

# Lab #2: Create Your Original Dragon

## Introduction:

Scientists have recently discovered what is to be believed as a series of ancient dragon's nests in the Arctic. They have been able to extract fossilized sperm and have perfectly preserved dragon eggs. These eggs were preserved at extremely low temperatures, and scientists believe some of the eggs might be viable. They theorize that they can bring dragons back to life by using the fossilized sperm to inseminate the eggs.

You have been tasked with combining various genotypes to create the "best" female or male dragon. Your dragon will be bred with another dragon in an effort to "bring back" *Draconus arcticus* from extinction. The future of dragons is in your hands, choose wisely!

## PART A:

In order for your dragon to be selected for breeding, the D.R.A.G.O.N. Society needs the genotypes and a representation of the dragon featuring its various traits.

In order to meet the standard, you must complete the following:

- Use genotypes to identify phenotypes in your dragons.
- Represent your dragon based on chosen phenotypes.

**Step 1:** Pick your lottery chip to determine if you will have a male or a female dragon.

**Step 2:** Then, complete the Dragon Traits Survey to select your dragon's genotypes. *Remember, some traits are sex-linked (like spikes).* Write the genotype for each trait you selected in the space provided. Remember, dominant traits usually have two options for the genotype (ZZ and Zz), while recessive traits have just one (zz). *Watch out for incomplete dominance, epistasis, and sex-linked inheritance genotypes! They do not follow this general rule.*

**Step 3:** Create a representation of your dragon showcasing its phenotypes. Your phenotypes **must** be based on your survey and their corresponding genotypes.