

Materials:
Pencil, Notes, Smart Phone/Tablet

Group Member Names

1) 3)

2) 4)

Secondary 4 Science & Technology

Cecil the Lion: Populations & Communities [Chapter 9]

Video Introduction

<http://www.cbsnews.com/news/cecil-lion-illegally-poached-killed-american-hunter-zimbabwe-groups-say/>



Associated Problem?

*Definition

a pride is a family group of lions that live together.

1) What happens to the rest of Cecil's pride* now that he has been killed?

- Females of the pride claimed by other male lions
- Whole pride adopted by Jericho, a lion that was allied with Cecil
- Lion cubs/children killed by new dominant male

2) What happens to the community of Hwange National Park if humans are killing lions for sport? Specifically, describe the effect on two of the following species: African Wild Dogs, Zebra, Savannah Grass, Elephants, Cheetah, Leopards, Teak trees.

Wild Dogs, Cheetah & Leopards

- Less competition with lions for food
- Populations increase

Zebra

- Less predation by lions
- Populations increase

Savannah Grass

- More predation by increased zebra populations
- savannah grass population declines

Elephants and Teak Trees

- Not directly affected by a change in the lion population
- Population size remains the same

- 3) In the table below state how a scientist could measure or estimate the size of a population of the following organisms and give a justification for your answers.

Species	Technique	Justification
Elephant	Mark and Recapture	Mobile herd animals that can't be relied on to stay within a given area
Baobab Tree	Counting by sample area Or Counting individuals	Trees don't move and are easy to count and baobab trees are rare and could be counted individually
Dung Beetle	Counting by sample area	Small animals that don't move very quickly and can be counted within quadrats

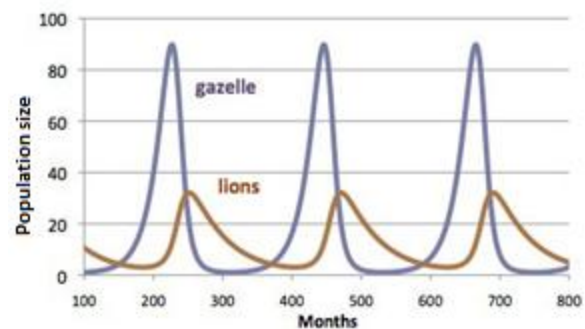
- 4) As an ecologist, how would you describe the distribution of the following species?

Elephant Clumped Distribution	Baobab Tree Random Distribution
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- 5) Under natural conditions the lion and gazelle populations in Hwange National Park follow a biological cycle together.

- A) What type of interaction do these species have?

Predator/Prey



- B) If new laws and policies are passed to stop the hunting of lions by humans what will happen to the populations of lions and gazelle in the park?

The lion population will begin to grow as the limiting factor of trophy hunting was removed. After the lion population increases, the gazelle population will decrease because of increased predation from the lions.

- C) Which group would be affected first: lions or gazelle? Explain why.

The lions would be affected first. This is because the limiting factor of trophy hunting directly limits the lion population. The decrease in the population of gazelle happens as a result of increased predation which can only happen if the lion population has already increased in size.