

Study Guide for GE Outcome

IS3-4

Name: _____ Per: _____

1. Define and give an example of each of the following: (from a HW)

- Selective breeding (p383)
- Inbreeding
- Hybridization
- Restriction enzymes (p387)
- Recombinant DNA
- Plasmid
- Genetic Marker

2. Understand the main idea and a pro and con for each of the presentations on biotechnology

3. Understand the purpose of the labs done in this section

- a. Cupcake protein synthesis
- b. Hemoglobin amino acid sequence lab
- c. P glo/p red

Past Items from this Unit to focus on

1. How have vertebrates evolved?

- Overview of Vertebrate Evolution
 - ❖ Phylogeny (cladograms)
- Comparative Anatomy and Physiology
 - ❖ Respiratory, nervous, and circulatory systems.
 - ❖ Evolution from water to land
 - ❖ Ancestral vs derived conditions
 - ❖ **Metabolism** – endothermy and ectothermy
 - ❖ Pros and cons
 - ❖ Differences between the 2

2. What is the genetic basis for vertebrate anatomy and physiology?

- Mendelian Genetics
 - ❖ Punnett Squares: Dihybrid crosses (genotypic ratio vs phenotypic ratio)
 - ❖ Pedigrees
- Structure of DNA
 - ❖ Nucleotides
 - ❖ Genes
 - ❖ Mutations – point and chromosomal
- DNA replication
 - ❖ Process
 - ❖ Purpose
- Protein synthesis

• Transcription	Purpose, Process, Location
• Translation	

 - ❖ Amino acid sequences to protein
 - ❖ Protein Folding

Final Exam Hints:

Review old labs, past study guides and past quizzes. A few cumulative questions will come from the pop/ag unit but most of the test will be a unit exam.