

Learning Target: I will analyze and interpret data in order to identify patterns in selective breeding.

Breeding Dragons

Have you ever wanted a pet? Now is the time to get a very special one: Breed yourself a dragon!

Materials

- List of dragon breeds with pictures and descriptions
- Just Flip A Coin Website (linked below)

Procedure

1. Decide what kind of dragon you want to have and why. Be specific: List the features you would like your dragon to have and explain why these features are important to you. Suggest a task you would perform with your dragon. It can be anything—be creative!

Description of your dream dragon:

Can fly long and breaths fire

2. Carefully review the descriptions of the existing dragon breeds linked [HERE](#).

3. Select two dragon breeds with the features you think most likely to produce a dragon with the traits you desire. If you cannot find a dragon pair that combines all the traits you are looking for, you should prioritize the required traits, or plan to get the desired baby dragon in a second round of breeding.

Selected dragon breeds:

Arcticus glaciaticus	x	Ignis antiphon caldus
mother		father

4. Each breeding dragon pair will produce three puppies, and each of them may inherit a certain trait either from the mother or from the father.

You will determine this by a flip of a DIGITAL coin:

HEADS = the female's (mother's) feature, TAILS = the male's (father's) feature.

You will flip a coin for each trait to be inherited for each baby dragon separately.

The digital coin site is linked below.

5. Record the results of your coin flips and determine the traits of each baby dragon you get in the table on page 2.

6. You may repeat the breeding process once again, choosing a different dragon pair, or including your newly produced dragons in the breeding.

7. Compile the baby dragon you like best from the dragon cut-outs.

STUDENT SHEET → Use [Just Flip A Coin](#) to determine your traits.

Table 1: Traits and abilities of dragon pups

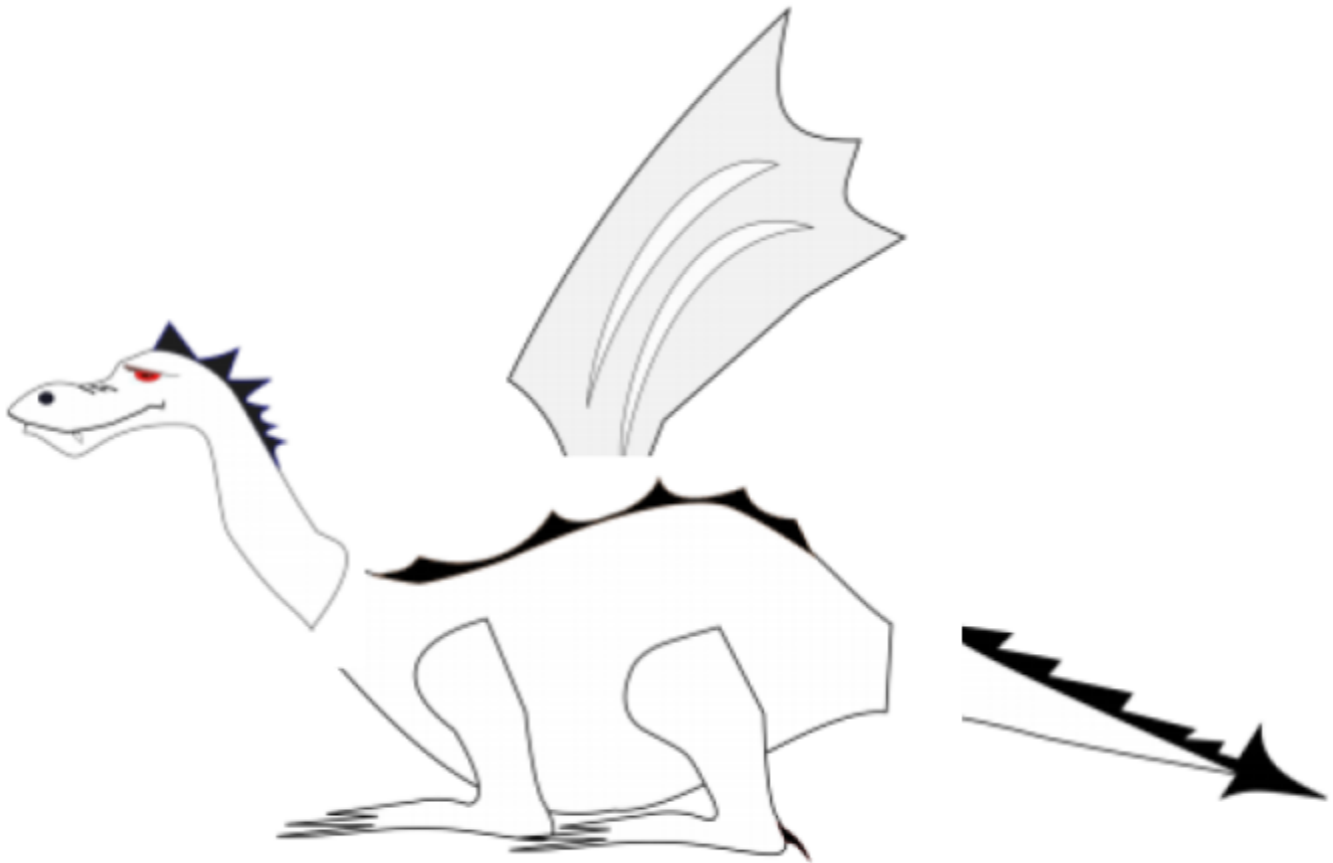
Pups from:	(mother x father)		
Trait / ability:	First pup*	Second pup*	Third pup*
Head shape/size	father	mother	mother
Wing shape/size	mother	father	mother
Tail shape	mother	mother	father
Body shape	father	mother	father

**list “inherited from mother” or “inherited from father” for each trait*

Choose a dragon pup to create. **HIGHLIGHT** the dragon pup column you choose to create.

Double-click the drawing below to create one of your dragon pups.

Feel free to delete the options you didn't use.



Analysis Questions:

1. Does your dragon baby meet your expectations? Explain.

Yes because it can breath fire and fly well

2. You determined the features of the baby dragon by tossing a coin. What biological process or processes does this action represent?

Determining which traits they will have

3. Compare the baby dragons. Are they identical? If not, how do they differ? Do any of them have everything you were looking for?

No because they look different than both

4. What does the expression “dragon breed” mean? What is the difference between a “dragon breed” and a single dragon?

A dragon breed is made from two dragons not one and will have different traits

5. Would the baby dragon you have just produced be able to establish a new dragon breed? Why or why not?

Yes because it can have offspring