

POPULATION MANAGEMENT

Part 1. Vocabulary. Terms can be found in Population Biology Powerpoint or on the internet.

Tragedy of the commons:

Minimum viable population:

Logistic carrying capacity:

Optimum sustainable population:

Time series:

Historical range of variation:

Endangered species (IUCN):

Threatened species (IUCN):

Local extinction:

Global extinction:

Part 2. Reading. Answers can be found in Population Biology Powerpoint or on the internet

1. What does it mean to save a species?
2. Draw and describe the S-shaped logistic curve in relation to population management. Use the terms Maximum Sustainable Yield and Carrying capacity.

3. On the curve you drew above, label the Carrying Capacity (K) and Maximum Sustainable Yield (MSY).

4. What have efforts to save the grizzly bear and American bison told us about estimation of population sizes?

5. What are the more recent principals of wildlife management (shorten them and put them in your own words)?

6. How does age structure help to conserve a species?

7. What does the reading tell us about the sustainability of fisheries?

8. What makes fisheries so challenging to maintain?

9. What has happened to the rate of extinction over time?

10. How do people affect biological diversity?

11. What do we do when a species becomes too abundant?

12. How is climate change affecting different species?

Bonus: Play the “Tragedy of the Commons” activity that is attached with your family and explain to them the significance of the game.

Challenge

Directions: Choose one of the species on the IUCN red list (iucnredlist.org) or the world wildlife federation (worldwildlife.org) and make an advocacy video with your phone or lap top. Inform your audience what the current population is and which way the population is trending. Let us know what some of the current threats are and some conservation efforts that are currently in place. Then offer some ways in which we can improve our conservation efforts. If you would like to share your completed video, feel free to email it to me and/or your peers.