




Rubric: Sweet Sale

Key APS Mathematics Performance Standards: Kindergarten

-  **Combines and separates** sets of objects with quantities and **identifies** the parts and the whole.
-  **Represents** numbers in a variety of equivalent ways (e.g., dots, pictures, numerals).
-  **Identifies** penny, nickel, dime, and quarter.

Level	Understanding	Strategies, Reasoning, & Procedures	Communication
Novice	<ul style="list-style-type: none"> ❖ The student understands: <ul style="list-style-type: none"> • That s/he can spend money on candy. ❖ The student does not understand: <ul style="list-style-type: none"> • The value of the coins and cannot identify pennies or nickels. • That there is a connection between the candy and the coins and cannot use the coins to determine how many candies they can buy for the 11¢. • The first piece of candy costs 5¢ and each piece afterwards costs 3¢. 	<ul style="list-style-type: none"> ❖ The student has started the task using manipulatives or representations, but does not use an effective strategy to determine how many pieces of candy they can buy for 11¢, therefore cannot complete the task and/or find a correct solution. ❖ The student needs to develop a concept of money. The student does not see a connection between the candy and its cost. Sample Strategy: The student cannot count out 11¢ using coin manipulatives. The student buys one piece of candy for every coin manipulative they have been given. 1penny = 1 candy, they have 11 pennies and think they can buy 11 candies. 	<ul style="list-style-type: none"> ❖ There is little or no communication, the student did not label the work, and/or their thinking is difficult to follow. ❖ Summary: The student cannot write/verbalize his/her final answer, and/or uses little or no math language and symbols to explain (verbally or in writing) how s/he determined the number of candies s/he could buy with 11¢. ❖ Representations: The student has no system (charts/t-tables/graphs) to track the number of 5¢ & 3¢ candies s/he can buy for 11¢.
Apprentice	<ul style="list-style-type: none"> ❖ The student understands: <ul style="list-style-type: none"> • That s/he can spend money on candy. • The value of pennies and nickels. ❖ The student may not understand: <ul style="list-style-type: none"> • How to combine the pennies and nickels to total 11¢ and cannot determine how many pieces of candy s/he can buy. • The first piece of candy costs 5¢ and each piece afterwards costs 3¢. 	<ul style="list-style-type: none"> ❖ The student has started the task using manipulatives or representations, has chosen a strategy to solve the task, but does not achieve a correct solution. ❖ The student is developing their concepts of money. The student may be able to count out 11¢, but may not be able to group the money in sets of 5 or 3 to determine how many pieces of candy they can buy. ❖ The student makes errors in their understanding of the problem and thinks that each piece of candy is worth 5¢. ❖ Sample Strategy: The student uses the coin manipulatives to count out 5¢ for the first piece of candy, 5¢ for the second piece of candy, 5¢ for the third piece of candy etc. The student may not make the connection of the parts of \$ to the entire 11¢. 	<ul style="list-style-type: none"> ❖ The student has communicated his/her understanding of the task by labeling their work, but the task is not clearly organized and the student's thinking is hard to follow. ❖ Summary: The student states his/her final answer and uses some math language and symbols to explain (verbally or in writing) how s/he determined how many pieces of candy s/he can buy for 11¢ using manipulatives or representations. ❖ Representations: The student can represent the money & candy, but has not establish an accurate system (charts/t-tables/graphs) to track the cost of the candy and the number of pieces s/he can buy.

<p>Practitioner</p>	<p>Proficiency</p> <ul style="list-style-type: none"> ❖ The student understands: <ul style="list-style-type: none"> • S/he must find the total number of candies that s/he can buy for 11¢. • The value of 11¢ and can use coin manipulatives to represent the given values. • The first piece of candy costs 5¢ and each piece afterwards costs 3¢. 	<p>Proficiency</p> <ul style="list-style-type: none"> ❖ The student must have a correct solution and demonstrate one strategy that will determine how many pieces of candy s/he can buy for 11¢ using manipulatives or representations. ❖ The student counts to represent the candy & money to determine how many pieces of candy they can buy with 11¢. Sample Strategy: The student draws a picture/uses manipulatives to track the amount of money spent on each piece of candy. I have 11¢, the first piece of candy is 5¢ (counts out 5¢), the next piece is 3¢, and the next piece is 3¢. I have spent all of my \$ and have 3 pieces of candy. 	<p>Proficiency</p> <ul style="list-style-type: none"> ❖ The student can represent his/her work in a clear, organized manner. ❖ Summary: The student states his/her final answer and uses appropriate math language and symbols to explain (verbally or in writing) how s/he determined how many pieces of candy s/he can buy for 11¢ using manipulatives or representations. ❖ Representations: The student can represent the money & candy using manipulatives and/or drawings, and has created an efficient system (charts/t-tables/graphs) to track the cost of the candy and the number of pieces s/he can buy.
<p>Expert</p>	<ul style="list-style-type: none"> ❖ The student understands that s/he: <ul style="list-style-type: none"> • Must find the total number of candies that s/he can buy for 11¢. • The value of 11¢ and can use coin manipulatives to represent the given values. • The first piece of candy costs 5¢ and each piece afterwards costs 3¢. ❖ Task Extension: The student includes a rule, equation, generalization, and/or observation (verbal or written) about their understanding of money, counting, or sets. 	<ul style="list-style-type: none"> ❖ The student must have a correct solution and demonstrate more than one strategy that will determine the how many pieces of candy s/he can buy for 11¢ using manipulatives or representations. ❖ The student starts connecting the concept of combining and separating sets. Sample Strategy: See Practitioner 1 piece = 5¢, 2 pieces = 8¢, 3 pieces = 11¢ Task Extension: I just added the money together as I counted out the candy $5 + 3 = 8$, $8 + 3 = 11$. I can buy 3 pieces of candy. OR I have 11¢ to spend; the first piece will cost 5¢, so I take away 5 pennies. I have 6¢ left to spend. So I can buy 2 more pieces of candy because each of those pieces will cost 3¢. I will have 3 pieces of candy. 	<ul style="list-style-type: none"> ❖ The student can represent his/her work in a clear, organized manner. ❖ Summary: The student states his/her final answer and uses appropriate math language and symbols to explain (verbally or in writing) how s/he determined how many pieces of candy s/he can buy for 11¢ using manipulatives or representations. ❖ Representations: The student can represent the money & candy using manipulatives and/or drawings, and has created an efficient system (charts/t-tables/graphs) to track the cost of the candy and the number of pieces s/he can buy. ❖ Task Extension: The student includes a rule, equation, generalization, and/or observation (verbal or written) about their understanding of money, counting, or sets.