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Lesson Plan – Subtracting Across Zeroes  
4<sup>th</sup> grade

**Subtraction**

Objectives:

- Students will be able to review and understand key vocabulary: Operation, ones, tens, hundreds, regroup, and difference.
- Students will be able to understand the concept behind subtraction, using a base ten block computer program on the Internet.
- Students will be able to build different numbers out of base ten blocks on the computer.
- Students will be able to manipulate the base ten blocks on the computer when regrouping.
- Students will be able to explain their reasoning using key vocabulary.
- Students will have a better understanding of subtraction.
- Students will be able to use the Smartboard and laptops to reinforce concepts.

Anticipatory Set:

- The lesson will open with a review of key vocabulary used for subtraction. Students will have to “find their match”, matching their definitions to vocabulary words.

Procedure:

- Use my delicious account to review basic subtraction using the SmartBoard. Students will come up and move the different base ten blocks to the different place values for proper regrouping.
- Introduce how to build their own problems, do various examples.
- Hand out worksheet which explains all the directions for using the computer program as well as problems.
- Give directions that the students are going to pair up with assigned partners and complete the worksheet using the laptops. The worksheet consists of building their own problems and solving them using the computer program. In addition, a word problem is included which the students have to solve and explain their reasoning using math vocabulary.
- When complete, students will self check their answers with answer keys.

Close:

- Students will come back together after about 20-25 minutes. Go over any questions that the students had with the subtraction. Have volunteers read their explanations to the word problem.

Name \_\_\_\_\_ Date \_\_\_\_\_

### Building Numbers and Subtracting Across Zeros

**Directions:** Answer the following subtraction problems using the Internet. Go to [Delicious.com/philarom](http://Delicious.com/philarom). Click first one, **Base Blocks Subtraction NLVM**.

When using the computer program, you must:

- First, click on **“Create Problem.”**
- Next, create the problem you are working on. The blue cubes are the **top** number. The red cubes are the **bottom** number.
- Then, click **Begin Problem**. You may then move the cubes to the correct place value.
- Last, use your pencil and fill in the correct answer for each problem.

1. 
$$\begin{array}{r} 60 \\ - 7 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 307 \\ - 54 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 3004 \\ - 225 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 2006 \\ - 1129 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 3015 \\ - 1346 \\ \hline \end{array}$$

## Math - Problem Solving and Reasoning

1. There are 500 students at an elementary school. Of those students, 229 are involved in sports. How many students are NOT involved in sports? Please explain your answer. You MUST use the following vocabulary words in your answer: Operation, ones, tens, hundreds, regroup, difference, and reasonable.

Show your work:

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CATEGORY	4	3	2	1
<b>Explanation of word problem</b>	Explanation is detailed and clear. Shows thorough understanding of regrouping and vocabulary in entire problem.	Explanation is clear. Shows understanding of regrouping in at least one column and some vocabulary.	Explanation is a little difficult to understand, but includes critical components. Only describes steps and minimal vocabulary.	Explanation is difficult to understand and is missing several components OR was not included. No vocabulary is used.
<b>Subtraction</b>	Explanation is detailed and clear. Shows thorough understanding of regrouping in entire problem.	Explanation is clear. Shows understanding of regrouping in at least one column	Explanation is a little difficult to understand, but includes critical components. Only describes steps.	Explanation is difficult to understand and is missing several components OR was not included.