What questions should I ask my child to support them?

To promote problem solving, ask…

- What do you need to find out?
- What information do you have?
- What strategies are you going to use?
- What do you think the answer or result will be?

To help when students get stuck, ask…

- What part of the problem do you understand?
- How did you tackle similar problems?
- Could you try it with simpler numbers?
- Would it help to make a diagram? A picture? A table?
- Can you guess and check?

To build confidence and rely on their own understanding, ask…

- Does that make sense?
- Can you solve the problem using a different strategy?
- How did you reach that conclusion?
- Can you make a model to show that?

How can I help my child at home?

Real-life Applications:

Counting out money (money)
Following a recipe (measuring)
Telling time (use analog clock)
Sorting objects into groups & counting
Building things (measuring, spatial)
Point out the "math" in our every day world (shapes, estimation, patterns, problem-solving)

Play Games:

Checkers
Yahtzee
Blokus
Sudoku
Chutes & Ladders
Monopoly Jr.
Guess my number

Online Resource:

SuccessNet—an Investigations resource for teachers, parents and students. Students will use a Username and Password to access a handbook and activities.
Log onto: www.pearsonsuccessnet.com

A Parent's Guide to Mathematics

Stafford Primary School
19875 S.W. Stafford Road
West Linn, Oregon 97068

Our overarching goal for students is that they develop mathematical proficiency. We want them to build a strong conceptual base of understanding which they can apply to a wide range of problems. It is important that students become flexible, accurate and efficient thinkers in math.

Math looks different today than it did when we were children. Our focus on building a conceptual understanding (the "why" within the math) through a variety of strategies is one example of the differences.

We also want students to explain their thinking and share their strategies with their peers. It is through this "talking the math" process that students become more articulate, competent and confident as mathematicians.

Our own attitudes about math matter to our children. They look to us for guidance, support and encouragement. It is important for school and home to foster a positive attitude even when tackling complex problems.

Developing Mathematical Proficiency

Schools today have developed new methods to help children learn, understand and demonstrate their knowledge in mathematics.

1. **Conceptual Understanding**
When facts and methods are deeply understood and connected, then they are easier to remember and use
2. **Procedural Fluency**
Students are flexible, accurate and efficient solvers
3. **Strategic Competence**
Students formulate, represent, and solve problems
4. **Adaptive Reasoning**
Students think logically about relationships and situations
5. **Productive Disposition**
Students enjoy math and are confident in their mathematical abilities

Our mathematics instruction is based within a framework of best practices. Best practices define an effective mathematical culture where four practices are evident:

- All students are engaged in worthwhile mathematical tasks
- Mathematical activities center on understanding, invention, and sense-making by all students
- The classroom culture provides opportunities for inquiry, for exploring the new learning that can result from wrong answers, collaboration and disequilibrium, leading to mathematical learning by all students
- A teacher's knowledge of the mathematical content and the trajectory of the content enables the teacher to support important, long-lasting student understanding

BROAD OVERVIEW OF K-5 CURRICULUM

Becoming mathematically proficient takes time and should be thought of as a long-term process along a learning continuum.

Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade
Building a strong foundation in understanding number and geometric principles. Using numbers to represent quantities and solve quantitative problems (counting objects in a set, joining and separating situations with objects). Identifying and making patterns. Interpreting the physical world with geometric ideas.	Continue building number sense, patterns and geometric principles. Develop strategies for adding and subtracting whole numbers using a variety of models. Compare and order whole numbers up to 100. Compose and decompose plane and solid figures; building an understanding of part-whole relationships.	Continue building number sense and more complex patterns. Begin measurement of straight lines, area, perimeter. Develop understanding of base-ten numeration system and place value. Develop quick recall of basic addition and related subtraction facts. Solve arithmetic problems by applying models of addition and subtraction.	Extend understanding of number and operations to division, multiplication and fractions. Apply with whole numbers through the use of representations. Develop meaning and use of fractions to represent parts of a whole, parts of a set or points or distances on a number line. Describe and analyze 2D shapes by attributes.	Apply models for multiplication, place value, and properties of operations; use efficient and generalized methods to multiply whole numbers. Develop an understanding of decimal notation as extension of base-ten system and connect to fractions. Develop understanding of area of 2D shapes.	More fluency with addition and subtraction of fractions and decimals, using models to represent various problems. Develop an understanding of and fluency with division of whole numbers. Relate 2D shapes to 3D shapes and analyze their properties, including volume and surface. area.