

## Helping Your Child with Math

### Be a learner yourself:

- Learn to play with numbers using mental arithmetic.
- Play mathematical games at home that involve problem solving.
- Notice when you use mathematics in your everyday life and share this with your child.
- Demonstrate that you value persistence.
- Get to know the research on math education

### Be a researcher:

- Become a question poser
- Be curious about your child's thinking when they are doing math.
- Be a thoughtful listener.
- Ask questions that help you understand your child's thinking.
- Know that teaching by telling is not how people learn mathematics.

### Be a communicator:

- Recognize how important talking and writing is to learning mathematics.
- Talk with your child about the many ways to think about a math problem.
- Encourage diverse ways of solving problems



## **Helping Your Child with Math at Home: Questions Parents Can Ask**

Questions that help children rely more on themselves to determine whether something is mathematically correct

*Why do you think that?*

*Why is that true?*

*How did you reach that conclusion?*

*Does that make sense to you? If not, what is puzzling you?*

*Can you make a picture or model to show that?*

Questions that help children learn to reason mathematically

*Does that always work?*

*Is that true for all cases?*

*Can you think of a case where that wouldn't work, a counterexample?*

*How could you prove that?*

*What assumptions are you making?*

Questions that help children learn to conjecture, invent, and solve problems

*What would happen if . . . ? What if not?*

*Do you see a pattern?*

*What are some possibilities here?*

*Can you predict the next one? Can you predict the last one?*

*How did you think about the problem?*

*What decision do you think you should make? Why?*

*What is different and what is similar about your method of solution and mine?*

Questions that help children connect mathematics, its ideas, and its applications

*How does this relate to . . . ?*

*What ideas that you learned before were (or might be) useful in solving this problem?*

*Have you ever solved a problem like this one before?*

*Can you give me an example of . . . ?*