Explain how the following human activities can reduce biodiversity.

|  |  |
| --- | --- |
| Human activity | How this can reduce biodiversity |
| Overexploitation |  |
| Habitat destruction |  |
| Monocultures |  |
| Pollution |  |

Explain how the following factors can be a limiting factor for population growth.

|  |  |
| --- | --- |
| Factor | How it can affect population growth |
| Biotic | Competition for resources |  |
| Predation |  |
| Disease |  |
| Abiotic | Space |  |
| Availability of nutrients |  |
| Pollution |  |
| Natural disasters |  |
| Extreme climatic events |  |

Describe the carbon cycle

Describe the nitrogen cycle. Highlight processes in one colour and the bacteria in another.

Describe the water cycle

Define ecological niche

Name some keystone species

Define carrying capacity

Define keystone species

Draw pyramids of number, energy & biomass for: Oak tree 🡪 Aphids 🡪 Ladybirds 🡪 Birds

Gross inputs and outputs of respiration

Gross inputs and outputs of photosynthesis

|  |  |  |
| --- | --- | --- |
| Feature | Primary Succession | Secondary Succession |
| Type of species present |  |  |
| Biodiversity |  |  |
| Biomass |  |  |
| Biotic interactions |  |  |
| Abiotic interactions |  |  |

What is the effect of changes within population-limiting factors on the carrying capacity of the ecosystem?

Contrast primary and secondary succession.

Describe how population size can be estimated using the Lincoln Index.

What do arrows represent in food chains and food webs?

Growth shown by S curve

Growth shown by J curve

What is NPP?

What is GPP?

Explain the transfer and transformation of solar energy into biomass as it flows through biotic components of an ecosystem:

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Describe how energy is lost in a food chain

Equation that links GPP and NPP together

Lincoln Index equation:

Describe the competitive exclusion principle

What is a food chain?

Population growth equation:

What information can be used to show changes in biotic and abiotic components of past ecosystems?