Glenbard District 87

Course Title: Biology

Unit: Genetics **Unit Title**: Genetics

Stage 1 – Desired Results	
Established Goal(s): *What relevant goals (e.g. Content standards, course or program objectives, learning outcomes, etc.) will this address?* ***NGSS Standards*** **HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.** **HS-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.**	
Understanding(s): *Students will understand that…* - Inheritance is based on the relationship between alleles, traits, and genes. - Probability can be used to predict phenotypes of offspring.	**Essential Question(s):** *What provocative questions will foster inquiry, understanding, and transfer of learning?* What are Mendel's principles of genetics? What are the possible variations in inheritance patterns? Where is genetic information located in a cell?
Knowledge: *Students will know…* 1. Describe how probability applies to genetics. 2. Contrast genotype and phenotype. 3. Explain simple principles of inheritance. 4. Describe different patterns of inheritance.	**Skills:** *Students will be able to …* 1. Use genetic probability to predict phenotypes of offspring. 2. Demonstrate an understanding of probability in genetics using punnett squares. 3. Compare and contrast DNA, chromosomes, genes, alleles, and traits.