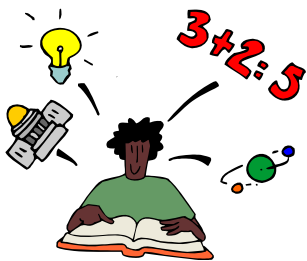


Help your child discover math in our world!

In the young child's world, mathematics is used everyday with familiar objects in real life situations. In the first few grades, children think in very concrete terms. They enjoy learning numbers, counting things (everything), identifying shapes, collecting and describing their collections, and, of course, building things. You can help your child enjoy mathematics by:

- Helping them recognize shapes (circles, squares, triangles) in nature and in things that people build
- Counting things in your daily world—plates on the table, shirts in the laundry, toys as you put them away
- Pointing out patterns—in traffic (truck, car, truck, car)—in the grocery line (cart, person, cart, person)—in nature (bird songs and pine cones)
- Playing the “missing” game—Show your child some candies (pennies, rocks, etc.) in your hand. Let your child count them. Put a few in your pocket. Show your child what is left in your hand. Ask, “How many did I put in my pocket?” Great training for algebra!



For complete information on the Arizona Academic Standards go to www.ade.az.gov/standards/contentstandards.asp

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Osborn School District
An Osborn Education

*Parents' Guide to
Grade Level
Learning Targets
for Mathematics*

Grade 2

Osborn School District ***Grade 2 Targets***

Mathematics

Number and Operation

Number Sense:

- Students refine their understanding of the base ten number system;
- Use place value concepts of ones, tens, and hundreds to understand number relationships;
- Become fluent in writing and renaming numbers to 1000 in a variety of ways;
- Understand place value to develop a strong foundation for learning how to add and subtract two-digit numbers.

Number and Operations:

- Students continue to focus on what it means to add and subtract;
- Achieve fluency with single-digit addition and subtraction facts;
- Develop addition and subtraction procedures for two-digit numbers;
- Refine their knowledge of place value, number relationships, and putting together or taking apart sets of objects;
- Begin to develop an understanding of multiplication.

Estimation: Students use the benchmark numbers 20, 50, and 100 to estimate sums without rounding.

Data Analysis and Discrete Mathematics

Data Analysis (Statistics):

- Students create displays of data;
- Ask and answer questions about pictographs, frequency tables and single bar graphs;
- Apply their growing understanding of numbers and the operations of addition, subtraction, and multiplication.

Systematic Listing and Counting:

Students apply their number sense skills to solve problems in context involving systematic listing and counting.

Vertex-Edge Graphs:

- Students apply problem solving skills to color simple pictures/maps following specific rules;
- Create vertex-edge graphs using concrete materials or drawings.

Patterns, Algebra and Functions

Patterns:

- Students work with patterns to extend their thinking about numbers, operations, and geometry;
- Use reasoning to describe patterns and their rules.

Functions and Relationships:

- Students extend their understanding of patterns
- Use objects, pictures, and function tables to explore the relationships between sets of numbers

Algebraic Representations:

- Students make strong connections between algebraic representations and number sense;
- Construct models to demonstrate equivalency of numbers to 1000

Geometry and Measurement

Geometric Properties:

- Students solve problems involving two-dimensional figures;
- Analyze the attributes and properties of two and three-dimensional figures
- Develop mathematical arguments about the relationship of two and three-dimensional figures.

Transformation of Shapes: Students explain the rationale for symmetry of two-dimensional figures.

Measurement:

- Students strengthen their understanding of the process of measuring length;
- Progress from measuring length with non-standard units to using standard units;
- Use tools such as rulers, tape measures, or meter sticks;
- Tell time on different types of clocks.

Structure and Logic

Logic, Reasoning and Problem Solving:

- Students “do” math by solving problems and talking about what they did to solve those problems;
- Communicate their mathematical thinking and make increasingly more convincing mathematical arguments.