# Arizona Mathematics Standard Articulated by Grade Level

## GRADE 2

Every student should understand and use all concepts and skills from the previous grade levels. The standard is designed so that new learning builds on preceding skills. Communication, Problem-solving, Reasoning & Proof, Connections, and Representation are the process standards that are embedded throughout the teaching and learning of all mathematical strands.

**Strand 1: Number and Operations**

Number sense is the understanding of numbers and how they relate to each other and how they are used in specific context or real-world application. It includes an awareness of the different ways in which numbers are used, such as counting, measuring, labeling, and locating. It includes an awareness of the different types of numbers such as, whole numbers, integers, fractions, and decimals and the relationships between them and when each is most useful. Number sense includes an understanding of the size of numbers, so that students should be able to recognize that the volume of their room is closer to 1,000 than 10,000 cubic feet. Students develop a sense of what numbers are, i.e., to use numbers and number relationships to acquire basic facts, to solve a wide variety of real-world problems, and to estimate to determine the reasonableness of results.

**Concept 1: Number Sense**

Understand and apply numbers, ways of representing numbers, and the relationships among numbers and different number systems.

In Grade 2, students refine their understanding of the base ten number system and use place value concepts of ones, tens, and hundreds to understand number relationships. They become fluent in writing and renaming numbers in a variety of ways. This fluency, combined with the understanding of place value, is a strong foundation for learning how to add and subtract two-digit numbers.

| ***Performance Objectives*** | ***Process Integration*** | ***Explanations and Examples*** |
|---|---|---|
| *Students are expected to:* | | |
| PO 1. Express whole numbers 0 to 1000, in groups of hundreds, tens and ones using and connecting multiple representations.<br><br>Connections: M02-S1C1-02, M02-S1C1-03, M02-S1C1-04, M02-S1C1-05, M02-S1C1-06, M02-S2C1-01, M02-S2C1-02, | M02-S5C2-04. Represent a problem situation using any combination of words, numbers, pictures, physical objects, or symbols. | There is a strong connection between this performance objective and recording equivalent forms of whole numbers (M02-S3C3-01). Teaching these ideas concurrently is critical. Models, pictures, number lines, spoken and written words, and expanded form should be used.<br><br>Continued on next page |

The bulleted items within a performance objective indicate the specific content to be taught.