

**UCSB Department of Mathematics  
Center for Mathematical Inquiry  
Workshop for K-1 Teachers, 2008**

**Number Sense and the Landscape of Learning:  
Developing Place Value and Using the Arithmetic Rack  
to Develop Addition and Subtraction Concepts**

**June 30 and July 1, 12:30-5:00**

**Workshop leader: Bill Jacob, UCSB Mathematics Department**

This workshop introduces the landscape of mathematical development in number and operation in grades K-1 including the big ideas, strategies, and representations that children need to progress from counting to understanding addition and subtraction facts and early place value. The workshop is introductory in nature and participants will leave with two *Contexts for Learning Mathematics*<sup>1</sup> instructional units that they can use at the beginning of the school year. Follow-up workshops will be organized in the fall for participants who want to continue to collaborate on this work with other Contexts units. Participants from previous years' workshops are especially welcome and will find this experience productive because of its focus on the instructional materials.

*Participating teachers will receive a \$150 stipend for the two-afternoon institute.*

The emphasis of the workshop will be to examine student thinking through video and their written work. Then participants will work in teams learning to use the Contexts units. The units also include mini-lessons that can be used throughout the year to help students develop computational fluency.

The units studied in the is workshop are:

**The Double Decker Bus: Early Addition and Subtraction**

The Double Decker Bus introduces students to the arithmetic rack where they see the relationships between addition and subtraction, using doubles and near doubles.

**Organizing and Collecting: The Number System**

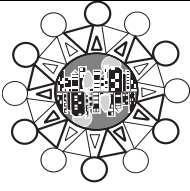
Organizing and Collecting creates a context for investigating place value patterns and efficient ways to count using grouping strategies, from which they develop the five- and ten-structures in our number system.

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The workshop will be limited to 20 participants. All workshop sessions will be held at UCSB in Trailer 940, Room 1010 and parking passes will be provided to participants. An application is attached. **Applications are due by June 10, 2008.** This workshop is funded in part by a grant from the Educational Advancement Foundation. For more information contact Bill Jacob at [jacob@math.ucsb.edu](mailto:jacob@math.ucsb.edu) or Monica Guzman at [monica@math.ucsb.edu](mailto:monica@math.ucsb.edu).

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<sup>1</sup> The Contexts for Learning Mathematics units have been adopted by the California State Board of Education for instructional use and are available through Harcourt or Heinemann. They are not a full program, however each unit provides two to three weeks of material to help students develop understanding and computational fluency in number. The Contexts units can be ordered individually and there is no requirement that other Harcourt materials be used.



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**APPLICATION**

**Note: Participants are welcome to attend two workshops. However, you must submit two applications if you desire to do so.**

Name: \_\_\_\_\_

School: \_\_\_\_\_ Grade: \_\_\_\_\_

Home Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Home Telephone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Mail, Fax or email application to:

Monica Guzman  
Department of Mathematics  
University of California, Santa Barbara  
Santa Barbara, CA 93106  
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monica@math.ucsb.edu

This project is funded by a grant from the Educational Advancement Foundation. For more information email Bill Jacob at jacob@math.ucsb.edu. Space is limited. **Application Deadline: June 10, 2008.** Applicants will receive program information and parking permits prior to the start of the program.