STELLA WORKSHEET

Name_____ Date_____

Part 1 Question

1. How did your results from Step 8 in Part 1 compare to your predictions? Explain.

Part 2 Questions

2. If the Flow In rate is 30 and the Leak rate is 50, what should happen to the amount of water in the bucket over time?

3. What happens when the Leak rate is less than the Flow In rate? What happens when they are equal?

4. What happens to the Leak rate as the volume in the bucket decreases?

Part 3 Questions

5. What happens as you increase the Leak factor?

6. Describe the overall relationships between the Bucket, the Flow In rate, and the Leak rate. Compare the model to results you obtained during Part 1 of this protocol. If necessary, run the model several more times before completing an answer to this question.

7. Do you think this model would accurately represent a real-life situation in which a water hose was filling a leaky bucket at a constant rate?

8. What natural or man-made feature in a watershed might be simulated with a "leaky bucket" model? What would Flow In represent? What would Leak represent?

9. Do you think simple models like this one could be useful in predicting changes in real-life situations? Why or why not? How has your experience with this protocol affected your answer?