

Lowland gorilla challenge

Introduction

The previous session taught the learners the importance of being precise in calculating percentages of an amount over a period of years. This session will now look at making calculations to show what may happen to the gorilla population in the long term.

Support notes

The [lowland gorilla population challenge](#) may be displayed on the whiteboard and the learners can answer the questions individually. You can decide whether you want the learners to create questions in pairs or individually.

The challenge is designed to help the learners create their own questions and challenge their peers. This teaches them the important skill of being able to formulate relevant questions, pitched at the appropriate level.

Once the learners have completed the challenge, there is plenty of scope for discussion about the problems they encountered creating questions and the strategies which they developed to create appropriate questions.

The plenary can involve using some of the question cards which the learners have created during the task. These cards can also be used in subsequent sessions. These cards provide a creative summative assessment of the learners' understanding of calculating a percentage of a quantity.

Resources

The following websites are useful to introduce and revise percentages, in general, before embarking on the percentage challenges relating to the fluctuation in gorilla population.

[Simple and effective introduction to percentages](#)

[This simple activity compares percentages, decimals and fractions while designing the surface area of a park](#)

[This activity helps children to work out percentages of quantities but is simple.](#)

[This activity is more complex but is a good starting point to then help children work out the problems within the Gabon numeracy challenges.](#)

Statistics on Western Lowland Gorilla population and threats to this population

- Forest coverage of Gabon: 49.4 million acres or 85% of the country's land.
- Logging potential: 30.8 million acres or $\frac{3}{4}$ of Gabonese forest.
- Gabon lost an average of 10, 000 hectares of forest per year between 1990-2000.
- Protected areas of 9.8 million acres including 13 national parks.
- The rural forest domain is 19.7 million acres (spaces reserved for local populations).
- Gabon's national parks: 10% of Gabon's area set aside for gorillas and other wildlife. This is 10, 000 miles or 25, 900 square kilometres.
- Disease: Ebola virus and hunting caused over 90% mortality in some areas.
- Overall decline of more than 60% in Western lowland gorilla population over the last 20-25 years.
- Gorillas live long and have a low reproduction rate. Their maximum rate of increase is 3% per year.
- Population: in the 1980s estimated at less than 100, 000.
- In 2008, a population of 125, 000 was discovered in remote areas of Northern Congo.
- Therefore, at present, the total estimate for population is 150,000 to 200,000.
- Statistics for gorilla population in Gabon: the average annual decline in Gabon, between 1983-2000, was 4.7%. During this time period, roughly half of Gabon's gorillas disappeared. This was calculated by comparing two country-wide surveys 20 years apart. The North East of Gabon was hit by Ebola between 1996-2003. The highest mortality rates for Ebola virus were over 80% in two known gorilla populations in Gabon.
- No overall estimates for gorilla population loss due to hunting. However, it has been estimated that 5% of the gorilla population of North East Congo is killed every year. (Compare this to the maximum rate of increase of 3%).

Statistics based on information retrieved from the following sites on 25.02.12

- <http://www.iucnredlist.org/apps/redlist/details/9404/0>
- <http://www.iucnredlist.org/documents/attach/9404.pdf>
- <http://www.cotf.edu/ete/modules/mgorilla/mgorilla.html>
- <http://www.sbes.stir.ac.uk/research/ecology/afeg/research.html>
- http://www.yog2009.org/index.php?view=article&catid=46%3Agorillaspecies&id=63%3Aawlgspeciesinfo&option=com_content&Itemid=70