$1 Math

Overview:

**Higher Level Activity:** If A=1¢, B=2¢, C=3¢, etc., students attempt to find a word that, when the letters in that word are added together, equals exactly $1. Practice addition, mental math strategies, and estimation.

Mid-Level Activity: If A=1¢, B=2¢, C=3¢, etc., students attempt to identify the most expensive word from a given set of words. Practice addition, mental math strategies, and estimation.

Lower Level Activity: If A=1¢, B=2¢, C=3¢, etc., students attempt to identify the most expensive word from a smaller set of 3-6 letter words. Practice addition, mental math strategies, and estimation.

For All Students:

* Calculators may be optional. Use to check estimation or addition.
* Opportunities for students to work together and to share and discuss responses and to talk through mental math and estimation stategies

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| Related Common Core State Standards:  **7th Grade: Expressions and Equations:**  7.EE.3. Assess the reasonableness of answers using mental computation and estimation strategies.  **4th Grade: Operations and Algebraic Thinking:**  4.OA. 3. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.  **3rd Grade: Operations and Algebraic Thinking:**  3.OA.8. Assess the reasonableness of answers using mental  computation and estimation strategies including rounding.  **3rd Grade: Numbers and Operations in Base Ten:**  3.NBT.2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.  **2nd Grade: Numbers and Operations in Base Ten:**  2.NBT.5. Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between  addition and subtraction.  2.NBT.6. Add up to four two-digit numbers using strategies based on place value and properties of operations. |

Common Core State Standards  
Authors: National Governors Association Center for Best Practices, Council of Chief State School Officers  
Title: Common Core State Standards (insert specific content area if you are using only one)  
Publisher: National Governors Association Center for Best Practices, Council of Chief State School Officers, Washington D.C. - Copyright Date: 2010

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| DesCartes Statements: |  |
| RIT 201-210:   * Uses rounding to estimate answers to addition and subtraction problems (whole numbers only) * Performs mental computation with more than 4 addends | **Students:** |
| RIT 191-200   * Uses number sense strategies to determine the correct answer for an addition computation * Uses strategies for sums and differences with 2-digit numbers (e.g., decomposing, compatible, compensation, partial sums, counting on) | **Students:** |
| RIT 181-190   * Performs mental computation with 2, 3, or 4 addends * Adds 1-digit to multiple-digit number with regrouping * Adds two or three 2-digit number with regrouping * Uses strategies for sums and differences with 2-digit numbers (e.g., decomposing, compatible, compensation, partial sums, counting on) * Recognizes addition and subtraction fact families through 18 | **Students:** |
| RIT 171-180   * Uses strategies for addition facts (e.g., compatible numbers, counting on, doubles, neighbors, making tens) * Adds two or three 2-digit number with regrouping * Adds 1-digit numbers with sums to 18 (with parentheses) * Recognizes addition and subtraction fact families through 18 | **Students:** |
| RIT 161-170   * Adds two 1-digit numbers with sums to 10 in horizontal format * Adds two 1-digit numbers with sums between 10 and 19 in horizontal format * Adds two 1-digit numbers with sums between 10 and 19 in vertical format * Adds multiple 1-digit numbers * Uses strategies for addition facts (e.g., compatible numbers, counting on, doubles, neighbors, making tens) * Adds 2-digit numbers with no regrouping | **Students:** |
| RIT Below 161   * Adds two 1-digit numbers with sums to 10 in horizontal format | **Students:** |

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| Higher-Level Lesson & Activity: (1 class period; can also be used to fill 5-10 minutes at the end of any class) | | |
| 1) Introduction  .  Post on board or show on overhead: A = 1¢, B = 2¢, C = 3¢, etc.  Ask students:   * + How much does your first name cost?   + Your last name?   + Which student do you think has the most expensive name?   + The cheapest? Why do you think so?   2) Challenge Students to Find a Word that Equals Exactly $1  Allow students to work together  Idea: Brainstorm some words they think may be close to $1. Discuss: What about this word makes you think it would be that much?  Optional: Offer clues to get them started:   * + Which day of the week equals $1?   + Which zoo animals?   + Which musical instrument? | 3) Optional: Use as “Time Filler” Activity or Anchor Activity  Can be used in 5-10 minute blocks when there is extra time before the bell rings or to start class time with students productively working at their seats  Provide some limits to better accommodate the small amount of time  Ideas:   * + Which of the characters in the story we just read has the most expensive name?   + Which of these vocabulary words is the cheapest? Most expensive?   + Which school subject? | Resources:   * Scratch Paper * Calculators optional |
| Means of Assessment:   * Estimation/Addition accuracy * Use of strategies (observe, listen to student discussions to better understand their thinking) |
| Mid-Level Lesson & Activity: (1 class period; can also be used to fill 5-10 minutes at the end of any class) | | |
| 1) Introduction  .  Same as above  2) Challenge students to come up with the most expensive response  Individually or in partners: Think of an animal that you think has an “expensive” name  Calculate the cost. Compare with other students’ results. Which was most expensive?  Repeat with other categories: state names, foods, words from a vocabulary list, book/movie titles, etc.  As students work, look for opportunities to demonstrate mental math strategies | 3) Optional: Use as “Time Filler” Activity or Anchor Activity  Same as above (include shorter words that would be appropriately challenging) | Resources:   * Same as above |
| Means of Assessment:   * Same as above |
| Lower-Level Lesson & Activity: (1 class period; can also be used to fill 5-10 minutes at the end of any class) | | |
| 1) Introduction  Same as above  2) Estimate, then calculate, which word is more expensive  Write two 3-6 letter words on the board (ie. Horse/Cow, Cat/Dog, etc.)  Have students predict which would be most expensive. Discuss with partner.  Then calculate the “cost” of each word to confirm predictions (as a class, with a partner or individually | 3) Optional: Use as “Time Filler” Activity or Anchor Activity  Same as above (include shorter words that would be appropriately challenging) | Resources:   * Same as above |
| Means of Assessment:   * Same as above |

**$1 Math**

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| **A = 1¢** | **G = 7¢** | **M = 13¢** | **S = 19¢** | **Y = 25¢** |
| **B = 2¢** | **H = 8¢** | **N = 14¢** | **T = 20¢** | **Z = 26¢** |
| **C = 3¢** | **I = 9¢** | **O = 15¢** | **U = 21¢** |  |
| **D = 4¢** | **J = 10¢** | **P = 16¢** | **V = 22¢** |  |
| **E = 5¢** | **K = 11¢** | **Q = 17¢** | **W = 23¢** |  |
| **F = 6¢** | **L = 12¢** | **R = 18¢** | **X = 24¢** |  |

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| **M** | **A** | **T** | **H** |  |  |  |  |  |  |
| **13 +** | **1 +** | **20 +** | **8 =** | **42** **¢** |  |  |  |  |  |

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| **A** | **D** | **D** | **I** | **T** | **I** | **O** | **N** |  |  |
| **1 +** | **4 +** | **4 +** | **9 +** | **20 +** | **9 +** | **15 +** | **14 =** | **76¢** |  |

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| Some $1 Words | | | |
| **Attitude**  **Borrowed**  **Clockwise**  **Elephants**  **Drizzle**  **Fountain** | **Glimpses**  **Hospital**  **Intellect**  **Jurassic**  **Keyboards**  **Lightest** | **Mailboxes**  **Negotiated**  **Overboard**  **Problems**  **Quarter**  **Raincoats** | **Scoreboard**  **Telephone**  **Useless**  **Violins**  **Wednesday** |