

**School name:** Melrose Middle School

**Area of science:** Ecology

**Project Title:** Blood Ivory

**Problem Definition:**

Throughout history, the human desire for ivory has outdone the efforts to stop the trade of ivory. While it is a pretty thing to have, Ivory comes at a huge cost to the African elephants population. In some countries of Africa, including Senegal, Somalia, and Sudan, elephants have already been driven to localized extinction. The peoples of these countries have been killing elephants and taking their tusks in order to support the ivory trade. The ivory demand comes from mostly Asian countries such as Japan, China, and Korea. They use the ivory for things such as: jewelry making, piano keys, sculpting, and religious ceremonies.

Many people believe that elephants are just stupid animals with no emotion or feelings however elephants share the same emotions and cognitive behavior as humans. They grieve for their losses; they feel fear, joy, and empathy. Elephants are a keystone species; other animals, plants, and ecosystem depend on their survival so along with their loss goes the ecosystems they help support. Elephants, although protected by multiple laws against killing them, are hunted by criminal gangs for their ivory, meat, and babies to be beat into submission for a future life in entertainment or manual labor. If the ivory trade does not stop, there will be a mass extinction of the African elephants.

**Problem solution:**

We will help the problem by promoting awareness for elephant extinction. We will help others understand that it is not just elephants that will go, but entire ecosystems, tree species, and small animals along with them. We would like to build a model about elephant ecology. In our model we will show the rate at which elephants are going extinct as well as different variables as to how it can and will change as elephant poaching speeds up and slows down. Some variables we can show are: the rate of reproduction, death by disease and poaching, the way the ecosystems change, and how people can slow down their extinction by decreasing the ivory demand. We are currently working on how to incorporate the need for food and water into the list of shown variables. We will need to show these things because those are the main causes of elephant extinction. Elephant death rate will have to change tremendously for the elephant species to be conserved.

**Progress to date:**

We have researched how Ivory trade has increased in the 1970s. Demand of ivory rocketed with 80% of Ivory coming from poached elephants. We have learned how international Ivory trade was prohibited in an attempt to fight this illegal trade. Since records began, 2011 saw the largest recorded black market ivory trade increase. We read that 38 elephants range states were set with the main objective to stop poaching of the elephants, but it did not work. We expect to raise awareness of the problem by modeling what can happen. We believe that if people are aware that if the elephants go they will take entire ecosystems with them, they will help in the fight against ivory trade. The usefulness of this is to

show people that elephants are a keystone species in large ecosystems and many different species depend on their survival.

**Expected results:**

We expect to raise awareness of the problem by modeling what can happen. We believe that if people are aware that if the elephants go they will take entire ecosystems with them. They will help in the fight against ivory trade. The usefulness of this is to show people that elephants are a keystone species in large ecosystems and many different species depend on their survival. This model will show the importance of their survival. We will show the rate of reproduction, death by disease and poaching, the way the ecosystems change, and how people can slow down their extinction by decreasing the ivory demand.

**Cites:**

Iworry.com a web site that gives info about ivory trade

National geographic Blood ivory Issued October 2012

Wwf.com web site that gives info about elephants

I dreamed I was in Africa a book by kuki gullmann

Ivory ghosts by Caitlin O'Connell book about ivory trade