

## DO THE MATH TEACHER GUIDE SAMPLER

## ADDITION \& SUBTRACTION, NUMBER CORE

This Sampler includes select pages from the Addition \& Subtraction, Number Core Teacher Guide. You'll see a sample of the:
(3) Instructional Principals
(3) Letter from Marilyn Burns
(3) Planner
(3) Lessons
(8) Annotated WorkSpace

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Help At-Risk and Struggling Students Succeed in Math
Research shows that students with diverse needs succeed in learning mathematics through explicit, intentional teaching based on proven instructional strategies.

## TEACHNG For UNDERSTANDING

Students benefit from instruction based on teaching for understanding. Step-by-step lessons help students develop understanding, learn mathematical skills, see relationships, and make connections.
Learning experiences link concepts and skills to their mathematical representations and language.
Students use concrete and pictorial models to build a strong foundation in key mathematical concepts, operations, and strategies.
scaffolded content
Scaffolding of the content makes the mathematics more accessible to students.
Do The Math focuses on key content in mathematics so that students are not overwhelmed with extraneous material.

- The content is organized into manageable chunks.
- The lessons are explicit about the relationships among these chunks.
- The instruction is carefully sequenced to help students build a solid foundation of understanding.
 place value


Help Students Build Their

## Mathematical Reasoning

CLASSROOM ROUTiNEs
Routines such as "think, pair, share" promote engagement and deepen student understanding.

$$
\begin{aligned}
& \text { Students collect their thoug } \\
& \begin{array}{|c}
\text { PAIR } \\
\text { Students discuss with a partner. } \\
\hline
\end{array} \\
& \text { SHARE } \\
& \begin{array}{l}
\text { Students report ideas to the whole group. } \\
\text { Expressing ideas and hearing other perspectives }
\end{array} \\
& \begin{array}{l}
\text { Pressing ideas and hearing other perspec } \\
\text { help students claríy their thinking }
\end{array} \\
& \text { help students clarify their thinking. }
\end{aligned}
$$

-The listening and speaking that occur during "think, pair, share" are especially valuable for English language learners.
Teachers can pair English language learners Teachers can pair English language learners language to allow them to discuss concepts.
Teachers can also pair a student with early English skills and a student early English skills and a student language development.

## independent student work

Assignments provide students with opportunities to practice, strengthen, and extend their learning

## - WorkSpace ${ }^{\text {assignments }}$ are

carefully constructed to motivate students and maximize their success through games, assignments for reinforcement, and problem-solving situations

- The digital experience gives students the flexibility to explore mathematical tools and games within and outside the classroom


## vocabulary and language

Explicit vocabulary instruction helps students communicate effectively about the math they are learning Vocabulary is introduced after student experience concepts. Vocabulary lessons ollow a consistent routine-the teacher writes nd provides an example; students see, hear say, and write it; and the vocabulary is then incorporated throughout the lessons to support students' learning.
Key mathematical and academic vocabulary is highlighted at the start of each lesson, and Spanish translations are provided.

A glossary in the WorkSpace ${ }^{\oplus}$ provides students with a reference for definitions.


Assessment and differentiation
Ongoing assessment is built into the program to help teachers meet individual student needs.
During lessons, teachers observe students working in the whole group, with partners, and independently.

Specific guidance for how to promote understanding and address student misconceptions is integrated into all lessons.
Suggestions for differentiating instruction are included after every "Assessing Student Understanding" lesson, both for students who need additional help and those who are ready for a challenge.


Students are then introduced to another visual tool-the
ten-frame. The ten-fro that helps students use is ideal for providing a structure numbers and fints use the benchmark number of 5 to build is is useful for building students' number sense and sum a 5 sums to 10 .


Students use the ten-frames along with the two-color counters for a
activity-Roll and Add-which gives them two-color counters for a new Students also revisit Shake and Spill and Racte to figuring sums to 10. activities to numbers greater than 5. They also to the Top, now applying these addends for sums to 10 .
Marsyon
. his module has been specica. The number 5 is an important benchmark in oundation the first two lessons ease students into the our base-ten number system, and addends that make 5 .
module with a focus on pars ingal tool. They engage in two Students use two-color counters as the Top. A variety of games and activities-Shake and Spill and the module to motivate students activities like these are woven trous first twities, students spill interest and support their learning. In these frist 5 and then record the

$$
66_{\text {The number } 5} \text { is an }
$$ important benchmark in our base-ten number our base-ten

system. 99

Dear Colleague, five counters to generate
students...

- Use the benchmark of 5 to
represent sums of 6 to 9 .
- Identity pairs of addends with sums to 9 .
- Communicate ideas with key math vocabulary: add, key math vocabuiary: add,
addend, addition, equals, equation, plus, and sum.


## FROM MARILYN BURNS







## Call 800.225.5800 or visit <br> Heinemann.com/DoTheMath

Created by
Marilyn Burns

## NEW From Heinemann Math Listening to Learn

## By Marilyn Burns and Lynne Zolli

A K-5 Digital Interview Tool to help teachers learn how their students reason numerically-information that's essential for planning instruction.

LISTENINGTOLEARN.COM

