

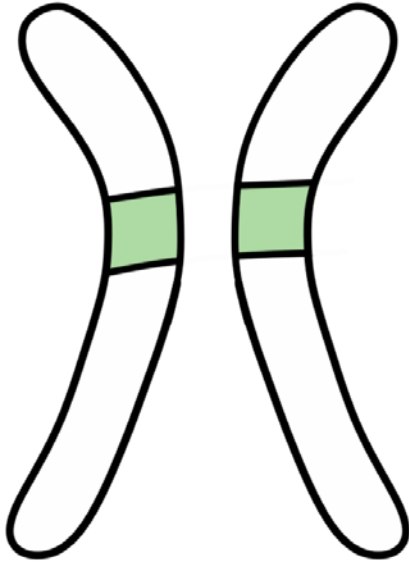


Amoeba Sisters | Video Recap

NAME: _____

Amoeba Sisters Video Recap: Alleles and Genes

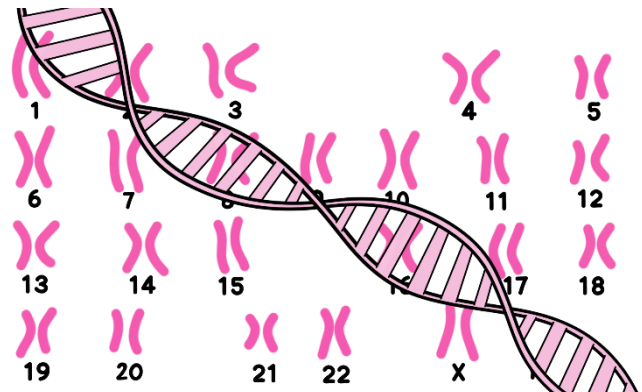
1. **Visualizing the Vocabulary:** For the following illustration, determine where you could label the following terms: **allele**, **gene locus**, and **chromosome**. Be sure to draw arrows to specify where you are labeling!



Analyzing Inheritance: A human's DNA code, found in nearly all body cells, can be condensed into **chromosomes**.

- How many chromosomes do humans have total in *each* *body cell? _____
- How many of those chromosomes in *each* human *body cell are from the mother? _____
- How many of those chromosomes in *each* human *body cell are from their father? _____
- How many *pairs* of chromosomes are there in *each* human *body cell? _____
- When looking at *each pair*, how many chromosomes in each pair come from the mother? _____ Father? _____

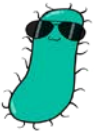
**some exceptions*



7. **Working with the Vocabulary:** *In your own words*, explain how a person may taste the bitterness of PTC by using the following vocabulary words in your explanation (choose any order): **trait**, **gene**, **genotype**, **phenotype**, and **alleles**. Underline each word as you use it in your explanation. In this explanation, you can treat PTC taste sensitivity as a single-gene trait. [As mentioned in the video, it may be more complex than a single-gene trait.]








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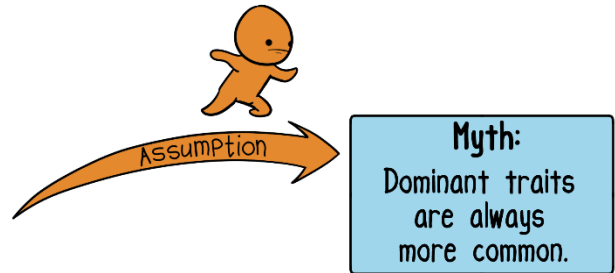
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8. **Deducing a Genotype:** If assuming PTC as a simple gene trait, what other genotype would you select to put in this missing genotype box that could result in this phenotype? Why?

PTC Taster (Dominant Trait)			
Phenotype	Genotype		
	<table border="1"> <tr> <td>TT</td> <td></td> </tr> </table>	TT	
TT			

9. **Relevant Scenario:** When explaining dominant and recessive traits to a younger family member, they respond, "Well chances are I can probably taste PTC, since dominant traits are more common." How might you address this misconception?



10. **Contrast:** Many times, students struggle with the difference between the terms **allele** and **gene**. How would you explain the difference of these two terms in a way that is memorable to you?

