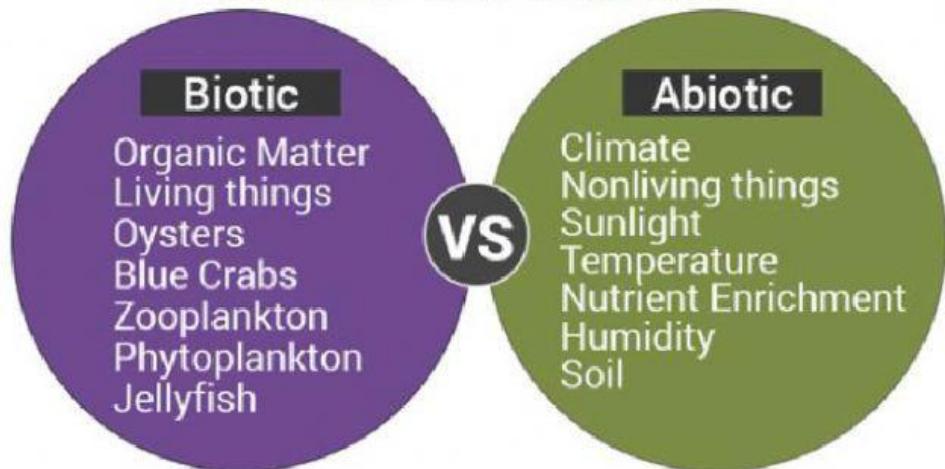


Biotic Vs. Abiotic



Biotic and abiotic are the two essential factors responsible for shaping the ecosystem. The biotic factors refer to all the living beings present in an ecosystem, and the abiotic factors refer to all the non-living components like physical conditions (temperature, pH, humidity, salinity, sunlight, etc.) and chemical agents (different gases and mineral nutrients present in the air, water, soil, etc.) in an ecosystem. Therefore, both the abiotic and biotic resources affect survival and reproduction process.

Assess It! #1

Prairie dogs live in complex tunnels underground and compete with other herbivores in the ecosystem. Which is the abiotic factor in this situation?

A. Prairie dogs
B. Underground habitat
C. Other herbivores
D. Grasses

Assess It! #2

Which is not an example of an abiotic factor?

A. Sunlight
B. Wind
C. Fungi
D. Water from a stream

Abiotic vs Biotic Factors

1. What is the definition of an abiotic factor?

2. What is the definition of a biotic factor?

Label the following items as either abiotic (A) or biotic (B):

3. <input type="checkbox"/> whale	8. <input type="checkbox"/> glass	13. <input type="checkbox"/> snail	18. <input type="checkbox"/> wool
4. <input type="checkbox"/> clock	9. <input type="checkbox"/> aluminum	14. <input type="checkbox"/> steak	19. <input type="checkbox"/> gold
5. <input type="checkbox"/> water	10. <input type="checkbox"/> metal ruler	15. <input type="checkbox"/> bread	20. <input type="checkbox"/> plastic
6. <input type="checkbox"/> fish	11. <input type="checkbox"/> sand	16. <input type="checkbox"/> plant	21. <input type="checkbox"/> grapes
7. <input type="checkbox"/> paper	12. <input type="checkbox"/> clouds	17. <input type="checkbox"/> pipe	22. <input type="checkbox"/> air

All biotic and abiotic factors are interrelated. In nature, you will find that if one factor is changed or removed, it impacts the availability of other resources within the system. Knowing this, give an example of what might happen given the following situations:

(In the open space place either an (A) for abiotic or (B) for biotic to identify the **bolded** object.)

23. All of the **rocks** () are removed from a desert ecosystem, what would happen to the population of rock dwelling **lizards** () and in turn the animals which eat them?

24. A ten mile area of **trees** () is removed from the tropical rainforest. How will this affect the amount of **water** () and the amount of **oxygen** () in the area?

Abiotic and Biotic Factors

How do biotic factors limit other organisms in their environment?

Parasitism – when an organism lives off of a host organism sometimes killing the host.

- Worms in animal digestive tracts
- Mistletoe in trees
- Pine bark beetle invade and kill pine trees.



How do abiotic factors limit organisms in their environment?

Example: Drought, floods, pollution.