

Genetics Unit - Learning Goals

Name: _____

Period: _____

Instructions: Using the performance expectations sheet, write your current level of understanding (1-4) for each learning goal after completing an activity

Unit E: Genetics Learning Goals	Pre-assessment	Act 1 - Eye Color Pedigree	Activity 2: Reproduction	Act 3: Show me the Genes	Act 4: DNA, Chromosomes & Mutations	Act 5: Mendel discovers Genetics	Act 6: Analyzing Genetic Data	Act 7: Investigating Human Traits – Two Parts	Act 8: Skittles Genetics	Figure One-Your Child – <i>Final is Separate</i>	Post-assessment
Sexual vs. Asexual Reproduction											
1. I can compare & contrast the processes of asexual & sexual reproduction.											
Key Elements of Heredity											
2. I can describe the functions of the key cell parts that effect heredity.											
Patterns of Inheritance											
3. I can use Punnett squares & pedigrees to accurately predict the genotypes and phenotypes over multiple generations											

Unit D: Genetics Performance Expectations	Level 1	Level 2	Level 3	Level 4
<p>Learning Goal #1: I can compare & contrast the processes of asexual & sexual reproduction.</p>	<p>I can accurately define key reproduction vocabulary:</p> <p>Asexual Reproduction Sexual Reproduction Sex Cell (Gamete) Offspring Cell Egg Sperm Zygote Nucleus Chromosome</p>	<p>I can describe the basic process of asexual reproduction on the cellular level.</p> <p>I can explain why offspring from asexual reproduction are identical to the parent.</p> <p>I can identify and give examples of asexually reproducing plants and animals.</p>	<p>I can describe the basic process of sexual reproduction on the cellular level.</p> <p>I can explain how offspring from sexual reproduction differ from the parent.</p> <p>I can identify and give examples of sexually reproducing plants and animals.</p>	<p>I can explain to others the advantages and disadvantages of Sexual reproduction and Asexual reproduction using examples.</p>
<p>Learning Goal #2: I can describe the functions of the key cell parts that effect heredity.</p>	<p>I can accurately define key vocabulary for heredity:</p> <p>DNA Genetic information Gene Allele Protein Phenotype Genotype Mutation</p>	<p>I can explain how information on cells grow & function is:</p> <ul style="list-style-type: none"> • Contained in each cell's nucleus, • On chromosomes that are made of DNA • "coded" on genes that make proteins which determine your characteristics 	<p>I can explain that specific genes on DNA have "code" plans for specific proteins.</p> <ul style="list-style-type: none"> • I can explain how each gene on a chromosome has at least two versions called "alleles". • I can explain how different alleles for the same gene cause variation in an organism. • I can explain how mutations cause changes to genes. 	<p>I can explain to others positive and negative effects of mutations (in genes or chromosomes) and give three examples.</p> <p>Examples include both naturally and environmentally caused mutations.</p>
<p>Learning Goal #3: I can use Punnett squares & pedigrees to accurately predict the genotypes and phenotypes over multiple generations</p>	<p>I can accurately define key vocabulary for inheritance:</p> <p>Characteristic Dominant trait Recessive trait Homozygous Heterozygous Punnet Square Pedigree Incomplete Dominance Trade Off</p>	<p>I can accurately describe the evidence Mendel used to show patterns of inheritance.</p> <p>I can explain the difference between dominant & recessive traits for different genetic characteristics.</p> <p>I can give 3 examples of dominant & recessive traits.</p>	<p>I can explain to others how to use a Punnett Square to accurately predict & describe the outcomes of sexual reproduction.</p>	<p>I can analyze a pedigree to accurately predict the genotypes and phenotypes within multiple generations.</p>

Student Leadership, Participation & Teamwork Self-Assessment (Tell 2 examples per area that support your score)

1 – Below Standard, 2 – Approaching Standard, 3 – Standard, 4 – Above Standard

1. Leadership: Explain w/2+examples: _____

2. Participation: Explain w/2+ examples: _____

3. Teamwork: Explain w/2+examples: _____

Student Growth and Learning Progress and Goal Setting

4. Tell three concepts/learning goals that you have shown growth in. **Explain.**
a. _____
b. _____
c. _____

5. Tell three concepts/learning goals you still need more growth in. **Explain.**
a. _____
b. _____
c. _____

Parent Signature _____ Date: _____

Comments: _____

Teacher Review - To be completed by your teacher

1 – Below Standard, 2 – Approaching Standard, 3 – Standard, 4 – Above Standard

- 1. Activities completed
- 2. Corrections made in red pen
- 3. Self-assessment & learning goals completed above.....
- 4. Parent review completed
- FINAL SCORE**
- Leadership, Participation & Teamwork rating**.....

Voc 1/2	Voc 3
CH/EC	Your Child Editor