only con do with  Name: and Stocket copy of  Name: troits + access  * Compture leb day *  researce early Super Hero Project Dane w/ or after  troits, Alleles lesson
Helpful Sites: marvel.com, marvelkids.com, DCcomics.com

Day 1: Activity - Finding your super hero / villain

**Objective:** To determine the **Phenotype** and **Genotype** of a chosen super hero or villain.

## **MATERIALS:**

- 1. Internet/iPad access
- 2. Graphic Organizer
- 3. Pennies (2)

## PROCEDURE:

- 1) Students use the Internet to locate Marvel/DC Comic/Other sites that give backgrounds and physical characteristics of the super heroes or villains. (Examples would include Wolverine, Cyclops, and Elektra to name a few).
- 2) Students must search for a super hero or villain and develop a list of physical traits and powers that these super heroes/villains have that can be identified by physically looking at the characters (example: Eye color, Hair color, etc.) and also those unique to that individual (example: Superman's flight, Spiderman's wall crawling). Develop a list of **20 minimum** physical traits (phenotype) and abilities that your character has and record it in the Super Hero Trait Chart Graphic Organizer.

Super Hero Trait Chart Gr	aphic Organizer.	XM	lock Examples
Super H	ero/Villain Trait Cl		
Physical Trait/Ability	Phenotype	Genotype	
1)Hair			
2) Eye color			
3) Super human			
strength			

In Class Second Step.

3) Create a genotype for you super hero/villain. For each trait, you will pick a letter to represent that trait (example: Brown Hair = B). You will flip two

\* Model how to use the pennies

Show on PowerPoint Penny Chart or have students us making tape + labor sides

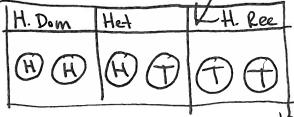
coins to determine if the trait is dominant or recessive. Heads will equal dominant, tails will equal recessive. If your coins land on 2 Heads, then you will have a complete dominant trait (example: Brown Hair = BB). If your coins land on 1 heads, and 1 tails, then you will have an incomplete dominant trait (example: Brown Hair = Bb). If your coins land 2 tails, then you will have a recessive trait (example: Brown Hair = bb). Record your genotype and phenotype in your Super Hero/Villain Trait Chart

Super H	ero/Villain Trait Chai	rt—Example	
Physical Trait/Ability	Phenotype	Genotype	
1)Hair	Blonde		-
2) Eye color	Blue		
3) Super human strength	Has Super Strength		

\* Put Questions After Super havo traits.

Questions:

1. What is the name of your Super Hero / Villain?



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pennie

- 2. What website did you use to find your information? morvel .com, google whages ... )
- 3. What are 4 examples of your Super Hero's / Villain's PHENOTYPE? (eye color, bein color,...)
- 4. From the examples you provided, what are the GENOTYPES? (if you picked eye color, what is eye color's genotype for eye color? AA, Aa, or your super hero's
- 5. From the examples you provided, what traits are dominant and what traits are recessive? (Homozygous Dominant AA, Heterozygous Aa, or homozygous vecessive aa)

Super hero nome\_\_\_\_

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Super Hero Willain Troit Chart Evennels						
	Super Hero/Villain Trait Chart—Example					
	Physical Trait/Ability	Phenotype	Genotype			
	01)					
$\Lambda$ 1 1	02)					
Add	03)					
Add traits	04)					
	05					
1-15	06					
to make	07					
	08					
ill heroes	09					
traits the	10					
Maits 4112	11					
Same	12					
t see	13					
nest	14					
Same & see Next page	15					
\ 0	16					
	17					
[	18					
	19					
	20					
	21					
	22					

A Superhero Family - Scoring Guide

	5	4	3	2	1
# of Traits identified	-identified 25	-identified 15	-identified 13-14	-identified 12	- identified less
	traits	traits	traits	traits	than 12 traits
Creation of	- identified 25	- identified 15	-identified 13-14	-identified 12	- identified less
Superhero	traits with a	traits with a	traits with a	traits with a	than 12 traits
Phenotype	phenotype	phenotype	phenotype	phenotype	with a phenotype
Creation of	- identified 25	- identified 15	-identified 13-14	-identified 12	- identified less
Superhero	traits with a	traits with a	traits with a	traits with a	than 12 traits
Genotype	genotype	genotype	genotype	genotype	with a genotype

Super Hero/Villain Trait Chart—Example					
Physical Trait/Ability	Phenotype	Genotype			
01) Eye Color		A)			
02) Hair Color		<b>B</b> )			
03) Hair Type		<b>C)</b>			
04) Face Shape		D)			
05 Tall		(3)			
06 Large		F)			
07 Male/Female		XX XY			
08 Cleft Chin		H)			
09 Widows Peak		I)			
10 Stranght nose		3)			
11 Large Nose		K)			
12 Lorge Ears		U			
13 Round Eyes		M)			
14 Powers		N)			
15 Powers		0)			
16		P)			
17 18					
19					
20					
21					
22					
23					
24					
25					
4J					

## A Superhero Family - Scoring Guide

	5	4	3	2	1
# of Traits identified	-identified 25	-identified 15	-identified 13-14	-identified 12	- identified less
	traits	traits	traits	traits	than 12 traits
Creation of	- identified 25	- identified 15	-identified 13-14	-identified 12	- identified less
Superhero	traits with a	traits with a	traits with a	traits with a	than 12 traits
Phenotype	phenotype	phenotype	phenotype	phenotype	with a phenotype
Creation of Superhero Genotype	- identified 25	- identified 15	-identified 13-14	-identified 12	- identified less
	traits with a	traits with a	traits with a	traits with a	than 12 traits
	genotype	genotype	genotype	genotype	with a genotype