

# Grades K-2 Mathematics Curriculum

## RATIONALE

All students, regardless of different abilities, needs and interests, must be able to use mathematics in their personal life. Mathematics is used in daily life as well as in the workplace. All students deserve to understand the power of mathematics. Students need to solve problems encountered in daily life and to predict future needs or outcomes.

## DESCRIPTION/PURPOSE

The mathematics curriculum requires participation in learning, connection to other curriculum areas, using technology, and generalization into the community. Mathematics enables students to fulfill personal ambitions and career goals in an ever-changing world.

Students with severe disabilities are able to build on the following outcomes through the mathematics:

- Learning concepts and skills in order to apply them to problem solving in and outside school
- Use comparison, sequencing, counting, and classifying to solve problems in daily life and in the work force
- Predict future needs through mathematics
- Follow a routine to participate in daily life
- Participate in daily life through the use of technology
- Learn and use signs, symbols and specialized terms of mathematics in communication

## Content Description by Grade Level Span

Grade levels are divided into four segments; kindergarten-second grade; third-fifth grade; sixth-eighth grades; and, ninth-twelfth grades. Grade twelve can last up to four years. The curriculum is cumulative in that skills learned during the elementary years are expanded during the middle school grades and so forth. The goals and benchmarks for the student must be selected from the student's curricular grade span. We recognize that each student will accomplish the graduate goals by different means (goals mastered).

**Mathematics      Grades K 2**

**Graduate Goal 1** Graduates will communicate.

**Graduate Goal 4** Graduates will solve problems or complete tasks.

**Graduate Goal 5** Graduates will follow routines.

**GLE:** Not Available

**STRAND:** Not Available

**Show-Me Standard M-4**  
Patterns and relationships within and among functions and algebraic, geometric, and trigonometric concepts.

**Alternate Framework Standard AltM-4**  
Recognizing shapes and patterns in the environment using visual models.

**Alternate Process Standard:** (What All Students Should Do)  
Goal 1 Alt-5, Goal 1 Alt-6, Goal 1 Alt-8

<b>Authentic Life Skills (What All Students Should Know)</b>	<b>IEP Code</b>	<b>API Code</b>	<b>Authentic Learning Activities</b>
Complete the steps of a visual schedule.	5017020		Follow examples on how to complete a task by following pictorial cues—hand washing picture sequence on the wall, picture cue on making Kool-Aid. Use an individual daily schedule which is developed with the assistance of the student.
Follow a daily schedule by carrying the object/representation to the activity site.	7300055		
Match activity to line drawing on visual schedule.	7300003		
Complete activity as indicated on visual schedule.	7800001		Follow (time and sequence) to complete activities that are found in the daily visual schedule.
Point to the picture of activity just completed.	7300067		

**VISUAL SCHEDULES**

**Assessment of Student Performance: Performance tasks, student performance data, authentic assessment.**

**Mathematics      Grades K 2**

**Graduate Goal 4** Graduates will solve problems or complete tasks.

**Graduate Goal 5** Graduates will follow routines.

**GLE:** Students will perform counting skills.

**STRAND:** Number and Operations

**Show-Me Standard M-1**

Addition, subtraction, multiplication, and division; other number sense, including numeration and estimation and application of these operations and concepts in the workplace and other situations.

**Alternate Framework Standard AltM-1**

Counting and grouping strategies used to solve problems encountered in the activities of daily living.

**Alternate Process Standard:** (What All Students Should Do)

Goal 1 Alt-4, Goal 1 Alt-6, Goal 3 Alt-2, Goal 3 Alt-3

Authentic Life Skills (What All Students Should Know)	IEP Code	API Code	Authentic Learning Activities
Explore quantity using manipulatives.	7810153	NO1.0	Push/slide off a table/surface into a container a card/item for each student and count the cards/items, with assistance if needed, to determine number of students present or number of items needed for specific activities.
Represent and number small collections.	7810155	NO1.1	Setup up situation so students can take a specific number of items to different location in school.
Recognize a small collection up to "four" items.	7810156	NO1.1b	Use a counting jig.
Show up to four items by responding to a verbal request for four items.	7810157	NO1.1d	
Start counting sequence with one.	7810158	NO1.2a	
Use counting sequence to show correct sequence up to 10.	7810159	NO1.2b	Play a game, counting and moving a marker/playing piece.
Use the counting sequence to enumerate (count one by one) a collection and to identify "how many" items in a collection.	7810160	NO1.3	Focusing on a specific number for the day, have students gather number of items and put in learning centers.
Demonstrate one-to-one correspondence between objects and counting words.	7810161	NO1.3a	Hand out/release/touch items for different activities, as the items are counted, during the daily routine – lunch tickets, snack items, lunch items, art materials, etc.

**READ, WRITE AND COMPARE NUMBERS**

**Assessment of Student Performance: Performance tasks, student performance data, authentic assessment.**

**Mathematics      Grades K 2**

**Graduate Goal 4** Graduates will solve problems or complete tasks.

**Graduate Goal 5** Graduates will follow routines.

**GLE:** Students will recognize patterns of sounds or shapes.

**STRAND:** Algebraic Relationships

**Show-Me Standard M-4**

Patterns and relationships within and among functions and algebraic, geometric, and trigonometric concepts.

**Alternate Framework Standard AltM-4**

Recognizing shapes and patterns in the environment using visual models.

**Alternate Process Standard:** (What All Students Should Do)

Goal 1 Alt-5, Goal 1 Alt-6, Goal 1 Alt-8

**Authentic Life Skills (What All Students Should Know)**

**IEP Code**

**API Code**

**Authentic Learning Activities**

Engage in pattern-related activities in the every day environment.

7810171

AR1.1a

Participate in singing/movement activities to sing songs with repeating sounds/phrases or repeating actions in the songs; repeat rhythm using musical instrument; repeat simple rhythm on a keyboard; participate in daily classroom jobs that follow a patterned routine. Perform music/dance with motions, pictures, objects.

**RECOGNIZE AND EXTEND PATTERNS**

**Assessment of Student Performance: Performance tasks, student performance data, authentic assessment.**

**Mathematics      Grades K 2**

**Graduate Goal 2** Graduates will make choices.

**Graduate Goal 4** Graduates will solve problems or complete tasks.

**GLE:** Students will model situations that involve whole numbers, using pictures, objects or symbols.

**STRAND:** Algebraic Relationships

**Show-Me Standard M-6**  
Discrete mathematics (such as graph theory, counting techniques, matrices).

**Alternate Framework Standard AltM-6**  
Using comparison, sequencing, counting and classifying to solve problems related to daily living.

**Alternate Process Standard:** (What All Students Should Do)  
Goal 1 Alt-7, Goal 1 Alt-10, Goal 3 Alt-2

<b>Authentic Life Skills (What All Students Should Know)</b>	<b>IEP Code</b>	<b>API Code</b>	<b>Authentic Learning Activities</b>
Use models to represent quantitative relationships.	7810176	AR6.1	Using measuring cups for cooking. Use of spinners and dice in a game.
Use pictures, objects or symbols to enact stories or model situations involving whole numbers.	7810177	AR6.1a	Develop social stories that relate to each student and/or seasons/holidays that include numbers.

**USE MATHEMATICAL MODELS**

**Assessment of Student Performance: Performance tasks, student performance data, authentic assessment.**

**Mathematics      Grades K 2**

**Graduate Goal 4** Graduates will solve problems or complete tasks.

**Graduate Goal 5** Graduates will follow routines.

**GLE:** Students will sort 2 dimensional shapes using physical models (circle, rectangle, triangle).

**STRAND:** Geometric and Spatial Relationships

**Show-Me Standard M-2**  
Geometric and spatial sense involving measurement (including length, area, volume), trigonometry, and similarity and transformations of shapes.

**Alternate Framework Standard AltM-2**  
Applying basic concepts related to size, shape, and amount (including measurement skills) to the activities of daily living.

**Alternate Process Standard:** (What All Students Should Do)  
Goal 3 Alt-2, Goal 3 Alt-6, Goal 3 Alt-7, Goal 3 Alt-8

Authentic Life Skills (What All Students Should Know)	IEP Code	API Code	Authentic Learning Activities
Identify, name, compare and/or sort 2-D shapes (pictures).	7810178	GS1.1	
Use 2-D shapes for informal play.	7810179	GS1.1a	Develop a game board and dice/spinner that consist of basic shapes and shapes of common items.
Release a two-dimensional object.	7600133		PECS, delivering messages or taking something to the office.
Match 2 dimensional items to identical 2 dimensional items.	5756040	GS1.1b	Memory type games.
Put together 2-D shapes to make new shapes.	7810180	GS2.1	Model an art project.
Use shapes in isolation, concrete or semi-concrete, to make a picture.	7810181	GS2.1a	Model an art object combining shapes, mosaic projects with either paper or tile.

**DESCRIBE AND USE GEOMETRIC RELATIONSHIPS**

**Assessment of Student Performance: Performance tasks, student performance data, authentic assessment.**