Extinction and Coding

This activity was created by Toni.

Extinction is when the last of a species dies and that group no longer exists. Extinction can happen to any living organism.

There are several ways that extinction can happen:

1 **Pollution** happens when dangerous contaminants are added to an environment and causes a negative change.

2 **Loss of habitat** is when the place that a species lives is destroyed or taken over by another species.

3 **Overhunting,** when a species is hunted so much that it doesn't get a chance to reproduce before they are endangered or extinct. They are hunted more than they can reproduce their population.

4 **Trophy hunting**, when a human hunts an animal for fun. Poaching is when hunters kill animals for certain body parts (tusks, furs, teeth, fins) in order to sell them.

5 **Natural forces**, when a major natural event causes irreparable damage to an environment, including killing entire species. Examples include flooding, forest fires, mud slides.

6 **Introduction of a new species**, sometimes, humans introduce a new species into a foreign habitat. If this species becomes very strong and multiplies to high enough numbers, it may kill another species by hunting it or by taking over its home and leaving them with no place to live. The new species could also become a competitor to the original species, hunting the same food until the original species has nothing to eat.

Sometimes, it takes multiple factors to make a species go extinct. For example, a species that is losing its habitat and is being hunted, might become extinct quicker than a species that still has its habitat.

Do you know of any animals that are extinct? Write your answers below!

Now let's format extinction so it looks like a coding language. Here are a few rules to follow:

1 In coding, the simpler the code is, the better. This means that lots of words are shortened. For example, function becomes Func.

2 When writing out code, words don't have spaces in between them. Each new word in a line of code is also capitalized.

3 When you define a function, you need to include the word "function" at the beginning. This let's anyone reading the code know that the big event is seperate from the steps that it needed to complete it.

4 Functions are written as the first line of code. Components of the function are then put between curly brackets below the first line.
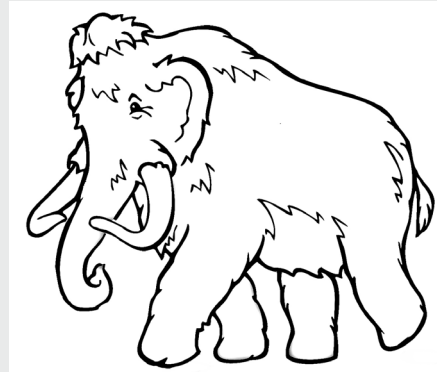
Coding an extinction
An easy way to visualize extinction is by using a coding language. In order to operate, computers follow a series of commands called functions. Functions are tasks that are made up of many little steps called components. Let's try and apply this thinking to the concept of extinction.

This is a Woolly Mammoth. It went extinct following an Ice Age.

Can you find the function in this example?
What is the component that made the function possible?

Take a look at the list of ways extinction can happen. What category does the Ice Age fit into?

Function: _____
Component: _____

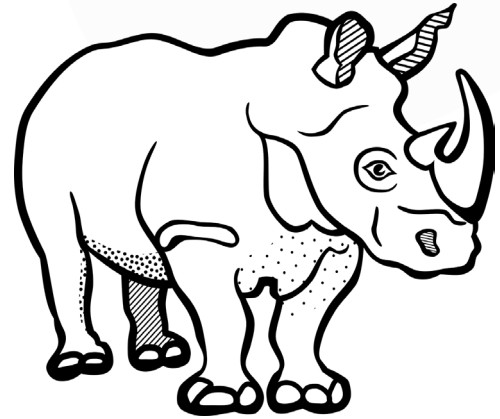Let's try writing out the function and components in coding language

```
FuncExtinctionOfWoollyMammoth():
{

NaturalForce

}
```

Now that you know how to write code and what you need to do it, test out your skills on the extinct species on the next page!
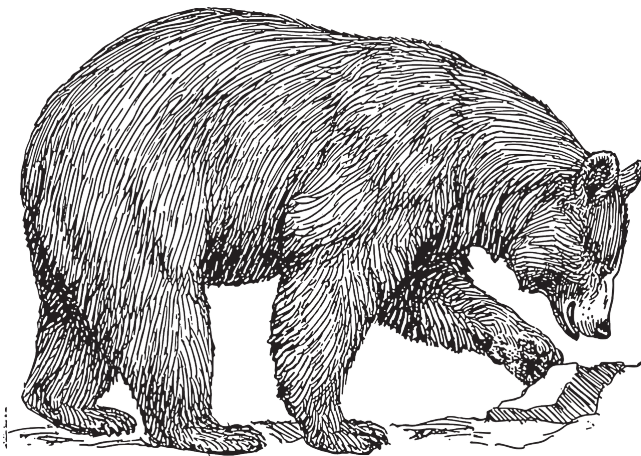
This is the Western Black African Rhino. They went extinct in 2011 because their habitats in Africa were damaged by humans and they were being hunted and killed illegally for their tusks.
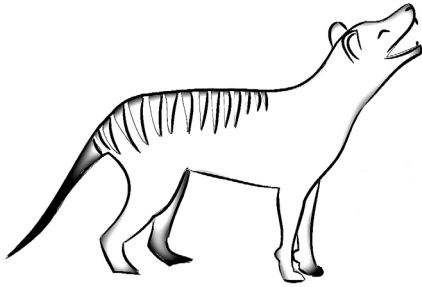
Func_____():
{

}

This is a California Grizzly Bear. The last one died in 1924. There used to be nearly 10 000 living in the wild but that changed after California was colonized in the late 1700s. When ranchers started raising cattle in California, the bears hunted the cows for food. To stop this from happening, ranchers would capture the bears and make them fight against their biggest bulls, which sometimes led to the bear dying. Ranchers would also actively hunt and kill the bears, even if the bear wasn't a threat to it's herd.

Func_____():
{

}

Date: _____   Name: _____

This is a Thylacine, also known as a Tasmanian tiger. The last of it's species died in 1936 while living in an Australian Zoo. The thylacine was a species native to Oceania and came into existence 4 million years ago. Thylacines were carnivores and preyed on herds of sheep in Australia. Because of this, awards were given to farmers and hunters that would kill thylacines to stop the sheep population from declining. Thylacines also had a hard time finding food because they were competing with another predator. These predators were called Dingos and they were introduced to Australia a few thousand years ago.

Func_____():
{

}

Coding challenge

Your turn! Find a species that is nearly extinct. This is called being an endangered species. Find all the reasons that the species is going extinct. Write it out in a function and component form in the box below.

Species chosen: _____

Reasons it's endangered:

You know all about how a species goes extinct. That means that you also know what humans need to do to stop it from happening. For the species you picked, write a code that will help the species survive. Make sure you include multiple strategies to help this species in your components!

Func_____():
{

}