

Tools and Manipulatives

Math

1. **Paper Plate Counting-** Cut a paper plate into fourths and write a number on each part. Give students a bag of beans and have them put the correct number of beans on each part.

Time: Less than 5 minutes if not colored or painted

Cost: Paper Plates = \$5 for 120
Beans = \$1



- a. Adaptation 1- Make a plus and minus sign and place it between two parts of the paper plate. Students will then use beans to find the answer to the problem.
- b. Put sounds on each part of the paper plate (sh, ch, th, etc.). Have pieces of paper cut out with words using those sounds (ship, shop, chip, chop, that, there, etc.)

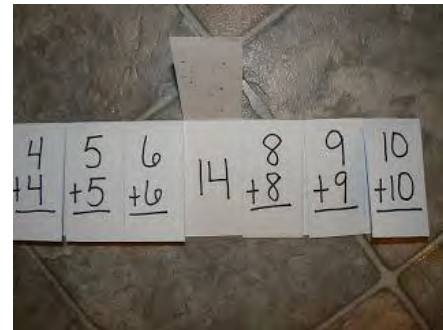


2. **Counting Flip Chart-** Cut a manila folder in half length-wise keeping the folding part in tact or fold a large piece construction paper in half. Then cut slits into one part of the folded half to make flaps. You can then mark dots on the top and the correlating number and word under the flap.

Time: Less than 5 minutes

Cost: Manila Folder = \$8 for 100 or used recycled ones for free

- a. Adaptation 1 - Use flip charts for teaching doubles addition.
- b. Adaptation 2 – Put the infinitive form of a verb (to eat) on the top. Inside the flap have the verb conjugated (I eat. You eat. He/She/It eats. We eat. They eat.)



3. **Pipe Cleaner Counting-** Assign each pipe cleaner a number. Give students a cup full of beads. The student must put the correct number of beads onto each pipe cleaner.

Time: Less than 5 minutes

Cost: Pipe Cleaners = \$3 for 100
Beads = \$6 for 1000



4. **Egg Carton Counting-** Flip the egg carton upside down and cut holes into the bottom of each section and number them 1 to 12. Then make corresponding dots on 12 popsicle sticks. Students must put the correct popsicle stick in the correct hole in the egg carton.

Time: Less than 5 minutes

Cost: Recycled Egg Cartons = Free
Popsicle Sticks = \$2.50 for 100



5. **Pipe Cleaner Calculator-** Put beads onto a pipe cleaner and glue larger beads at each end to keep the smaller beads from falling off. Students can use the beads to help add and subtract.

Time: Less than 3 minutes

Cost: Pipe Cleaners = \$3 for 100
Beads = \$6 for 1000



6. **Exploring Fractions-** Use foam circles to teach fractions. Cut them into halves, quarters, etc. On one side, write the fraction numerically. On the other side, write out the words. You can also color coordinate the fractions (e.g. quarters are yellow, eighths are green, etc.)

Time: Less than 10 minutes

Cost: Foam Sheets (from Michaels) = \$8 for 40






7. **Math Jenga-** Write four math problems (addition, subtraction, multiplication, and division) on each block. All students can play together regardless of his/her math level because once s/he pulls the Jenga block, s/he can answer the problem suited to his/her level.

Time: 30-40 minutes




Cost: Jenga = \$10


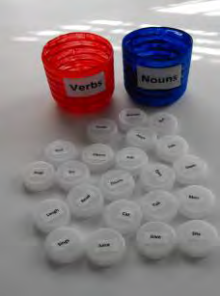

- Adaptation 1 – Sight Word Jenga. Write sight words on all sides of each Jenga piece. Students must read a sight word from the piece they pull.
- Adaptation 2 – Conversation Jenga. Write conversational questions on each Jenga



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| <p>piece (What is your name?). Students must read and answer the questions.</p> | |
| <p>8. Clothespin Math- Write a math problem on each side of a clothespin. Lay out numbers on the table. Students must choose a clothespin and pin it to the correct number laid out on the table. Time: 20-30 minutes Cost: Clothespins = \$1 for 36</p> |  |
| <p>a. Adaptation 1- Color coordinate the clothespin by difficulty level. For example, all addition problems are yellow.</p> | |
| <p>b. Adaptation 2- Have students time themselves and record their time on a sheet. Then encourage students to repeat the game and beat their score.</p> | |
| <p>9. Popsicle Stick Math- Write math problems on popsicle sticks and the answers on plastic cups (or duct tape on the cup). Students must choose a popsicle stick and put it into the correct cup. See Clothespin Math for adaptations. Time: 20-30 minutes Cost: Clothespins = \$2.50 for 100</p> |  |
| <p>a. Adaptation 1 – Have words on each popsicle stick and label the cups with noun, verb, adjective. Students must put each word into the proper category. b. Adaptation 2 – Have cups labeled with each vowel. Have small vocabulary pictures cut out. Students must draw a vocabulary picture out and place it in the cup with the correct vowel sound.</p> | |
| <p>10. Egg Carton Shake Up- Using an egg carton, write different numbers in each part and put two beans or coins inside. Students will shake the carton and then open it. Whichever numbers the two beans have landed in, they must add, subtract, multiply, or divide those two numbers based on their level. Time: Less than 5 minutes Cost: Recycled Egg Cartons = Free 2 Beans/Coins/Beads/Buttons = Free</p> |  |

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| <p>a. Adaptation 1- Make it into a competition. Have two students take turns shaking the egg carton. They must write the answer to their problem and continue adding their results until someone reaches a pre-determined number (100 for instance).</p> | |
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| <p>11. Color Matching- Obtain paint samples. Write the word for each color on a clothespin. Students must match and clip each clothespin to the correct color. If needed, write the word in the corresponding color (e.g. use a green marker to write the word <i>green</i>).</p> <p>Time: Less than 5 minutes Cost: Donated Paint Samples = Free Clothespins = \$1 for 36</p> |  |
| <p>12. Pipe Cleaner Colors- Label each pipe cleaner with its color. Give students a handful of mixed color beads and have students put each bead on the corresponding colored pipe cleaner.</p> <p>Time: Less than 3 minutes Cost: Pipe Cleaners = \$3 for 100 Beads = \$6 for 1000</p> |  |
| <p>13. Days of the Week Wheel- Divide a paper plate into seven parts and write the days of the week at the top of each section. Using cardstock, cut a circle that is smaller than the paper plate and divide it into three parts. Label part one "Yesterday was." Label part two "Today is." Label part three "Tomorrow will be." Then connect the circle and paper plate using a brad. Have students decorate. Use every morning to practice what day of the week it is.</p> <p>Time: Less than 10 minutes Cost: Paper Plates = \$5 for 120 Brass Plated Paper Fasteners (Brads) = \$2.50 for 100</p> |  |
| <p>14. Bottle Cap Alphabet- Write letters of the alphabet on bottle caps. Have students try to put the caps in the correct order.</p> <p>Time: Less than 5 minutes Cost: Recycled Bottle Caps = Free</p> | |

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| <p>Labels (if needed) = \$6 for 1000</p> <ol style="list-style-type: none"> Adaptation 1- Start slower. Give a student only the first 5 letters of the alphabet and have them put them in order. Take one cap away and mix it with the remaining 21 letters and see if they can choose the correct missing cap. Continue this process until they can complete the entire alphabet. Adaptation 2- For students who are able to spell words, give students a handful of random letters and have them create as many words as possible. They write the letters they received at the top of their paper and make a list of words they create. They get 1 point for each letter in the word (e.g. a 5-letter word is 5 points). They can work in pairs or teams. Adaptation 3- Students can sort consonants and vowels using bottle caps. |  |
| <p>15. Verbs vs. Nouns- Write a variety of verbs and nouns on bottle caps. Have one cup labeled “Nouns” and the other labeled “Verbs.” Students must sort the bottle caps into the correct cup.</p> <p>Time: Less than 10 minutes</p> <p>Cost: Recycled Bottle Caps = Free Labels (if needed) = \$6 for 1000 Recycled Cups or Tubaware = Free</p> |  |
| <p>16. Uppercase/Lowercase Matching- Write the letters in uppercase around the outside edge of a paper plate or on pieces of cardboard. Then write the lowercase letters on clothespins. Students will match and clip the correct clothespin to the letter on the plate.</p> <p>Time: Less than 5 minutes</p> <p>Cost: Paper Plates = \$5 for 120 or Recycled Strips of Cardboard = Free Clothespins = \$1 for 36</p> |  |

17. Phonics eggs- Write beginning sounds on one side of the plastic egg (e.g. ch) and write possible endings that make a word on the other part of the egg (e.g. -ain, -air, -ess, -in). Then students will practice reading and sounding out each word while rotating the egg.

Time: Less than 5 minutes

Cost: Plastic Eggs = \$5 for 24 or
Donated Paint Samples = Free

a. Adaption 1- You can focus on endings sounds as well. For example, -ar. The beginning part of the egg would have letters like c, b, f, and j.

b. You can also use paint samples. You will cut a square out of the larger sample and slide the strip sample through it. You can write the ending sound on the larger sample, and the different beginnings on each square of the strip.

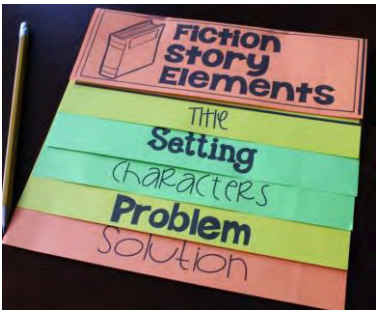
c. Practice compound words. Write one half of the word on one side of the egg and the other part on the opposite half. Open the eggs and mix them up. Students will have to put the two correct halves together.

18. Story Retelling Ropes- Use a rope or pipe cleaner to have students practice summarizing stories, ordering events, or putting things in chronological order. Have students add beads as they go through the story (first, next, then, finally). You can also place the beads on the rope and knot each end. Then students will move the beads up as they go through the story or event.

Time: Less than 3 minutes

Cost: Pipe Cleaners = \$3 for 100
Beads = \$6 for 1000



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| <p>19. Story Elements- For older students, have each student make a flip chart to organize story elements. Fold the first piece of paper once about one fourth of the way down. Then fold the next piece of paper inside the first about one inch further down. Continue until you've folded six pieces of paper inside each other and staple at the top. Label the top "Title." Label the following tabs: "Setting," "Characters," "Problem," "Solution." Students will then write and draw in each section.</p> <p>Time: Less than 5 minutes Cost: Ream of paper = \$7</p> |  |
| <p>20. Slap the Board- Write vocabulary words all over the board in no particular order. Divide the class into teams and call a member from each team up the board. Say the definition or give an example regarding a specific vocabulary word. The first student to find and slap the correct vocabulary word gets a point for his/her team.</p> <p>Time: Depends on class Cost: Free</p> | |
| <p>a. Adaptation 1- You can also write "True" and "False" on the board and give the students statements regarding something you've read, vocabulary words, etc. The students must slap the correct side.</p> | |
| <p>21. Contraction Memory – Write contractions and the words that make up the contraction on multiple pieces of paper. Flip them all upside down. Students must choose to flip over two. If they match (didn't and did not), the student keeps both cards. If they don't match, the student must flip them back over and try to remember what each one was.</p> <p>Time: Less than 10 minutes Cost: Ream of paper = \$7</p> | |