Name: **Date:**

HANDS-ON LAB

Model Factors in Resource Use

You will model the use of a resource by individuals to determine how changes in individual use can affect the overall use of a resource by a population. The cups represent individuals, and the beans represent the resource.

Materials
- beans (72)
- cups, small (18)

Procedure

STEP 1 Choose a certain number of people for your model A population. Decide how many beans each person will use. Distribute the beans. Record the results of your model in the table below.

STEP 2 Model two or three different scenarios with different populations using different amounts of the resource. Try to design your models so that you can draw conclusions about the factors that affect the overall use of a resource.

Model	Total population	Beans used by each person	Total beans used	Total beans left over
A				
B				
C				
D				

Analysis

STEP 3 How can an increase in the amount of a resource each person uses affect the overall resource use if the population stays the same? What would happen if the population also increased? Use your models to support your answer.

STEP 4 Consider two equal-sized population models. Individuals in one model use fewer resources per person than individuals in the other model. How will total resource use of the models differ? What might account for the difference in two real populations represented by the models?