

# Test: Systems Thinking

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## Part A: Matching

Match the term with its correct definition. Write the letter on the line.

Term	Definition
1. ____ System	A. Information or matter that enters a system
2. ____ Input	B. A group of connected parts working together
3. ____ Output	C. Information or matter that leaves a system
4. ____ Feedback	D. A change in one part affects other parts
5. ____ Interdependence	E. Information from a system used to make changes

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## Part B: Multiple Choice: Choose the best answer for each question.

- What is a system?
  - A single object with no purpose
  - A collection of parts that work together
  - A type of machine only
  - A scientific theory
- Which of the following is an example of a system?
  - A bicycle wheel
  - A school
  - A single pencil
  - A rock
- In systems thinking, an input is:
  - Something that leaves a system
  - A problem in the system
  - Something that enters a system
  - The final result
- Which is an example of an output in a plant system?
  - Sunlight
  - Water
  - Oxygen released by the plant
  - Soil
- What does feedback do in a system?
  - Stops the system from working
  - Provides information that can affect the system
  - Removes all inputs
  - Creates a new system

11. Why is systems thinking useful?
    - a. It ignores relationships between parts.
    - b. It focuses on only one part of a problem.
    - c. It helps us understand how parts work together.
    - d. It eliminates the need for observations.
  12. Which statement best describes interdependence?
    - a. Parts of a system work separately.
    - b. One part of a system affects other parts.
    - c. Systems never change.
    - d. Inputs and outputs are the same.
  13. A car is a system because:
    - a. It contains only one part.
    - b. Its parts work together to make it move.
    - c. It has no inputs or outputs.
    - d. It does not require energy.
  14. Which of the following is an input for a car?
    - a. Exhaust gases
    - b. Movement of the car
    - c. Fuel
    - d. Heat from the engine
  15. A food web is considered a system because:
    - a. Organisms do not affect one another.
    - b. It has no inputs or outputs.
    - c. Organisms interact and depend on each other.
    - d. It only contains plants.
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### Part C: True or False

Write T for True or F for False.

16. \_\_\_\_ Systems can be found in nature and in human-made objects.
17. \_\_\_\_ A system is made up of only one part.
18. \_\_\_\_ Outputs leave a system.
19. \_\_\_\_ Feedback can help a system adjust or improve.
20. \_\_\_\_ Changes in one part of a system can affect other parts.
21. \_\_\_\_ The human body is an example of a system.
22. \_\_\_\_ Inputs and outputs are not important in systems thinking.
23. \_\_\_\_ Systems thinking helps scientists understand complex problems.
24. \_\_\_\_ Ecosystems are examples of systems.
25. \_\_\_\_ Systems never change over time.