DO NOW: Albinism & Epistatic NAME: _____ CLASS: _____

Some genes mask (or hide) the expression of other genes just as a fully dominant allele masks the expression of its recessive counterpart. A gene that masks the phenotypic effect of another gene is called an **epistatic gene**. The gene for albinism in humans is an epistatic gene. No matter what race or ethnicity someone with albinism is their skin and hair appear white and they have light-colored eyes. This is because their bodies do not make something called melanin (a pigment that gives color to these parts of our bodies). Its dominant allele (MM) is necessary for the development of any skin pigment, and its recessive homozygous state results in the albino condition (aa) regardless of how many other pigment genes may be present. Albinism can happen in individuals among dark- (MM), intermediate- (Mm), or light- (mm) skinned peoples.

A mother with dark skin that is a carrier to albinism (Aa) and father with intermediate skin that is a carrier to albinism (Aa) want to have children. Create a Punnett square to determine the probability of their offspring having different colored skin.

Parents: _____ x _____ *(Mother's Traits)*

____	____	____	____

List the possible phenotypes & matching genotypes of their children along with their percentages (%) in the chart below:

Offspring	Phenotype	Genotype	%
Type 1			
Type 2			
Type 3			
Type 4			
Type 5			
Type 6			