Dominant vs. Recessive

Each person has a set of genes that contain the genetic code for humans. They also have alleles which code for specific characteristics, like light hair, dark eye color, etc. Those alleles are either dominant or recessive. Let's use "A" to represent the dominant allele, and "a" to represent the recessive allele. Dominant phenotypes are always expressed if a dominant allele is present in the genotype. Thus, if the genotype is "AA" or "Aa", the dominant phenotype is expressed. In the second case, "Aa", both alleles are present, but the dominant allele dominates over the recessive allele. In contrast, the recessive phenotype is only expressed when there are two recessive alleles in the genotype. This means the genotype must be "aa" to have a recessive phenotype. Examples of dominant characteristics are widow's peak, dark hair, and dark eyes. Examples of recessive characteristics are straight hairline, light hair, and light eyes.

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Dominant allele dominates over recessive allele
Domino with A-Eel dominating over Recessive-Chocolate with a-Eel
Dominant alleles are always expressed if present in the genotype. This can occur either with two dominant alleles (homozygous dominant) or one dominant allele and one recessive allele (heterozygous).

If both alleles are present the dominant phenotype is expressed
Domino A-Eel shown to Phoenix-Type instead of Recessive-Chocolate a-eel
For a gene, if "A" is the dominant allele and "a" is the recessive allele, a genotype of "Aa" will result in the dominant phenotype. The dominant allele is always expressed if both alleles are present.

The recessive phenotype is expressed only with two recessive alleles
Two Recessive-Chocolates giving a-Eel to Phoenix-Type to express recessive traits
Because the dominant allele is always expressed when present, the only way a recessive allele can be expressed is if there are two recessive alleles. Thus, the only genotype that results in a recessive phenotype is "aa".

Examples of dominant characteristics are widow's peak, dark hair, and dark eyes
Domino with Widow's Peak, Dark Hair, and Dark Eyes
Some dominant characteristics, which are coded by dominant alleles, are widow's peak, dark hair, and dark eyes. If someone has the alleles for those characteristics, they will express those characteristics.

Examples of recessive characteristics are straight hairline, light hair, and light eyes
Recessive-Chocolate with Straight Hair, Light Hair, and Light Eyes
Recessive characteristics, coded by recessive alleles, include straight hairline, light hair, and light eyes. These are only expressed if a person has two recessive alleles and no dominant alleles for these traits.