



Montezuma Community Schools

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Kindergarten Math Example:

Students are provided with number cards. They each will flip a card and identify the number and place the number of counters or beans on the ten frame. So for example: 6

X	X	X	X	X
				X

X	X	X		
X	X	X		

Students are asked to count the number of objects on the ten frame. Some students will count by one, some students will see five and then count one more, and yet others will say two, two, and two. In each case the student would be right when getting to six.

The object of the lesson would be for students to gain number sense skills, count on, begin skip counting, and to gain foundational addition skills.

Third Grade Math Example: Partial Sums Addition **Concepts: Place Value and Addition**

In third grade students will begin multi-digit addition and the goal is to provide the students with knowledge in the area of number sense and the ability to complete the task mentally. In this method students will be shown the following addition strategy:

In partial sums addition students will start adding in the hundreds column.		356 + 243
$356 + 243 = 599$	$300 + 200$	$\longrightarrow 500$
	$50 + 40$	$\longrightarrow 90$
	$6 + 3$	$\longrightarrow 9$
		<hr/> 599



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Fourth Grade Math Example: Estimation

Concepts: Various Estimation Strategies

Estimation can be used for a variety of reasons and each method may provide a different answer. So, when students are estimating the goal is to find a method that provides them with the best answer for the question they are trying to solve. It is also important to find a method that each person is comfortable with, can understand, and explain the impact each method has on the answer. In the following estimation lesson you will see 3 different methods of estimation.

Data:	Monday: 226 people	Tuesday: 312 people	Saturday: 463 people
Front-End Estimation:	$200 + 300 + 400 = 900$ people. The addition in the problem is simple and quick for students to complete. However, when using Front-end estimation the student will have underestimated for each day and in the end may not have had enough supplies.		
Rounding	$200 + 300 + 500 = 1000$ people Rounding is a second estimation strategy. However, when you estimate using rounding the answer may not be very close due to rounding to the greatest place value. This can be both good and bad, but you have to understand the results of your choice.		
Close-to	$200 + 300 + 450 = 950$ people When using the 'close to' method you will find an answer that is closer to the exact answer. This will prevent students from going to the extremes when estimating.		

Fifth Grade Math Example: Partial Quotients

Concepts: Mental Math Division using Name boxes

The focus of this lesson is to provide students with a mental math strategy for division of numbers that are not basic facts. We want students to be able to use numbers that are multiples of the divisor to make the division problem easier. Sample Problem: $66 \div 4$.

Step 1: List the multiple of 4: 4, 8, 12, 16, 20, 24, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68
Step 2: The student could recognize that $40 + 24 + 2 = 66$
Step 3: The student then divides 40 by 4 to find 10, 24 by 4 to find 6, and 2 cannot be divided by 4 so it becomes a remainder.
Step 4: Students then need to add the answers to the division problems to find the solution to the problem [quotient]: $10 + 6 = 16$ R 2