

Standard: Students will analyze how biological traits are passed on to successive generations.

Element: Using Mendel's laws, explain the role of meiosis in reproductive variability.

EQ: What is a pedigree?

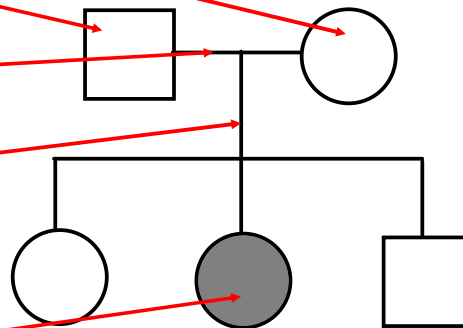
A **pedigree** is a family history that shows how a trait is inherited over several generations.

Females are represented by **circles** and males are represented by **squares**.

Horizontal lines connect parents.

Vertical lines connect parents to their offspring (arranged from left to right in birth order).

Shading is used to represent individuals that have the trait.



Pedigrees are useful for showing the family history for a particular **genetic disorder**. A genetic disorder is any type of disease or condition that can be **inherited**.

Based on the patterns shown in a pedigree, it is possible to determine **dominant alleles**, whether or not a person is **heterozygous**, and if a trait is **sex-linked**.

[Check Your Understanding](#)

Answer the questions for the **Quick Lab** at the top of page 281 in your biology textbook.

[Analysis](#)

1. It is recessive, because it sometimes appears in the children of parents who lack the trait (so the parents must be **carriers**)

2. Female A must be homozygous to express the recessive trait. Female B does not show the trait, so she *could* be heterozygous. We can't tell for sure without seeing her offspring.

3. There is no chance their children will have the trait.

	A	A
A	AA	AA
a	Aa	Aa