NC Home Support Resource - Kindergarten Math

Purpose:

This document is intended to support parents/guardians with understanding the major concepts in the NC Standard Course of Study (SCOS) for Kindergarten mathematics, and provide possible ways to partner with their student's teacher, school, or district at home.

What is the NC Standard Course of Study?

North Carolina's Standard Course of Study (SCOS) defines content standards for each grade level and high school course to provide a consistent set of learning standards for every public school in North Carolina. These standards define what students know and should be able to do by the end of a specified year or course. The SCOS provides expectations with the end goal of preparing all students to successfully do mathematics in ways that lead them to become ready for careers and/or college.

Who determines how the standards are taught?

Local school districts have autonomy to choose the curriculum (materials and resources) to help students meet the expectations of the SCOS. Mathematics learning is facilitated by the classroom teacher and should be aligned to the local school and district curriculum, as well as the North Carolina Standard Course of Study.

The Content:

Elementary math builds a strong foundation of mathematical understanding that will be applied in later grades. Students develop number sense and fluency with operations using conceptual models. Students develop an understanding of properties of operations and apply the properties to problem solving. Students in elementary grades also develop an understanding of shapes and their properties; as well as, collecting and representing data in various ways. Students will apply what they learn in elementary mathematics to middle school mathematics and beyond.

What's new in Kindergarten Math?

The table below summarizes the content for kindergarten mathematics, along with content from the next grade level.

Kindergarten Mathematics	Grade One Mathematics
• Know number names (1-20) • Know the count sequence (1-100) • Count to tell the number of objects (1-20) • Understand addition as putting together and adding to • Understand subtraction as taking apart and taking from • Work with numbers 11-19 to build the foundation for place value • Identify and describe shapes • Create and compare shapes	• Solve problems with addition and subtraction (1-20) • Extend the counting sequence, counting beyond 100 • Understand place value of two-digit numbers • Measure lengths using non-standard units • Tell time to the hour and half hour on analog and digital clocks • Identify coins and their value • Build and identify 2-D and 3-D shapes • Partition circles and rectangles into two and four equal shares

Support Mathematics Learning Outside of School

There are a variety of ways that parents/guardians can support students at home. Here are a few suggestions for supporting student learning outside of school.

1. **Encourage perseverance.** Problem solving requires students to make conjectures and inferences, and test and modify their strategies. It is important to encourage students to persevere through challenging problems. Avoid providing answers and promote perseverance by asking, “What is the problem asking you to find?” and "What did you do in class that might help you figure it out?"
2. **Ask questions about what they are learning in school.** Notes from class or print/digital materials can be used as resources when students are studying or doing math work at home. They provide insight on the strategies and methods students are expected to use when solving problems
3. **Transform mistakes into opportunities for growth.** Discuss and ask questions about students’ work to help them reflect on their work and opportunities for growth. Provide a safe space to talk about mistakes and opportunities to practice. Doing this regularly will assist in knowing students’ progress and minimizing surprises in the gradebook or on report cards.
4. **Seize opportunities to practice math in the real world.** Play board games and counting games with your student during downtime. For example: Say to your student, “You have 3 crackers. If I give you 2 more, how many will you have?” or spend time naming and describing shapes seen around them.
5. **Practice computational skills to build fluency*.** Fluency progresses learning strategies beyond basic facts and memorization. Students should be able to fluently add and subtract all numbers 5 or less by the end of Kindergarten. Regular practice using sense-making strategies rather than memorization helps build student fluency. Partner with your student’s teacher to understand learned strategies.
6. **Support student responsibility.** Help students to take ownership for their own learning. Encourage them to ask for help, share when the learning is not clear, and to independently practice math skills.

Partnering with the School

A healthy home-student-school relationship is a vital component to the success of students. Asking questions can help parents/guardians to understand what their student is learning so that they can provide support to their student and teacher.

1. **Classroom instruction.** Ask questions to help you understand what and how your student will be learning: What math will they learn this year? How will I know the expectations throughout the year? What skills should my student already have mastered? How will I know if more practice is needed? How much and what kind of work will they be expected to complete at home? How often will students be assessed? What are some ways that I can help my student prepare at home?
2. **District Curriculum.** Find out what curriculum resources/materials the school or district use to implement the SCOS. Are there parent resources? What manipulatives will my student use? Will my student have a printed workbook/textbook or access to digital materials? If so, will they bring any of these items home?
3. **District and State Assessments.** Get information about the assessment schedule for the year. Find out what assessments are required by the district and the state. How often throughout the year will students be assessed? How and when will testing information and results be shared?
4. **Parent-teacher communication.** Keep an open line of communication with the teacher and the school so that you can stay updated on your student’s progress. Ask questions, such as: How is my student progressing? What are some things my student does well? What gaps in understanding do you see?

**Fluency is defined as the ability to apply procedures accurately, efficiently, and flexibly; to transfer procedures to different problems and contexts; to build or modify procedures from other procedures; and to recognize when one strategy or procedure is more appropriate to apply than another. NCTM Position Paper, Procedural Fluency in Mathematics, Retrieved from https://www.nctm.org/Standards-and-Positions/Position-Statements/Procedural-Fluency-in-Mathematics/*