

Name _____ Date _____ Per. _____

Science 8B - Anderson

Systems Thinking

PART ONE: Analyzing a Simple System *Analyze: Take apart; examine; figure out how something works*

1. What is a system? _____

2. What is a component? _____

3. What system are you analyzing? _____

4. Is the system you are analyzing a human-designed one or a "natural" one? _____

5. What are the components of this system? _____

6. How do the components work together to make this system do what it does? _____

7. How are the components of this system different from the system itself? _____

8. Choose one component of the system. If this component was removed, how would that affect the system? _____

9. Using the same component from your previous answer or a different one, tell how changing (not removing) that component would change the system. (Changes may include making it larger, smaller, stronger, weaker, more concentrated, less concentrated, hotter, colder, brighter, darker, etc., etc. There are a LOT of possibilities!)

10. Can anything be a system? Explain.

11. Name as many systems as you can that we actually CALL systems (like "the solar system")

PART TWO: The Carson River Watershed

12. Look at the map of the Carson River Watershed. A watershed is an area of land that is drained by a river. This means that any water that falls on this area as rain or snow, that doesn't evaporate, eventually ends up carried away by the river.

Is this watershed a system? _____ Explain _____

13. What are some components of this watershed?

14. Can any of these components be changed? _____ Which ones? _____

15. Choose one of your answers from the previous question and tell how you think that changing this component would affect the watershed.

16. Explain how this watershed can be considered to be part of a larger system. _____

17. What are some of the systems within the system of this watershed? _____
