

Name _____

Shaken, Not Stirred: Exploring the Impact of Disturbances on Ecosystems

Open-Ended Response Answer Key

1. Disturbances disrupt ecosystem functioning, creating opportunities for renewal and regeneration. For example, wildfires clear vegetation, allowing new growth, while floods redistribute nutrients and create new habitats.
2. Human-induced disturbances, such as deforestation and pollution, can have long-term effects on biodiversity and ecosystem resilience. For instance, deforestation can lead to habitat loss and fragmentation, reducing species diversity and ecosystem stability.
3. Disturbances can act as natural selection pressures, favoring species with specific adaptations. For example, plants with fire-resistant bark may survive wildfires, while those without such adaptations perish, leading to changes in species composition.
4. A real-life example of ecological succession following a disturbance is the regeneration of a forest after a wildfire. Pioneer species like grasses and shrubs colonize the burned area, followed by the establishment of young trees and eventually, a mature forest ecosystem.

