The six extinction
Extinction: the complete loss of species

Threaten organism: a high threatened species due to human activities

There have been 5 mass extensions
History of extinction

- Biodiversity of life has increased over 580 million years

Mass extinctions

- Species loss on a global scale
- Affects a large number of species
- Dramatic impact
- Probably caused by a massive global change
    - climate fluctuations that changed the sea level
    - continental drift that changed ocean and land forms
    - asteroid impact that caused widespread destruction and climate change

Extinction are caused by various events

Causes of extinction

- Loss or degradation of habitat
- Introduction of nonnative species
- Over-exploitation of species
- Pollution

Extinction due to habitat

Habitat: THE PLACE WHERE A PARTICULAR SPECIES LIVES AND OBTAINS FOOD, WASTE, shelter, and space
Habitat degradation is when there is damage and destruction to the habit
Habitat destruction: human modification and degradation of nature forests, grasslands, wetlands, and waterways

- Accelerated rates of destruction in 20th century due to human population growth
- Most serious threat to species around the globe
- Caused by human use and development

Habitat fragmentation - Large nature areas subdivided to small areas

- More commonly caused by human activity
- Especially threatening to large predators

Extinctions disrupt food chains

Food chain: linear flow of energy within an ecosystem, energy flow in one direction

Sun→ producer → primary consumers → secondary consumers

- Producers: photosynthetic organisms
- Primary consumers: feed on producers
- Secondary consumers: predators that feed on primary consumers

Trophic level: a level of the food chain

Extinctions disrupt trophic levels

Trophic pyramid: the flow of energy along a food chain

- Most biomass (total weight) at the bottom level
- Much energy is lost as heat between levels
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The Consequences of Extinction

Biological community: all of the organisms living together in a particular habitat area

- Ecological niche: the role or "job" of the species
- Humans benefit from he community species

Food web

Nonnative species lead to extinctions too

Introduced (invasive) species: organisms brought by human activity, either accidentally or purposely, to new environments

- Dangerous to native species due to a lack of coevolution: groups of species adapt to each other through natural selection
- Native species have

Overexploitation is a major cause of extinction.

Overexploitation: when the rate of human use of a species outpaces it reproduction

- If organism

Pollution is the final cause of extinctions

pollution: the release of poisons, excess nutrients, and other waste products into the environment

Excess nutrients flowing into ware

- Increases algo production
    - may produce toxic

Extinction affect ecological relationships
Mutalism : interactions between two species that benefit each other
Commensalism : relationship in which one species benefits and other us unaffected.

Predator: species that survive by eating another species
Competition : occurs when two species require the same resources for life

Extinctions affect keystone species

Keystone species: play a dramaticn rolenin determining the composition role in determining the competition of a systems food web, may have indirect effects on the community