

Name: _____

Packet Due Date: _____

Life Science	
Unit 4	Genetics
Part 2	Ethics and Genetics



Grading for each section you will earn a grade based on the following criteria				
4	3	2	1	0
Nothing is missing. Responses consistently meets ALL the criteria for high quality work. Evidence of exemplary effort is evident.	Work is 75-100% complete and accurate. Work/effort misses the criterion for high quality consistently.	Work is 50-75% complete and accurate. Work has evidence of quality but not consistently.	More than 50% of the work in incomplete or incorrect. Work does not meet the expected level of quality.	No work completed.

WHAT ARE ETHICS AND HOW THEY ARE RELATED TO SCIENCE

_____ are the rules or standards governing the conduct by which I live my life and make all my decisions. One of the best ways of thinking about ethics is to take a quick look at what you believe and then think about how you would react when those beliefs are challenged.

Why do you think that people would not all have the same ethical viewpoint?

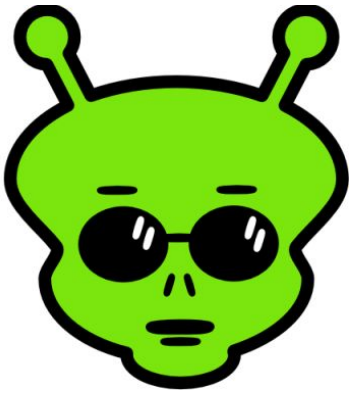
How do Ethics relate to science?

Science has the capacity to cure diseases, improve crop yields, reshape the planet and carry us into the cosmos, but are there also downsides to science when we do not think about the moral implications of experiments.

Video Notes:

What were some of the ethical problems related to this experiment?

Create a Alien




Part 1 Procedure:

1. Flip a coin twice to determine the **genotype** for each trait and record it in the data table.
Heads = allele 1, Tails = allele 2 (*Example: if you flipped heads twice, your monster will have two copies of allele 1 for his genotype.*)
2. Determine the **phenotype** resulting from the allele pair for each trait.
3. Repeat steps 1-2 for each trait and complete the female monster's Table 1.

Table 1: Genotypes & Phenotypes for Female Monster

Trait	Allele 1	Allele 2	Genotype	Phenotype
Eye	Two small eyes (E)	One large eye (e)		
Eye Color (incomplete)	Red (R)	White (R')		
Skin Color (codominant)	Green (G)	Blue (B)		
Tail Shape	Curly (C)	Straight (c)		
Tail Color	Purple (P)	Orange (p)		
Tail (regulatory gene)	Have tail (T)	No tail (t)		
Teeth	Sharp (S)	Round (s)		
Feet (incomplete)	Four toes (F)	Two toes (F')		
Horn Color	Purple (W)	White (w)		
Ear shape	Pointy (Y)	Round (y)		
Ears (regulatory)	No ears (N)	Two ears (n)		
Claws	Long (L)	Short (l)		

Draw the Alien you created?



Ethical Dilemma

Was the alien that you created; what you would have wanted?

How would you have created the alien if you could have picked anything?

_____ is the deliberate modification of the characteristics of an organism by manipulating its genetic material.

GMOS

_____ or genetically modified organism, is a plant, animal, microorganism or other organism whose genetic makeup has been modified in a laboratory using genetic engineering or transgenic technology

What are some examples of GMO foods?

Why did people want to genetically modify food?

Ethical Dilemma

Pro and Cons of GMOS

Pros	Cons

