

Analysis of Student Work

Teacher's Name: Kaylan Duthie		Assignment Title: Coin Crosses	
Grade and Subject: 7 th – Genetics		Date: January 18 th	
<p>Briefly describe the assignment:</p> <p>The students complete a 3-part lab, following instructions in the book. They first predicted the results of 20 coin tosses, and then tested their prediction. Next, they did a quick math practice on probability and percentages. Lastly, they completed an activity where they taped either a T or a t on the sides of a penny to represent alleles, and tossed the coins to determine offspring genotypes and phenotypes, and compared this to Mendel's pea plant experiment.</p>		<p>List the Learning Objectives:</p> <p>*Students will learn how probability helps to explain the results of genetic crosses</p> <p>*Student can create a data table to present data</p> <p>*Student can write down a genotype and determine the corresponding phenotype</p> <p>*Students can explain their results in comparison to Mendel's pea plant experiment</p> <p>*Student can answer in complete sentences</p>	
<p>Part 1: Describe expected student responses on the assignment that would show that the objectives are met. Include the evaluative criteria that will be used to determine whether a response is below, meets, or exceeds the objectives.</p> <p>Meets objectives:</p> <ul style="list-style-type: none"> • Students design a data tables to present collected data. • In part I, student compares their prediction to their results and includes an explanation for any differences • Student correlates combinations of T and t to the correct phenotypes and calculates percentages • Student compares their results to Mendel's results of 25% short and 75% tall • Student answered questions using complete sentences <p>Below</p> <ul style="list-style-type: none"> • Student does not write in complete sentences • Student does not answer the questions <p>Exceeds</p> <ul style="list-style-type: none"> • Student goes above and beyond two or more of the objectives 			
<p>Part 2: Sort the student work. Write first names below.</p>			
Below	Meets objectives		Exceeds
R.J. Chili Anonymous Noname Owen Kyle	Keaton Sylvie Aria Charlotte Emelyn Justin Caitlyn	Parker Anna	Bergan Carmen StudentX Chandra Ali Claire
__29__ % of class	__43__ % of class		__29__ % of class

Part 3: **Take a closer look** at the student work to find incomplete understandings, misconceptions, or other student needs (including engagement or greater challenge). List those you identify with student first names for each.

R.J. – No complete sentences, didn't create data table, did not complete lab

Chili – no complete sentences, didn't create data table

Anonymous – didn't create data table, didn't complete lab

Mystery – didn't use complete sentences, didn't complete lab

Owen – didn't use complete sentences

Kyle – didn't create data table or complete lab

Many students – went back and erase and changed their predictions after the experiment

Part 4: What **instructional strategies** could you use to address the issues listed above?

I need to explain to students that it doesn't matter if a prediction is right or wrong, that it is just a guess. After completing an experiment, if their prediction turns out not to be correct, they shouldn't go back and change it, they should just talk about it in their conclusion.

I need to explain and model to the class the difference between a list of information and a data table which summarized information

I need to go over what makes a complete sentence. I have done this a few times before, and made instructions very clear to students, but it seems some are still struggling.

Part 5: What **additional information** about your instruction and student understanding would you like to have? How could you collect it?

I would like to know, for the students who didn't complete the lab if it was a timing issue or an issue of lack of understanding. I could find this out by asking the students verbal questions similar to those on the lab to check for understanding, or just asking them why they didn't finish.