Genetics--H/G Biology 4/25/22 Lesson Plans

Teacher : Mrs. Audrey Hardman

Course/ Subject: Honors/Gifted Biology

Date of Instruction: 4/25/2022

Opening (I Do)

An engaging process for lesson introduction that is specifically planned to encourage equitable and purposeful student participation. Describe the instructional process that will be used to introduce the lesson.

TKES 1, 2, 3,4,5, 8,10

SB3 Obtain, evaluate, and communicate information to analyze how biological traits are passed on to successive generations.

a. Use Mendel's laws (segregation and independent assortment) to ask questions and define problems that can explain the role of meiosis in reproductive variability.

B. Use mathematical models to predict and explain patterns of inheritance. (Clarification statement: Students should be able to use Punnett squares (monohybrid and dihybrid crosses) and/or rules of probability, to analyze the following inheritance patterns: dominance, codominance, incomplete dominance.)

Learning Target:

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

Success Criteria:

- **I know who the father of genetics is.**
- **I can identify dominant & recessive alleles.**
- **I can identify homozygous & heterozygous alleles.**
- **I can give examples of genotypes & phenotypes.**
- **I can construct Punnett squares for: Monohybrid crosses and sex linked traits**
- **I can recall the phenotypic ratio for a dihybrid cross.**
- **Given the genotype, I can determine the phenotype**
- **Given the genotype, I can determine the phenotype**
- **I can recall that Mendel's law of independent assortment and segregation lead to genetic variation.**

Introduction/Connection:

Review of Vocab

DIRECT INSTRUCTION:

Types of genetic crosses: Dihybrid Lesson

Work Period (We Do, You Do) Students learning by doing/demonstrating learning expectations. Describe the instructional process that will be used to engage the students in the work period. **TKES 1, 2, 3, 4, 5, 7. 8,10**	**GUIDED PRACTICE:** **Types of genetic crosses: Monohybrids & Dihybrids & Practice** **Punnett Squares Crosses - Involving One Trait**
	INDEPENDENT/COLLABORATIVE PRACTICE/DIFFERENTIATION: **Simple genetics problems 1-3; Punnett Squares Crosses** **Dihybrid/Trihybrid Practice**
Closing (We Check) Describe the instructional process that will be used to close the lesson and check for student understanding . **TKES : 1,2,3, 4,5,6,7,8**	**SUMMARIZE/CHECK FOR UNDERSTANDING:** **-Questions over Vocab & Punnett Squares**