Prekindergarten Early Math Competencies

The purpose of this document is to clarify what students should know and be able to do each grading period (GP).

TPKG	Competencies	GP1	GP2	GP3	GP4
V.A.1, V.A.2, V.A.3	**C1 – Number Sense - Counting** The student rote counts from 1-30 and counts up to 10 objects with one-to-one correspondence and cardinality.	**X**	**X**	**X**	**X**
V.A.4, V.A.5, V.A.6	**C2 – Number Sense – Recognition and Subitizing** The student can recognize numbers up to 10, the quantity of up to 6 objects without counting, and represent quantities up to 10.	**X**	**X**	**X**	**X**
V.A.7, V.A.8	**C3 – Number Sense – Composing and Decomposing Numbers** The student begins to understand that numbers 0-10 can be composed and decomposed in various ways to represent a given quantity and can compare sets of objects (up to 10) using comparative language (greater/more than, less/fewer than, equal to/same).		**X**	**X**	**X**
V.B.1, V.B.2	**C4 - Joining and Separating** The student can use objects, pictorial models, and verbal word problems to demonstrate an understanding that when objects are added to a set, the total number of objects increases, and when you take an object away from a set, the total number of objects decreases.		**X**	**X**	**X**
V.C.1, V.C.2,	**C5 - Geometry** The student recognizes, describes, names characteristics of, and creates 2D shapes.	**X**	**X**	**X**	**X**
V.C.3, V.C.4	**C6 – Spatial Sense** The student uses position words correctly and recognizes common shapes regardless of orientation and size.	**X**	**X**	**X**	**X**
V.D.1, V.D.2, V.D.3	**C7 - Measurement** The student verbally describes the differences between objects' length, height, and weight, demonstrates an understanding of how much space is occupied by objects, and how to measure using nonstandard measurement tools.	**X**	**X**	**X**	**X**
V.D.4	**C8 – Passing of Time** The student uses language to describe concepts associated with the passing of time within a day.	**X**	**X**	**X**	**X**
V.E.1, V.E.3	**C9- Classification and Patterns** The student sorts objects that are the same and different into groups, describes how the groups are similar and different and recognizes and creates patterns.	**X**	**X**	**X**	**X**
V.E.2	**C10 – Data and Graphing** The student participates in collecting data and creating graphs using pictures and or real objects as a class and in small groups.	**X**	**X**	**X**	**X**

Learning Progression for Competency 1: Number Sense – Counting

The student rote counts from 1-30 and counts up to 10 objects with one-to-one correspondence and cardinality.

Developing	Progressing	Proficient
• Recites number words in order from 1-5 in poems, fingerplays, and songs • Attempts to count or counts 1-3 objects, with one-to-one correspondence • Places objects in a group and attempts to begin counting with one-to-one correspondence • Moves, touches, and/or points to each object in a set while attempting to count or counting aloud, with support • Has some awareness of cardinality when counting by attempting to count in a sequence	• Recites number words in order from 1-15 in poems, fingerplays, and songs • Counts 1-6 objects, with one-to-one correspondence • Places objects in a row and sometimes counts with one-to-one correspondence • Sometimes, moves, touches, and or points to each object in a set while counting aloud • Begins to demonstrate cardinality when counting by communicating that the last number of counted indicates how many items are in a set when prompted	• Recites number words in order from 1-30 in poems, fingerplays, and songs • Counts 1-10 objects, with one-to-one correspondence • Places objects in a row while counting with one-to-one correspondence with accuracy • Moves, touches, and or points to each object in a set while counting aloud • Consistently demonstrates cardinality when counting by communicating that the last number of counted indicates how many items are in a set on their own or when prompted

For additional examples of child behaviors across the progressions, reference the 2022 Texas Prekindergarten Guidelines.

Learning Progression for Competency 2: Number Sense – Recognition and Subitizing

The student can recognize numbers up to 10, the quantity of up to 6 objects without counting, and represent quantities up to 10.

Developing	Progressing	Proficient
• Attempts to recognize and sometimes calls the number of 1-5 objects while counting aloud • Attempts to recognize and names some of the printed numerals from 1 to 10 with some accuracy • Attempts to represent quantities up to 10 using different materials and movements with little accuracy	• Recognizes and calls the number of 1-5 objects while counting aloud • Recognizes and names some of the printed numerals from 1 to 10 with some accuracy • Represents quantities up to 10 using different materials and movements with some accuracy	• Quickly recognizes and calls the number of 1-5 objects without counting aloud • Recognizes and names printed numerals from 0 to 10 with accuracy • Represents quantities up to 10 using different materials and movement with accuracy

For additional examples of child behaviors across the progressions, reference the 2022 Texas Prekindergarten Guidelines.

Learning Progression for Competency 3: Number Sense – Composing and Decomposing Numbers

The student begins to understand that numbers 0-10 can be composed and decomposed in various ways to represent a given quantity and can compare sets of objects (up to 10) using comparative language (greater/more than, less/fewer than, equal to/same).

Developing	Progressing	Proficient
• Attempts to compose and decompose quantities up to 10 in different forms and with a variety of materials • Attempts to compare sets of objects up to 10 using comparative language such as greater/more than, less/fewer than, equal to/same	• Composes and decomposes quantities up to 10 in different forms and with a variety of materials with some accuracy • Compares sets of objects up to 10 using comparative language such as greater/more than, less/fewer than, equal to/same number of with some accuracy	• Composes and decomposes quantities up to 10 in different forms and with a variety of materials with accuracy • Compares sets of objects up to 10 using comparative language such as greater/more than, less/fewer than, equal to/same number of with accuracy

For additional examples of child behaviors across the progressions, reference the 2022 Texas Prekindergarten Guidelines.

Learning Progression for Competency 4: Joining and Separating

The student can use objects, pictorial models, and verbal word problems to demonstrate an understanding that when objects are added to a set, the total number of objects increases, and when you take an object away from a set, the total number of objects decreases.

Developing	Progressing	Proficient
• Attempts to create verbal word problems involving adding or subtracting up to 5 objects with limited accuracy, using multiple representations • Attempts to put together or separates elements from a set of 5, counting them in the correct sequence and saying the total number of objects with limited accuracy, using multiple representations • Attempts to use a story mat and counters to represent adding or subtracting 1 to 4 elements in a group of 5, while able to say how many are there all together with limited accuracy, using multiple representations	• Creates verbal word problems involving adding or subtracting up to 5 objects with some accuracy, using multiple representations • Puts together or separates elements from a set of 5, counting them in the correct sequence and saying the total number of objects with some accuracy, using multiple representations • Uses a story mat and counters to represent adding or subtracting 1 to 4 elements in a group of 5, while able to say how many are there all together with some accuracy, using multiple representations	• Creates verbal word problems involving adding or subtracting up to 5 objects with accuracy, using multiple representations • Puts together or separates elements from a set of 5, counting them in the correct sequence and saying the total number of objects, using multiple representations with accuracy • Uses a story mat and counters to represent adding or subtracting 1 to 4 elements in a group of 5, while able to say how many are there all together, using multiple representations with accuracy

For additional examples of child behaviors across the progressions, reference the 2022 Texas Prekindergarten Guidelines.

Learning Progression for Competency 5: Geometry

The student recognizes, describes, names characteristics of, and creates 2D shapes.

Developing	Progressing	Proficient
• Recognizes non or a few shapes • Attempts to create 2D shapes using different classroom materials • Attempts to put together shapes to make a real-world object, a circle, and a rectangle to make a lollipop	• Recognizes some of the shapes • Creates 2D shapes using different classroom materials • Puts shapes together to make a real-world object, for example, a square and a triangle to make a house	• Recognizes and describes attributes of several 2D shapes and at least one 3D shape • Creates 2D shapes using different classroom materials and identifies them using the correct names • Puts shapes together to make a real-world object, for example, a square and a triangle to make a house • Uses two existing shapes to create a new one, for example, two triangles to make a square

For additional examples of child behaviors across the progressions, reference the 2022 Texas Prekindergarten Guidelines.

Learning Progression for Competency 6: Spatial Sense

The student uses position words correctly and recognizes common shapes regardless of orientation and size.

Developing	Progressing	Proficient
• Attempts to follow directions that use location words; for example, places backpack “on” or “under” a table • Provides directions so that a friend can find an object, for example, “The sweater is on the table” with some support • Begins to understand that 2D shapes remain the same besides their orientation	• Follows directions that use location words; for example, places backpack “on” or “under” a table, sits “besides,” and “between” friends on the carpet with some support • Attempts to provide directions so that a friend can find an object, for example, “The sweater is on the table”	• Follows directions that use location words; for example, places backpack “on” or “under” a table, sits “beside” or “between” friends on the carpet, gets “in front of” or “behind” a peer in line, etc. • Provides directions so a friend can find an object, for example, “The ball is on the front of the cubies with the pencil boxes”

	• Understands that 2D shapes remain the same besides their orientation	independently • Understands that 2D or 3D shapes remain the same besides their orientation • Matches groups of the same shapes correctly regardless of their orientation; for example, identifies and groups rectangles in different positions across a table

For additional examples of child behaviors across the progressions, reference the 2022 Texas Prekindergarten Guidelines.

Learning Progression for Competency 7: Measurement

The student verbally describes the differences between objects' length, height, and weight, demonstrates an understanding of how much space is occupied by objects, and how to measure using nonstandard measurement tools.

Developing	Progressing	Proficient
• Compares objects that are "taller," "shorter," "longer," or "smaller" • Compares objects and their capacity using hand gestures • Uses hands to compare everyday life object's weight	• Compares and identifies objects that are "taller," "shorter," "longer," or "smaller" using some forms of non-standardized measurement • Compares and demonstrates an understanding of objects and their capacity using some non-standardized measurement objects or hand gestures; for example, I think this bowl holds more water than this other one • Uses hands and measurement words to describe everyday life object's weight; for example, this doll is "heavy," "light,"	• Compares and identifies objects that are "taller," "shorter," "longer," or "smaller" using a variety of non-standardized measurement objects/manipulatives and uses vocabulary that aligns with their description • Compares and demonstrates an understanding of objects and their capacity while filling containers using measuring cups; for example, I think this bowl holds more water than this other one and will reach its capacity if I fill it up with three cups • Uses hands and measurement words to compare and describe everyday life objects' weight; for example, this doll is "heavy," "light," "heavier," or "lighter," etc.

For additional examples of child behaviors across the progressions, reference the 2022 Texas Prekindergarten Guidelines.

Learning Progression for Competency 8: Passing of Time

The student uses language to describe concepts associated with the passing of time within a day.

Developing	Progressing	Proficient
• Uses daily schedule to describe what happens next in the day	• Uses daily schedule to describe what happens next in the day • Uses language to describe what happens during a given day; for example, I come to school after my mom gives me breakfast	• Uses daily schedule to describe what happens next in the day • Uses language to describe what happens during a given day; for example, I *come to school after my mom gives me breakfast* • Uses time language to describe events of the day, for example, "in the morning," "after shack'" "before we go home," etc.

For additional examples of child behaviors across the progressions, reference the 2022 Texas Prekindergarten Guidelines.

Learning Progression for Competency 9: Classification and Patterns

The student sorts objects that are the same and different into groups, describes how the groups are similar and different, and recognizes and creates patterns.

Developing	Progressing	Proficient
• Sorts objects by different physical attributes such as color • Organizes objects with a common attribute • Attempts to identify and create repeating patterns in the environment that use different materials	• Sorts objects by different physical attributes such as color and size • Organizes objects with a common attribute and attempts to explain the reason for the categorization • Identifies and creates repeating patterns in the environment that use different materials	• Sorts objects by different physical attributes such as color, size, type, category, etc. • Organizes objects with a common attribute and explains categorization and criteria; for example, *I placed rectangles and squares in this tray because they have four sides. This other tray has triangles because they only have three sides*

		• Identifies and creates repeating patterns in the environment that use different materials, while saying what goes next in the sequence

Learning Progression for Competency 10: Data and Graphing

The student participates in collecting data and creating graphs using pictures and or real objects as a class and in small groups.

Developing	Progressing	Proficient
• Attempts to place concrete objects or pictures representations on a graph • Attempts to organize objects or pictures in a graph • Attempts to answer questions of the week; for example, do you ride to school in a car? And places a check on the yes or no graph	• Places concrete objects or pictures representations on a graph with some support • Organizes objects or pictures in a graph with some support • Answers questions of the week; for example, do you ride to school in a car? And places a check on the yes or no graph	• Places concrete objects or pictures representations on a graph with accuracy • Organizes objects or pictures in a graph with accuracy • Answers questions of the week; for example, do you ride to school in a car? And places a check on the yes or no graph

For additional examples of child behaviors across the progressions, reference the 2022 Texas Prekindergarten Guidelines.