

ACTIVITY!

Inquire & Investigate

DOMINANT VS. RECESSIVE TRAITS

As Mendel discovered in his pea plant experiments, some human traits are controlled by dominant and recessive genes. Parents pass the genes that control these traits to their offspring. Which inherited traits do you have?

- **To track your results, create a table that will list the trait you are investigating and its possible phenotypes.** Each of the traits listed below has two phenotypes. You can start with these and add to your chart if there is something else you would like to investigate.
 - a. Free earlobes vs. Attached earlobes
 - b. Hair on fingers vs. No hair on fingers
 - c. Widow's peak vs. No widow's peak
 - d. Curly hair vs. Straight hair
 - e. Cleft chin vs. Smooth chin
 - f. Can roll tongue vs. Cannot roll tongue

 Remember, the phenotype is the way an organism looks and the genotype is what genes it's made of.



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Earlobes	Fingers	Hairline	Hair	Chin	Tongue
free	with hair	widow's peak	curly	cleft	can roll
attached	no hair	no widow's peak	straight	smooth	can't roll

- **Which of these traits do you have?** Record your answers on your table.
- **Survey the members of your family. What traits do they have?** Are they similar or different from yours? Do you see an inheritance pattern?
- **See if you find an inheritance pattern that extends farther into your extended family.** Choose one or two traits and survey some relatives outside your immediate family. Create a family tree that shows which phenotype each person has. Do you see an inheritance pattern? Can you make any predictions about what genotypes the different family members may have?

To investigate more, survey at least 20 people who are not related to you. Analyze your results. What traits are more common or dominant? What traits are less common? What percentage of people had each phenotype of a trait?

Ideas for Supplies ▼

- paper
- pencil
- family members and friends to interview

