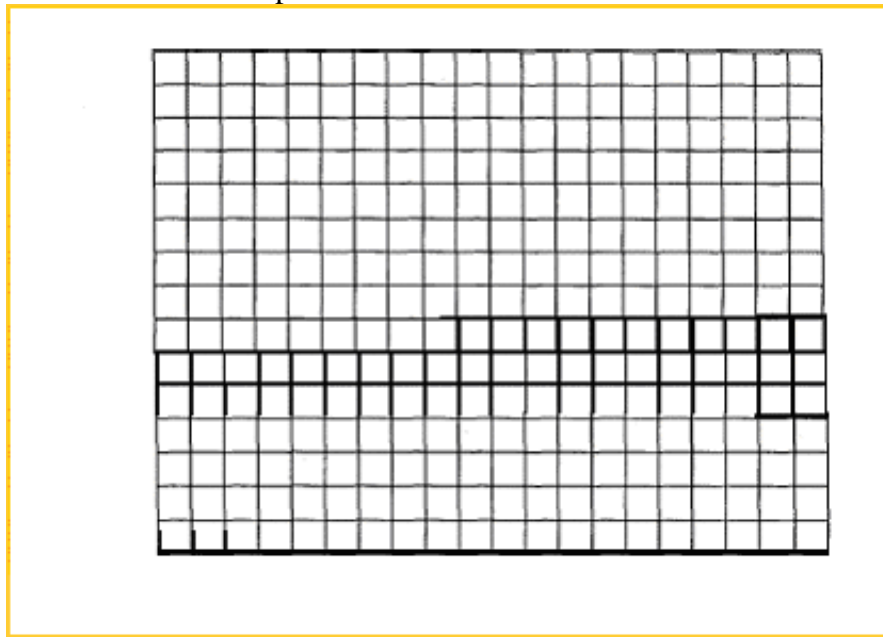
How do Certain Abiotic Factors Affect Organisms?

Base your answers to the questions on the information and the data table below and on your knowledge of biology.

The plant growth was determined for two types of plants: rose and sunflower. The growth was determined by weighing the mass of the flowers at varying amounts of nitrogen in the soil. The following data were collected.

| The Effect of Nitrogen on Sunflower and Rose Mass | | |
|---|-----------------------------|------------------------|
| Amount of Nitrogen (PPM) | Weight of Sunflower (Grams) | Weight of Rose (Grams) |
| 10 | 5 | 15 |
| 20 | 10 | 15 |
| 30 | 15 | 15 |
| 40 | 20 | 15 |

Directions (1-3): Using the information in the data table, construct a line graph on the grid provided below, follow the directions below. Label each axis and plot the data from the data table. There should be a line for the sunflower species and a line for the Rose species.



3. How are sunflowers affected by the amount of nitrogen in the soil? Support your answer using the data.
4. How are roses affected by the amount of nitrogen in the soil? Support your answer using the data.
5. A limiting factor is *any condition that can affect the growth or survival of an organism*. According to the data, is nitrogen a limiting factor for roses? Is nitrogen a limiting factor for sunflowers? Support your answer.