



of Greater Indianapolis

WHO GETS WHAT? GENETIC TRAITS STUDY

Ages:

12-14

Description:

Girls will analyze genetic traits and how genes affect traits like hair color, earlobe shape, dimples and more.

Time:

20-30 minutes

Materials Needed:

- Genetics traits worksheet (printed or online)
- Mirror
- Pen, pencil, or marker

Instructions:

Look in the mirror and notice your beautiful features! What color are your eyes? Is your hair curly or straight, dark or light? These traits are determined by your genes and studied with genetics. **Genetics** is the study of heredity and the differences of inherited traits and characteristics. The human body contains between 20,000 – 25,000 genes that are inherited from our parents and make each person unique.

In this activity, we will analyze differences in genetic traits and find what makes individuals unique. Traits are described as either **dominant** or **recessive**. Dominant means that people are more likely to have the trait while recessive means the trait is less likely to be seen. Let's look at some common traits and learn whether they are dominant or recessive.

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Step 1:


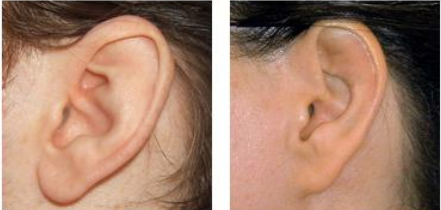
Look at the chart below and record whether you have the dominant or recessive gene for each trait.

Step 2:




Take a survey of these traits with at least 2-3 family members and analyze their similar dominant or recessive traits. See if you can find common traits within your family!

Step 3:

Now try this with friends to compare trait similarities and differences.

Genetic Traits	Dominant	Recessive	What is your trait?
 <p>Dimples</p> <p>No Dimples</p>	Dimples	No Dimples	
 <p>Detached Earlobes</p> <p>Attached Earlobes</p>	Detached “free” Earlobe	Attached Earlobe	

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		Widow's Peak hairline	Straight hairline	
<p>Widow's Peak Hairline</p>	<p>Straight Hairline</p>			
		Cleft chin	Smooth chin	
<p>Cleft Chin</p>	<p>Smooth Chin</p>			
		Freckles	No Freckles	
<p>Freckles</p>	<p>No Freckles</p>			
		Left thumb over right	Right thumb over left	
<p>Cross Right Thumb Over Left</p>	<p>Cross Left Thumb Over Right</p>			

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	<p>Rolling tongue</p>	<p>No Rolling tongue</p>	
	<p>Right-handed</p>	<p>Left-handed</p>	
	<p>Naturally curly hair</p>	<p>Straight hair</p>	
	<p>Long eyelashes</p>	<p>Short eyelashes</p>	

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	<p>No Hitchhikers thumb</p>	<p>Hitchhikers thumb</p>	
	<p>Dark hair</p>	<p>Light hair</p>	
	<p>Brown eyes</p>	<p>Light eyes (blue)</p>	
	<p>Can see color</p>	<p>Color blind</p>	

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 <p>Bent Straight</p>	<p>Bent pinky finger</p>	<p>Straight pinky finger</p>	
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ACTIVITY RECAP

Discovery Questions:

- What did you learn about your genetic traits? Did you find traits that were mostly dominant, recessive, or a mix of both?
- Why do you think all traits are so different? Can you find similarities in you and your family members?
- How will you share this information with your friends? Can you think of any other traits that may be dominant or recessive?
- With a parent/guardian's permission, share with us what you think of this activity on the Girls Inc. Instagram page with the tag @girlsincindy.

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