

Geniquest Dragon Breeder

Last Name _____, First _____ per _____

Open the Geniquest program and work through the intro and rules. Record the genetic rules as you discover them.

Intro and Rules

1. Challenge #1: Determine whether fancy tails on dragons is a dominant or recessive trait.
 - a. Based on your 1st set of breeding experiments, what kind of trait do you think fancy tail is? _____

2. If one parent has wings, does that guarantee that the child will have wings? _____
 - a. Is the trait wings dominant or recessive? _____

3. Experiment with changing the alleles of dragons.
 - a. Circle the gene combinations that yield a fancy tail TT, Tt, tt
 - b. Circle the gene combinations that yield wings. WW, Ww, ww
 - c. Is the trait legs dominant or recessive? _____
 - d. Is the trait fire dominant or recessive? _____
 - e. Experiment with the color alleles. Make a list of all the different colors you can create and their gene combinations. Also note any other affects that the gene combinations create.

Color	Gene Combination(4 alleles)	other affect
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Geniquet Dragon Breeder continued

Pedigree and Genes

The challenge of this level is to create a pure bred strain, one female and one male that will produce offspring exactly like the purebred parents every time. Good Luck. When you have achieved success, then describe the traits of your purebreds and explain how you achieved this challenging feat.

The Plates Problem

The challenge of this level is to determine which chromosome the gene for plates is located. To find out, you must experiment with breeding dragons on the pedigree level. Explore this level and see if you can solve the mystery of plates.

When you think you have solved the mystery, then write an explanation of how you solved it.
