**Lesson Title: Review**

**Unit: Molecular Genetics and Heredity**

TEKS: 130.7 (C)(7)(a)(b)(c)(d)(e)(f)

OBJECTIVES

The student shall be able to:

1. Define Gregor Mendle’s laws of inheritance.
2. Discuss the difference between genotypes and phenotypes.
3. Label the three types of genotypes.
4. Draw and label a punnett square.
5. Predict outcomes of a punnett square.
6. State the history of genetics.
7. Describe major century events.
8. Define terms used in genetics.
9. Identify and compare the three parts of nucleic acids.
10. Interpret protein synthesis.
11. Demonstrate comprehension of protein synthesis.
12. Review central dogma of molecular biology.
13. Discuss type of protein.
14. Assess amino acids.
15. Identify and analyze impacts of mutation.
16. Interpret impacts of mutation.
17. Synthesis of DNA extraction.
18. Discuss randomness in genetics.
19. Investigate principles of inheritance.
20. Comprehend how inheritance plays a role in sex-linked genes.
21. Explain the difference between sex-linked, limited, and influenced inheritance.
22. Compare the difference between simply-inherited and polygenic traits
23. Classify genotypic and phenotypic characteristics.
24. Draw conclusions from selective trait characteristics.
25. Define Expected Progeny Difference.
26. Identify terms associated with EPD’s.
27. Interpret EPD categories.
28. Analyze EPD variations within breeds.
29. Draw conclusions from EPD data set.
30. Recognize the importance of EPD use in selection.
31. Apply EPD concepts.
32. Define heritability.
33. Compare and contrast heterozygous and homozygous.
34. Cause and effect of environmental conditions in relation to heredity.
35. Investigate genetic selection methods.
36. Develop a logical argument for cloning.
37. Distinguish between embryonic cloning and nuclear transfer.
38. Apply inheritance and heredity concepts.
39. Recognize the function of meiosis.
40. Manage on SAE Record Books.

TEACHING MATERIALS, TOOLS, AND EQUIPMENT

TEACHING PROCEDURE

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| Interest Approach/Anticipatory Set | Teacher Notes |
|  |   |

ENGAGEMENT

EVALUATION

ADDITIONAL MATERIALS

N/A

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