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We started this course by asserting that scientists communicate in two basic ways: drawing pictures and telling stories. We've spent several weeks doing that!

Do your best to answer the following:

1. We have asserted since the first class that a description of modern science can be simplified down to three inter-related actions of the human person. What are they?

2. For the purposes of this course, define "investigation."

3. Name at least three characteristics that transform an "investigation" into a "scientific investigation"

4. A model that has at least one element of randomness can be described as _____.

5. A model whose behavior depends solely on its parameter values and its initial conditions can be described as _____.

6. The Euler Method iterates models and systems using what simple equation?

7. Models in a scientific investigation usually serve one or more of five main purposes. They are:

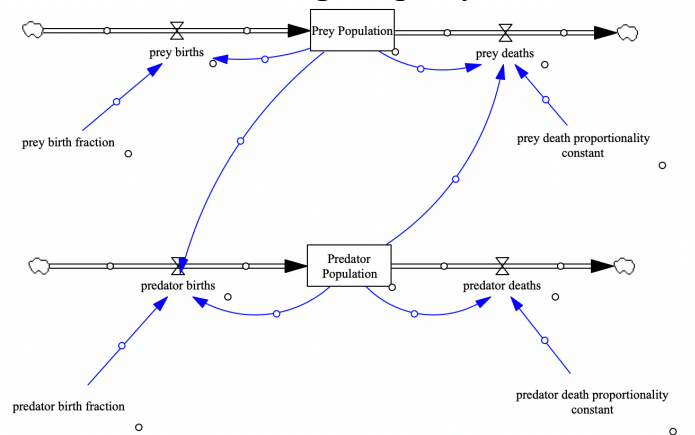   a. S_____

    b. E_____

    c. P_____

    d. V_____

    e. A_____

8. Consider the following simple *system model* of a predator-prey system:

    a. Identify the 4 basic components (building blocks) of system models

    b. Convert the above drawing of a system model to a story, consistent with the model of a 2-species, predator-prey model. Be as complete as you can.

9. Suppose the *rate of change* in the population of rabbits on Wofford's campus all during the month of March was observed to be more or less constant. How would you best describe the expected observed population growth of rabbits on Wofford's campus?

10. Consider the following simple chart. Fill in the missing elements:

Change per unit time:	System behavior looks:
0	
	Linear
Linear in time	
Proportional to Population	

11. Suppose there are 5 rabbits. If you take away 2 rabbits, how many rabbits would you have?

12. In class we listed more than a dozen uses of computers in a scientific investigation (in addition to *taking over the tedious, repetitious workload of iterative processes*). Name at least 3 other uses you have learned about and give an example of how each has been used so far in at least one of the labs/explorations.

13.(non-graded) The course is now approaching "mid-term."

    a. What is something new you have learned so far?

    b. What is something that you would like to learn before the course is over?