

Math & Movement

Texas Essential Knowledge and Skills Lesson Plans

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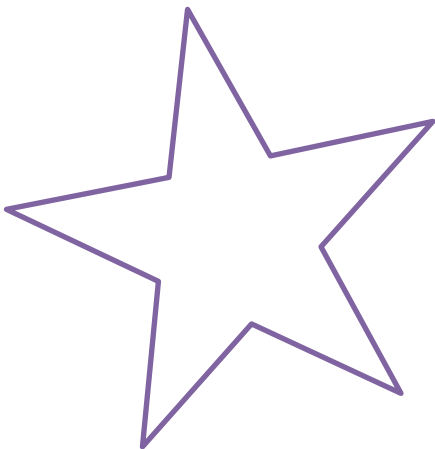


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The student applies mathematical process standards to understand how to represent and compare whole numbers and the relative position and magnitude of whole numbers and relationships within the numeration system. The student is expected to:

111.xx.Kindergarten(b)(2)(A)	count forward and backward to at least 20 with and without objects;	7
111.xx.Kindergarten(b)(2)(B)	read and write and represent whole numbers from 0 to at least 20 with and without objects or pictures;	10
111.xx.Kindergarten(b)(2)(D)	recognize instantly the quantity of a small group of objects in organized and random arrangements;	14
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111.xx.Kindergarten(b)(2)(I)	compose and decompose numbers up to 10 with objects and pictures.	27

111.xx.Kindergarten(b)(3) – Numbers and Operations 30

The student applies mathematical process standards to develop an understanding of addition and subtraction situations in order to solve problems. The student is expected to:

111.xx.Kindergarten(b)(3)(A)	model the action of joining to represent addition and the action of separating to represent subtraction;	31
111.xx.Kindergarten(b)(3)(B)	solve word problems using objects and drawings to find sums up to 10 and differences within 10;	33

111.xx.Grade1(b)(2) – Numbers and Operations 37

The student applies mathematical process standards to represent and compare whole numbers and the relative position and magnitude of whole numbers and relationships within the numeration system related to place value. The student is expected to:

111.xx.Grade1(b)(2)(C)	use objects pictures and expanded and standard forms to represent numbers up to 120;	38
111.xx.Grade1(b)(2)(E)	use place value to compare whole numbers to 120 using comparative language.	41

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The student applies mathematical process standards to develop and use strategies for whole number addition and subtraction computations in order to solve problems. The student is expected to:

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111.xx.Grade1(b)(3)(A)	use concrete and pictorial models to determine the sum of a multiple of ten and a one-digit number in problems up to 99	46
111.xx.Grade1(b)(3)(B)	use objects and pictorial models to solve word problems involving joining separating and comparing sets within 20 and unknowns as any one of the terms in the problem such as $2 + 4 = ?$; $3 + ? = 7$; and $5 = ? - 3$	50
111.xx.Grade1(b)(3)(C)	compose 10 with two or more addends with and without concrete objects;	54
111.xx.Grade1(b)(3)(F)	generate and solve problem situations when given a number sentence involving addition and subtraction of numbers within 20.	57
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<p>The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:</p>		
111.xx.Grade1(b)(5)(A)	recite numbers forward and backward from any given number between 1 and 120;	62
111.xx.Grade1(b)(5)(D)	use relationships to determine the number that is 10 more and 10 less than a given number up to 120;	65
111.xx.Grade1(b)(5)(F)	understand that the equal sign represents a relationship where statements on each side of the equal sign are true;	68
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<p>The student applies mathematical process standards to understand how to represent and compare whole numbers and the relative position and magnitude of whole numbers and relationships within the numeration system related to place value. The student is expected to:</p>		
111.xx.Grade2(b)(2)(A)	use concrete and pictorial models to compose and decompose numbers up to 1200 as a sum of so many thousands hundreds tens and ones in more than one way	76
111.xx.Grade2(b)(2)(B)	use standard and word and expanded forms to represent numbers up to 1200	80
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<p>The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve addition and subtraction problems with efficiency and accuracy. The student is expected to:</p>		
111.xx.Grade2(b)(4)(A)	recall basic facts to add and subtract within 20 with automaticity;	88

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111.xx.Grade2(b)(4)(B)	use mental strategies and flexible methods and algorithms based on knowledge of place value and equality to add and subtract two-digit numbers;	91
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The student applies mathematical process standards to determine the value of coins in order to solve monetary transactions. The student is expected to:

111.xx.Grade2(b)(5)(B)	use the cent symbol and dollar sign and the decimal point to name the value of a collection of coins	106
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The student applies mathematical process standards to identify and apply number patterns within properties of numbers and operations in order to describe relationships. The student is expected to:

111.xx.Grade2(b)(7)(A)	use relationships and objects to determine whether a number up to 40 is even or odd	112
111.xx.Grade2(b)(7)(B)	use relationships to determine the number that is 10 or 100 more or less than a given number up to 1200	115

111.xx.Grade2(b)(9) – Geometry and Measurement 119

The student applies mathematical process standards to select and use units to describe length and area and time. The student is expected to:

111.xx.Grade2(b)(9)(E)	determine a solution to a problem involving length including estimating lengths	120
111.xx.Grade2(b)(9)(G)	read and write time to the nearest five- and one-minute increments using analog and digital clocks and distinguish between a.m. and p.m.	123

111.xx.Grade2(b)(10) – Data Analysis 126

The student applies mathematical process standards to organize data to make it useful for interpreting information and solving problems. The student is expected to:

111.xx.Grade2(b)(10)(B)	organize a collection of data with up to four categories using pictographs and bar graphs with intervals of one or more	127
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111.xx.Grade3(b)(4) – Numbers and Operations 130

The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to:

111.xx.Grade3(b)(4)(B)	use strategies including rounding to the nearest 10 or 100 and compatible numbers to estimate solutions to addition and subtraction problems	131
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111.xx.Grade3(b)(4)(F)	quickly recall facts to multiply up to ten by ten and recall the corresponding division facts	134
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The student applies mathematical process standards to analyze and create patterns and relationships. The student is expected to:

111.xx.Grade3(b)(5)(B)	represent and solve one- and two-step multiplication and division problems within 100 using arrays and strip diagrams and equations	153
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111.xx.Grade3(b)(5)(D)	determine the unknown whole number in a multiplication or division equation relating three whole numbers when the unknown is either a missing factor or product such as the value 4 for $[\]$ makes $3 \times [\] = 12$ a true equation	160

111.xx.Grade3(b)(6) – Geometry and Measurement 163

The student applies mathematical process standards to analyze attributes of two-dimensional geometric figures to develop generalizations about their properties. The student is expected to

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The student applies mathematical process standards to select appropriate units and strategies and tools to solve problems involving customary measurement. The student is expected to:

111.xx.Grade3(b)(7)(C)	determine the solutions to problems involving addition and subtraction of time intervals in minutes using pictorial models or tools such as a 15-minute event plus a 30-minute event equals 45 minutes	171
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The student applies mathematical process standards to solve problems by collecting and organizing and displaying and interpreting data. The student is expected to:

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111.xx.Grade4(b)(2) – Numbers and Operations 180

The student applies mathematical process standards to represent and compare and order whole numbers and decimals and understand relationships related to place value. The student is expected to:

111.xx.Grade4(b)(2)(G)	relate decimals to fractions that name tenths and hundredths	181
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111.xx.Grade5(b)(2) – Numbers and Operations 184

The student applies mathematical process standards to represent and compare and order positive rational numbers and understand relationships as related to place value. The student is expected to:

111.xx.Grade5(b)(2)(D)	round decimals to tenths or hundredths	185
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111.xx.Grade5(b)(3) – Numbers and Operations 188

The student applies mathematical process standards to develop and use strategies and methods for positive rational number computations in order to solve problems with efficiency and accuracy. The student is expected to:

111.xx.Grade5(b)(3)(H)	represent and solve addition and subtraction of fractions with unequal denominators referring to the same whole using objects and pictorial models such as strip diagrams and properties of operations	189
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111.xx.Grade5(b)(9) – Data Analysis 191

The student applies mathematical process standards to solve problems by collecting and organizing and displaying and interpreting data. The student is expected to:

111.xx.Grade5(b)(9)(B)	represent discrete paired data on a scatter plot	192
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1 1 1.xx.Kindergarten(b)(2) – Numbers and Operations

111. xx. Kindergarten (b) (2) (A)

Math & Movement Lesson Plan

Grade/Subject: Kindergarten/Math

Lesson Topic: Counting and Cardinality – Counting Forward

I. Objectives

The learner will be able to count forward beginning from a given number.

II. Texas Essential Knowledge and Skills

Kindergarten(b)(2)(A) – Count forward and backward to at least 20 with and without objects.

III. Background Information/Vocabulary

The learner must be familiar with the numbers 1-100.

IV. Instructional Procedures/Activities (40 minutes)

A. Introduction/Motivational (5 minutes)

- The teacher will call for the attention of the students and ask them to stand quietly in a circle. The teacher will tell the class that today they are going to pretend to be dogs digging in a yard. The teacher will show the class how they can be digging dogs by getting down onto her hands and knees, then “digging” with her right hand when she says “one,” digging with her left hand when she says “two” and then digging with both hands when she says “three.” The teacher will demonstrate how the class can repeat the “dig right, dig left, dig both hands” movements and count all the way to 100. The teacher will then lead the class in counting to 100 by pretending to be digging dogs. The teacher will tell the class that today, they are going to practice counting starting at numbers other than 1.

B. Instruction (30 minutes)

- The teacher will show the class the Math&Movement Add/Subtract mat, and will show the class that all the numbers, 1-100 are on the mat’s squares.
- The teacher will tell the class that they are going to take turns throwing a bean bag somewhere on the mat.
- The teacher will tell the class that wherever the bean bag lands, that is where the student who threw it will start jumping on each number and counting loudly.
- The teacher will tell the class that she will put another bean bag twenty numbers away from the original bean bag, or two rows down from it, and that the student is to stop counting and jumping when he/she reaches the second bean bag.
- The teacher will tell the class that while the student is jumping, the rest of the class is to whisper count each of the numbers.
- The teacher will model her instructions by throwing the bean bag on the mat, placing another bean bag two rows down, and then jumping on each number and saying the number out loud until she reaches the second bean bag.
- The teacher will select the student to throw the bean bag first, and arrange the rest of the students around the mat.
- When each student has had a turn throwing the bean bag, jumping and counting, the teacher will ask the students to take a seat at their desks.
- The teacher will hand each student a Math&Movement *Counting from Numbers Other than One* activity sheet.

111. xx. Kindergarten (b) (2) (A)

- The teacher will tell the students that, with a partner, they will practice counting to 100 from the numbers on the paper.
- The teacher will model her directions by writing a number on the board and then counting on from that number.
- The teacher will assign each student a partner and tell them to begin.
- When it appears that most students in the class are finished with the Math&Movement *Counting from Numbers Other than One* activity sheet, the teacher will ask the students to sit in a circle on the floor.

C. Closure (5 minutes)

When the students are sitting quietly, the teacher will ask the class, “What did we do in today’s math lesson? Why do you think we practiced counting from numbers other than one?” The teacher will help the students answer the questions, and will tell the students what they are going to learn in the next math lesson.

V. Assessment

- The teacher can assess the students informally by monitoring and observing how well the students are able to count starting at a random number while in the whole group setting.
- The teacher can assess the students formally by working with each partner pair at a time while they are counting with the Math&Movement *Counting from Numbers Other than One* activity sheet. The teacher can record observations on their sheets.

VI. Materials

Math&Movement Add/Subtract mat

Two bean bags

Math&Movement *Counting From Numbers Other than One*

111. xx. Kindergarten (b) (2) (A)

Name: _____

Math&Movement Counting From Numbers Other than One

DIRECTIONS: With a partner, practice counting to 100 while starting at the numbers below.

12

32

42

8

75