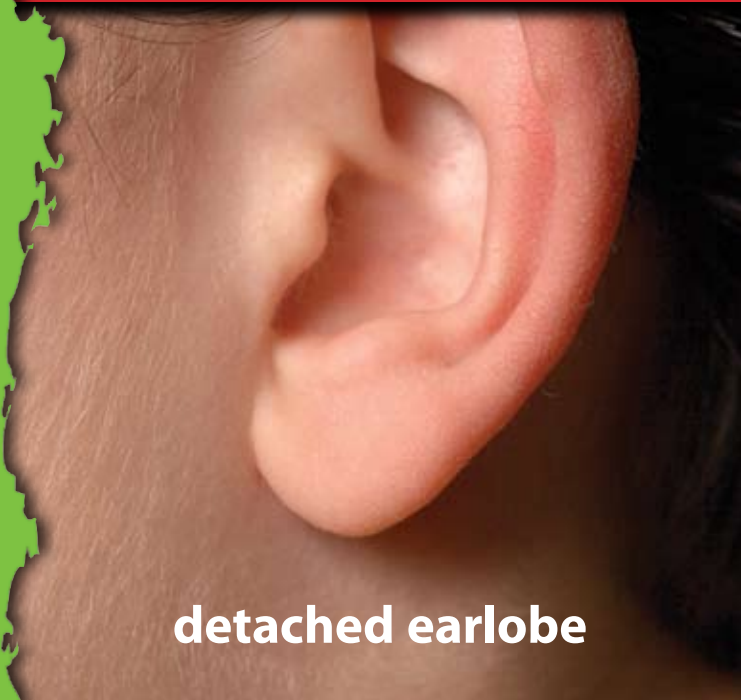
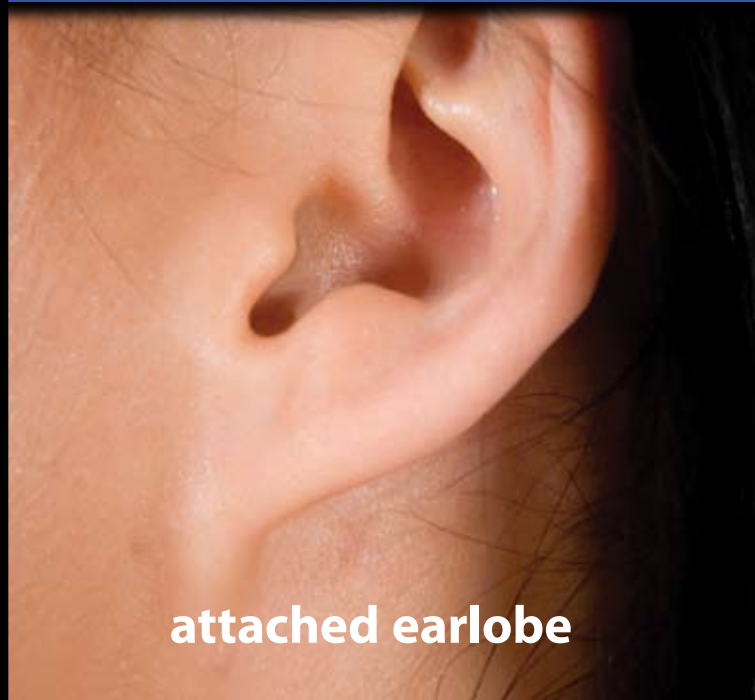


Dominant Trait

Recessive Trait



detached earlobe



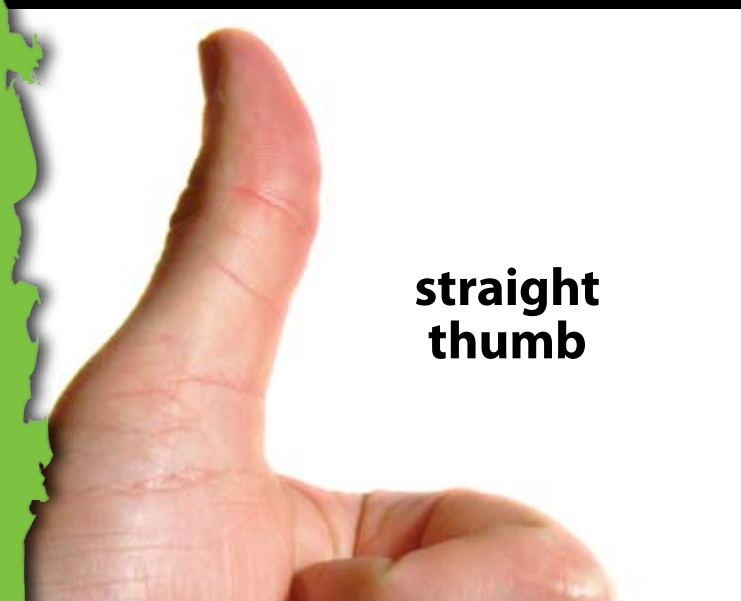
attached earlobe



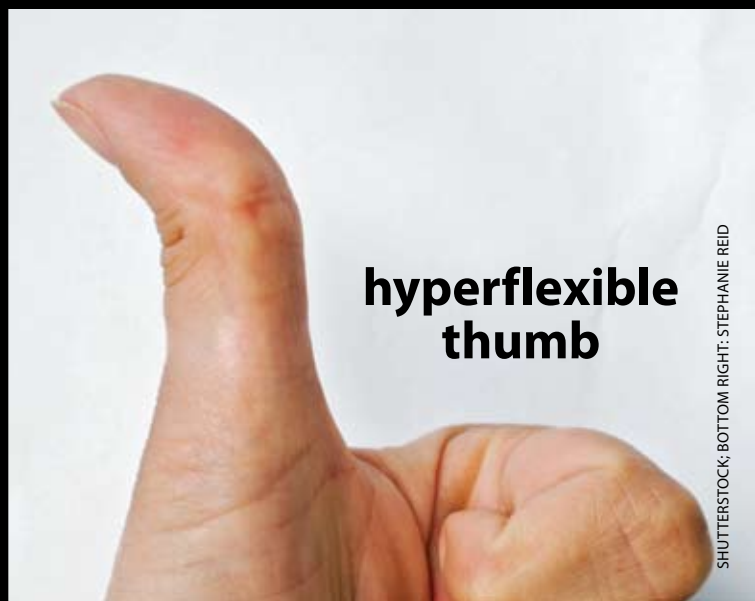
widow's peak



no widow's peak



straight thumb



hyperflexible thumb

Dominant and Recessive Traits

Background Information

Traits are passed from parents to their children. One example of a trait is the type of hairline a person has. A gene is a set of information. Genes determine traits. Often, there are two forms of each gene. Some forms are called *dominant*, or main. Other forms are called *recessive*, or less common. People often have both types of genes. The hairline known as a *widow's peak* is an example of a dominant trait. An attached earlobe is an example of a recessive trait. The front of this card shows examples of dominant and recessive traits.

A Punnett Square shows the possible trait groupings from two parents. A dominant trait is identified using a capital letter. A recessive trait is identified using a lowercase letter. If a person receives two dominant genes (seen as two capital letters on the Punnett Square), he or she will have a dominant trait. If a person receives one dominant gene and one recessive gene (shown as one capital letter and one lowercase letter on the Punnett Square), he or she will still have a dominant trait. However, if a person receives two recessive genes (shown as two lowercase letters on the Punnett Square), he or she will have a recessive trait.

Widow's Peak Punnett Square

| | | |
|---|----|----|
| | W | w |
| W | WW | Ww |
| w | Ww | ww |

Analyzing Science

- What is an example of a dominant trait? What is an example of a recessive trait?
- If you had one recessive gene for attached earlobes and one dominant gene for detached earlobes, which type of ears would you have?
- ▲ If two parents have widow's peaks, does that mean that each of their children will have a widow's peak as well? Explain.

Nonfiction Writing Prompt

Write an expository essay to compare dominant and recessive traits. Include examples of both types of traits. Be sure to explain how some traits show up in people with both dominant and recessive genes for the trait.

Fiction Writing Prompt

The year is 2050. Scientists have discovered an inherited trait in people that they did not know about before. What does this new trait look like? How is it passed on from parents to children? Base your story on scientific facts about how dominant and recessive genes work.

Scientific Challenge

What are some dominant and recessive traits that occur in plants? How can farmers use this information? Research these questions on the Internet or at the library. Create a poster detailing your answers. Use pictures, diagrams, and words on your poster.