

Reebop Lab

Name _____

Date _____ Period _____

Score _____ / 44 ($\div 11$) = _____ / 4

GLE: Organisms reproduce and transmit genetic information (genes) to offspring, which influences individuals' traits in the next generation.

Category	4	3	2	1
Heading / Title Purpose / Hypothesis ____ / 4	Hypothesis provides a research-based rationale for the prediction. The research source is cited.	Heading Title Purpose Hypothesis clearly predicts the most probable reebop from a heterozygous cross.	One of the required elements is missing	Two or more of the required elements are missing.
Materials/ Procedure ____ / 4	Exceptional detail – includes drawing of set up.	All materials are listed and adequately identified (drawing/description) so another person could find all of the supplies All steps are detailed so another person could repeat your technique exactly	Material are <u>partially</u> listed and/or described. Steps are <u>partially</u> described so a reader would be able to repeat most steps accurately	Materials an/or steps are missing and a reader would be misled by reading your lab.
Results ____ / 4	In addition to a high quality data table and drawing required for a "3", detailed data and observations are included of the other reebops that were born in this generation.	A table is included that clearly identifies the genotype for the reebop formed from the cross of the heterozygous parents. A ruler is used. A detailed drawing of the new reebop clearly identifies the traits (phenotype). Color is used.	Data is included which identifies counts – either no table was used or a ruler was not used.	Data is missing and/or inaccurate. No table was used.
Next Generation (Cross between your reebop and another team's) ____ / 4	Probabilities of all genotypes are clearly identified. Possible phenotypes are identified when 50 / 50 probabilities occur.	7 Punnett squares are used to identify the genotype for each trait. The hypothetical (most probable) phenotype for the next generation reebop is accurately drawn – colors are used. 7 pedigrees (family trees) identify the phenotype for each trait for all three generations. Color is used where appropriate.	One of the required elements is missing	Two or more of the required elements are missing.
Note New Point Values	8	6	4	2
Analysis: Paragraph 1 ____ / 8	Level 4: In addition to thoroughly completing levels 1-3, the discussion continues with extended details which identify and analyze the traits. Evidence for dominant and recessive traits should be identified. The possibility of incomplete dominance or other variations of dominance should be considered.	Level 1: Topic sentence - Possible topics: Dominant / recessive traits Heterozygous / homozygous Level 2: Next sentence(s) explain that we conducted a cross between two heterozygous parents. Level 3: The following sentences <u>clearly interpret the data from the cross – clearly comparing genotype and phenotype of the two generations. Data from other team's reebops are mentioned.</u>	One element of 1-3 is missing	Two elements of 1-3 are missing.

<p>Analysis: Paragraph 2 ____ / 8</p>	<p>Level 4: In addition to thoroughly completing levels 1-3, the discussion continues with extended details which identify and analyze the traits. Evidence for dominant and recessive traits should be identified. The possibility of incomplete dominance or other variations of dominance should be considered.</p>	<p>Level 1: Topic sentence - Possible topics: Dominant / recessive traits Heterozygous / homozygous Level 2: Next sentence(s) explain that we conducted a cross between our reebop with ____ genotype and ____ phenotype with another reebop with ____ genotype and ____ phenotype. Level 3: The following sentences <u>clearly interpret the data from the cross – clearly comparing genotype and phenotype of the all three generations. Data from other team’s reebops are mentioned.</u></p>	<p>One element of 1-3 is missing</p>	<p>Two elements of 1-3 are missing.</p>
<p>Analysis: Paragraph 3 ____ / 8</p>	<p>Level 4: Possible extensions include detailed “family tree” analysis which tracks a trait through three generations and identifies – evidence for variations of dominance should be identified and discussed.</p>	<p>Level 1: Topic sentence - Possible topics: Traits of parents are passed through generations Level 2: Next sentence(s) explain that we conducted a cross between reebops with ____ genotype and ____ phenotype with another reebop with ____ genotype and ____ phenotype. Level 3: The following sentences <u>clearly interpret the data from the crosses. Specific evidence of how traits are passed between generations is identified and discussed. Evidence which defines the difference between dominant and recessive traits is included. Data from other team’s reebops are mentioned.</u></p>		
<p>Note Point Value</p>	<p>4</p>	<p>3</p>	<p>2</p>	<p>1</p>
<p>Conclusion ____ / 4</p>	<p>In addition to the proficient requirements, paragraph includes insightful additions to the rationale to the discussion of the hypothesis, what you learned, and the “I wonder”. Clear reference to scientific principles and data should be included.</p>	<p>Topic sentence restates the purpose Acceptance/rejection of the hypothesis for the heterozygous cross is clearly identified. A brief explanation of why the hypothesis was accepted / rejected. A logical “what you learned” statement related to the data/purpose. I wonder comment is a logical next step to further research that is related to the original purpose.</p>	<p>One element of a proficient response is missing.</p>	<p>Two or more elements of a proficient response are missing.</p>