

# Elementary AKS Spotlight: How to Support Your Students at Home with Mathematics

## Second Semester Activities to Engage with the New AKS at Home

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### Kindergarten

#### Addition and Subtraction within 10

Kindergartners are beginning to understand the concept of addition and subtraction as we enter the second semester of learning. The sums and differences are limited to the number 10. Using common household objects like spoons or stuffed animals to represent values, have your student practice adding two numbers using the objects to count the total number of objects. Students are working on the understanding and application of the word sentences such as "3 and 2 is the same as 5." As your child becomes successful with addition to ten, repeat using subtraction and word sentences such as "7 subtract 3 is the same as 4." Students will begin to understand the idea of equivalence.

#### Create, Extend, and Describe Repeating Patterns (Numbers and Shapes)

Your kindergartener is extending their learning this semester with creating, describing, and extending both shape and number patterns.

Ask your child to see if they are able to create the following patterns, extend the patterns, or tell what is missing if part of the pattern is hidden:

- Penny, nickel, penny, nickel...
- Red square, blue square, yellow square, red square...
- 4, 2, 2, 4, 2, 2, ...

Then have your child find patterns in the environment (floor tiles, height of fence posts, colors of cars, etc.)

#### Money

Kindergartners only have to be able to know by recognizing the following coins: pennies, nickels and dimes. They must know their names and their values. At home, you can practice this skill by allowing your child to hold the coins and talk about the characteristics of the coins. Consider allowing your child to "purchase" their toys or necessities. Example: Ask them to bring you a dime for a juicebox. Students will enjoy this real world experience.

### First Grade

#### Shapes

Our first graders are required to identify the following two-dimensional shapes: rectangles, squares, rhombuses, triangles, trapezoids, hexagons (6-sides), circles, half-circles, and

quarter-circles. Have your child try to find examples of each shape in your home, driving places, and at stores.

First graders will also learn about the following three-dimensional shapes: cubes, rectangular prisms, cones, spheres, and cylinders. Again, have your child try to find examples in the real world of these shapes.

### **Telling Time**

Students in first grade are working on telling time this semester. They must know the time on an analog and digital clock in hours and half-hours. If you have an analog clock in your home, have your students practice telling time when the clock is showing a time at o'clock (12 o'clock PM ) or to the half-hour (5:30 PM).

### **Money**

First graders are extending their knowledge from kindergarten with coins. Last year, students should have been able to identify and state the values of pennies, nickels and dimes. This knowledge is continued as now first graders are required to identify and state the values of pennies, nickels, dimes, and quarters. They must know their names and their values.

Students in first grade do not have to calculate the value of different coins, but must be able to compare the values of different coins such as three dimes has a greater value than one quarter or five nickels is equal in value to one quarter.

At home, you can practice this skill by allowing your child to hold the coins and talk about the characteristics of the coins. Consider allowing your child to "purchase" their toys or necessities by asking them to bring you a ten cents for a juicebox. They may bring you a dime or other combinations to make ten cents. Students will enjoy this real world experience.

## **Second Grade**

### **Addition and Subtraction (within 1,000)**

Consider allowing your child to create a budget for a new bedroom remodel or a special event in the family with a \$999 spending limit. Your child (with your permission to search online) can research different costs for their remodel or special event. Your second grader can practice their addition and subtraction within 1,000 by adding costs and subtracting from the \$999. Have students use whole dollar amounts as second graders have not been taught decimals.

### **Measurement**

Our second graders are beginning to estimate and measure lengths of objects and distance using the following customary measurement: inches, feet, and yards. Consider allowing your child to find objects around the home in which they can practice estimating the length and then measuring with a ruler, yardstick, or measuring tape. Students might measure (to the nearest inch) how long the cereal box measures, or the height of a parent.

### **Tell Time (Nearest 5 minutes)**

Students in second grade are working on telling time this semester. In first grade, they began learning to tell time. Now, this knowledge extends to being able to tell time on an analog and digital clock to the nearest five minutes. If you have an analog clock in your home, have your students practice telling time when the clock is showing a time and find the closest 5-minute interval.

Consider using a hula hoop and sidewalk chalk to make a clock on your driveway. Use the inside area of the hoop to write the hours on a clock and the 5-minute intervals on the outside of the hoop. With hour and minute hands, have your child find the various times you indicate (3:15). You can also use different lengths of sticks to represent the hands of a clock if it is a windy day.



## **Third Grade**

### **Telling Time**

Third graders are continuing to build their understanding of telling time. Practice telling time to the nearest minute on an analog clock. Have your child determine times using the clock based on your schedules at home. For example, “ We finished cooking dinner at 5:37 PM. Show me that time on the clock.”

### **Fractions**

Students in third grade continue to build their understanding of fractions in the second semester. One concept they will begin to explore is the idea of equivalent fractions. Consider having your child help you in the kitchen baking a recipe. If the recipe requires  $\frac{1}{2}$  cup of rice, have your child determine how many fourths or eighths are needed to make a  $\frac{1}{2}$  cup. Students will only work with fractions with denominators of two, three, four, six, and eight.

### **Measurement**

In third grade, our students are measuring within the customary system. They are to estimate and measure liquid volume using fluid ounces, cups, pints, quarts, and gallons. With your permission and supervision, have your child go on a scavenger hunt in your home to find different examples of products that are used and determine their liquid volumes on the containers. With your permission and supervision, also consider allowing your child to determine how many pints or quarts of water there are in an empty milk gallon. Discussing when measurements are used (fluid ounces versus gallons) will benefit your child's understanding of the different measurements and when it is appropriate to use.

Along with liquid volume, students will also deepen their understanding from previous grades about customary length. Students are expected to estimate and measure inches (to the nearest half inch and quarter inch), feet, yards, and miles. Using a ruler, yardstick, or measuring tape, consider allowing your child to practice estimating and measuring in inches, feet, and yards various objects found around the home. Students might measure (to the nearest half inch and quarter inch) how long their favorite stuffed animal might be or the height of their brother or sister.

## Fourth Grade

### Area and Perimeter

Find locations or items around your house (such as an area rug, the top of their bed, or flower bed, etc.) that your child may measure to the nearest foot or yard to determine the area and the perimeter of the objects. Consider giving your child the perimeter of an object and have them determine the area, or vice versa. As a family, you can hunt for different objects or locations around your home, neighborhood, or parks for your child to measure and find the perimeter and area.

### Types of Angles

Students in fourth grade begin to understand that angles are able to be categorized by their angle measure. Three types of angles are explored in fourth grade: right (measuring  $90^\circ$ ), acute (measuring less than  $90^\circ$ ), and obtuse (measuring greater than  $90^\circ$ , but less than  $180^\circ$ ). Provide your child with opportunities to locate angles within your home, in local architecture, and/or in nature and determine the type of angle by its estimated measure.

### Continue to Practice Multiplying Whole Numbers (Up To Four-Digit by One-Digit and Two-Digit by Two-Digit)

Students in fourth grade are expected to be able to multiply up to a four-digit number by a one-digit number ( $4,276 \times 6$ ) and a two-digit by a two-digit number ( $45 \times 87$ ) by the end of fourth grade. Have students calculate the cost of visiting Dairy Queen for your family for 8 weeks since they love to spend our money! How much would that cost our family in one month? You can be creative in identifying different ways for students to practice their multiplication by putting the situation into real-life situations and maybe bringing awareness to why we do not always visit Dairy Queen for treats every week! Keep the amounts to whole numbers. Students in fourth grade are not working with decimals at this time.

Using playing cards (pull out the Jacks, Kings, Queens and Aces), have your child pull cards to create two sets of two-digit numbers. Have your child multiply them to find the product.

## Fifth Grade

### Fractions

Your children are extending their understanding of fractions in fifth grade. Have your child find and make a list of how fractions are used in everyday life. Consider having your child, with your supervision, ask family friends how they use fractions in their work and/or at home. Have your child justify why it is important for them to understand and be able to use fractions! Consider having them find as many different professions that use fractional understanding in their lives!

### Addition and Subtraction of Decimals

Students are able to practice their understanding of adding and subtracting decimals by taking receipts and cutting off the computerized totals found at the bottom. Have your child add the total amount and ask them to determine the change if paid with \$100.00 (or other amount).

Another idea is to allow your child to find the cost of three items they really want and add the total. To practice their subtraction skills, have your child determine the change if paid with \$100.00 (or other amount).