

Standards-Based IEP

Sample Measurable Goals

Mathematics K-12

2016 Standards of Learning

Standards-based Math Goals, SOLs, and Strategies/Ideas for Instruction K-A1 (2016)

Measurable Mathematics Standards Based IEP Goals for K

Goal (Number and Number Sense k.2a)

By the annual review of the IEP, the student, given two sets containing 10 or fewer concrete items, will identify and describe one set as having more, fewer, or the same number of members as the other set, using the concept of one-to-one correspondence in 8 out of 10 trials.

Strategies/Ideas for Instruction

- Mathematics Instructional Plans: [Build and Compare](#), [How Many Snails?](#), [Splash](#)
- Graphic Organizers
- 3 types of Counting Manipulatives
- Counting Apps for iPods and iPads
- Interactive White Boards
- Hands on Lessons that involve moving, touching, & aligning that involves visual and kinesthetic.

Goal (Patterns, Function, and Algebra K.13)

Given a repeating relationship (pattern) in common objects, sounds, and movements, the student will identify and describe the pattern and then extend the pattern by adding at least two repetitions in 7 out of 10 trials by annual review of the IEP.

Strategies/Ideas for Instruction

- Mathematics Instruction Plan: [People Patterns](#)
- Manipulatives /Drawings
- Interactive White Boards
- Pattern Apps for iPods and iPads
- Clapping and Snapping Patterns
- Music (Refrain of Simple Songs)

Measurable Mathematics Standards Based IEP Goals for 1st Grade

Goal (Number and Number Sense 1.4)

Given region/area models (e.g, pie pieces) and measurement models (e.g., fraction strips), the student will identify and model one-half and one-fourth of a whole in 8 out of 10 trials by annual review of the IEP.

Standards-Based IEP Sample Measureable Goals

Strategies/Ideas for Instruction

- Mathematics Instructional Plans: [Sharing Brownies](#)
- Flex Blocks
- Cooking Activities
- Children's Literature
- Interactive White Boards
- Fraction Apps for iPods and iPads

Goal (Computation and Estimation 1.6)

The student will create and solve story and picture problems involving one-step solutions, using basic addition and subtraction facts with 100% accuracy on 8 out of 10 trials by the annual review of the IEP.

Strategies/Ideas for Instruction

- Mathematics Instruction Plans: [Near Doubles](#), [Neighbor Fact](#), [Number Stories](#)
- Manipulatives
- Drawings
- Interactive White Boards
- Schema-Based Instruction- additive schemas

Goal (Measurement 1.8)

Given a collection of pennies and/or nickels whose value is 10 cents or less, the student will determine the value of the collection with 100% accuracy on 8 out of 10 trials by annual review of the IEP.

Strategies/Ideas for Instruction

- Mathematics Instruction Plan: [Counting Coin Collections](#)
- Nickels and Pennies for counting
- Counting Money Apps for iPods and iPads
- Graphic Organizers to discuss the physical properties of each coin
- Interactive White Boards
- Money Bingo

Goal (Measurement 1.9a)

Given written time shown on a digital or analog clock, the student will tell time to the half hour with 100% accuracy on 8 out of 10 trials by the annual review of the IEP.

Strategies/Ideas for Instruction

- Mathematics Instruction Plans: [What Time is It?](#)
- Analog Clocks
- Digital Clocks
- Daily Routines & School Schedules
- Interactive White Boards
- Flash Cards

Standards-Based IEP Sample Measureable Goals

Measurable Mathematics Standards Based IEP Goals for 2nd Grade

Goal (Number and Number Sense 2.2c)

Given a collection of objects, the student will determine whether the total number is odd or even by dividing the objects into two equal groups or pairing the objects with 100% accuracy on 8 out of 10 trials by annual review of the IEP.

Strategies/Ideas for Instruction

- Co-Teaching Mathematics Instruction Plans: [Even or Odd?](#)
- Counting Manipulatives
- Hundreds Chart
- Interactive White Boards
- Flash Cards

Goal (Geometry 2.13)

Given an assortment of three-dimensional (solid) concrete figures, the student will identify, describe, and sort these figures with 100% accuracy on 8 out of 10 trials by annual review of IEP.

Strategies/Ideas for Instruction

- Mathematics Instruction Plans: [The Shape Show](#)
- Three Dimensional Geometric Shapes
- Geometric Apps for iPods and iPads
- Geoboards
- Graphic Organizers
- Interactive White Boards

Goal (Probability and Statistics 2.14)

Given experiments, using spinners and colored tiles/cubes, the student will accurately record and use data to predict which of the two events are more likely to occur if the experiment is repeated on 7 out of 10 trials by annual review of the IEP.

Strategies/Ideas for Instruction

- Mathematics Instruction Plans: [We are Spinning in Second Grade](#)
- Spinners with Colors & Spinners with Numbers
- Manipulatives
- Two-Colored Counters
- Dice
- Graphic Organizers
- Interactive White Boards

Standards-Based IEP Sample Measureable Goals

Measurable Mathematics Standards Based IEP Goals for 3rd Grade

Goal (Computation and Estimation 3.3)

Given 10 problems involving the sum or difference of two whole numbers, each 9,999 or less, with or without regrouping, the student will solve with 80% accuracy using various computational methods by annual review of the IEP.

Strategies/Ideas for Instruction

- Mathematics Instructional Plans: [Addition and Subtraction](#)
- Dominoes, Number Line, Cotton Balls, Sandpaper
- Counting Up to subtract
- Trading (10 ones = 1 ten)
- Use Concrete Representational Abstract approach (manipulatives, drawings, algorithms)
- Schema based instruction- additive schemas

Goal (Computation and Estimation 3.5)

Given 10 problems, the student will add and subtract with proper fractions having like denominators of 10 or less, with 70% accuracy by annual review of the IEP.

Strategies/Ideas for Instruction

- Mathematics Instruction Plans: [Adding and Subtracting Fractions](#)
- Fraction Strips
- Pattern Blocks
- Cuisinaire Rods
- Linking Cubes
- Use Concrete Representational Abstract approach (manipulatives, drawings, algorithms)

Goal (Measurement and Geometry 3.9c)

Given a prompt, the student will accurately identify equivalent relationships, including the number of days in a given month, the number of days in a week, the number of days in a year, and the number of months in a year in 8 out of 10 trials by annual review of the IEP.

Strategies/Ideas for Instruction

- Mathematics Instruction Plan: [Calendar Math](#)
- I Have...Who Has?
- Card Sorts (months and number of days)
- Concentration Game (match equivalents)

Measurable Mathematics Standards Based IEP Goals for 4th Grade

Goal (Computation and Estimation 4.5b)

Given a set of five single-step problems involving addition and subtraction of fractions and mixed numbers with like and unlike denominators, the student will solve them with at least 80% accuracy on three consecutive days, by the end of the 3rd grading period.

Strategies/Ideas for Instruction

- Co-Teaching Mathematics Instructional Plan: [Fraction Strips Addition and Subtraction](#)
- Fraction Circles
- Fraction Strips
- Linking Cubes
- Rulers
- Number Lines
- Pattern Blocks
- Use Concrete-Representational-Abstract approach
- Schema-Based Instruction- additive schemas

Goal (Probability and Statistics (4.14a,b)

Using collected data, the student will be able to display and interpret data in a variety of graphs and tables with 75% accuracy by the end of the year.

Strategies/Ideas for Instruction

- Co-Teaching Mathematics Instructional Plan: [Collecting Data for Bar Graphs and Line Graphs](#)
- Newspapers
- Sports data
- Student Grades
- Journal Entries
- Examples and Non Examples
- Choice Boards (choose source of data)

Goal (Pattern, Functions, and Algebra 4.15)

When shown the first four steps of a pattern, the student will extend the pattern three steps with 100% accuracy on three consecutive days, by the end of 3rd marking period.

Strategies/Ideas for Instruction

- Mathematics Instruction Plan: [How Does the Pattern Grow?](#)
- Hundreds Chart, Number Lines, Words
- Manipulatives (toothpicks)
- Graph Paper

Measurable Mathematics Standards Based IEP Goals for 5th Grade

Goal (Computation and Estimation 5.4)

When given multi-step practical problems involving whole numbers, the student will solve the problems with 75% accuracy by the end of the year.

Strategies/Ideas for Instruction

- Co-Teaching Mathematics Instructional Plan: [Multi-Step Practical Problems](#)
- Simplify the Language or adjust numbers in problem
- Use manipulatives to model the problem
- Use Representations (drawings) of problem
- Highlight Pertinent Information
- Think-Pair-Share
- Cooperative Learning Groups
- Schema-Based Instruction

Goal (Measurement and Geometry 5.8a)

Given a set of five diagrams of rectangles, the student will determine the perimeter ($P=2L + 2W$) and area ($A=L \times W$) of the rectangles, and determine which application is appropriate for a given situation with 80% accuracy, by the end of the 3rd period.

Strategies/Ideas for Instruction

- Mathematics Instructional Plan: [The Sandbox: Perimeter, Area, and Volume](#)
- Grid Paper
- Drawings
- Rulers, Tiles, String/Rope
- Card Sorts
- Practical Problem Based Lessons

Measurable Mathematics Standards Based IEP Goals for 6th Grade

Goal (Computation and Estimation 6.5)

When given a 6th grade level multistep practical problem with whole numbers, fractions or decimals, the student will solve the problem using addition, subtraction, multiplication or division with 85% accuracy on quizzes and test where each operation is assessed by the end of the school year.

Standards-Based IEP Sample Measureable Goals

Strategies/Ideas for Instruction

- Simplify the Language or adjust numbers in problem
- Use similar computations without story problem context
- Use manipulatives and drawings to model the problem
- Highlight Pertinent Information
- Cooperative Learning Groups
- Schema Based Instruction

Goal (Computation and Estimation 6.6a,b)

When given a 6th grade practical problem involving integers, the student will use addition, subtraction, multiplication, or division to solve the problem with 85% accuracy on quizzes and tests by the end of the first semester.

Strategies/Ideas for Instruction

- Mathematics Instruction Plans: [Operations with Integers](#), [Application of Integer Operations](#)
- Number Lines
- Algebra Tiles
- Tile Spacers, Linking Blocks, Integer Chips
- Charge Model
- Integer Mat with Manipulatives
- Foldables
- Schema-based instruction

Goal (Patterns, Functions, and Algebra 6.13)

After representing a one-step equation with concrete materials, the student will solve the linear equation algebraically with 85% accuracy on quizzes and tests by the end of the school year

Strategies/Ideas for Instruction

- Mathematics Instructional Plans: [Modeling One-Step Linear Equations](#), [One-Step Equations](#)
- Colored Chips
- Algeblocks or Algebra Tiles
- Balance Scale
- Journaling
- Use Concrete-Representational-Abstract Approach

Measurable Mathematics Standards Based IEP Goals for 7th Grade

Goal (Computation and Estimation 7.3)

When given a 7th grade practical problem, the student will apply proportions to solve the problem in 3 out of 4 trials with 90% on classwork by the end of the second semester.

Standards-Based IEP Sample Measureable Goals

Strategies/Ideas for Instruction

- Co-Teaching Mathematics Instruction Plan: [Sales Tax and Tip](#)
- Recipe conversions, scale drawings, map reading, reducing and enlarging, comparison shopping, monetary conversions.
- Metric conversions
- Schema-Based Instruction-multiplicative schemas

Goal (Measurement and Geometry 7.4)

Using the 7th grade level mathematics formula sheet, the student will solve practical problems involving surface area and volume of rectangular prisms and cylinders with 85% accuracy on tests by the end of the school year.

Strategies/Ideas for Instruction

- Mathematics Instruction Plan: [Volume and Surface Area of Rectangular Prisms and Cylinders](#)
- Nets
- Solids
- Beans and Rice Measuring cups for volume
- Foldables
- Boxes and cans
- Package design

Goal (Measurement and Geometry 7.6a)

Given a grade level activity, the student will identify, sort and classify quadrilaterals based on their properties 85% of the time in 4 out of 5 trials by the end of the second grading period.

Strategies/Ideas for Instruction

- Mathematics Instruction Plan: [Classifying Quadrilaterals](#)
- Foldables
- Journal writing
- Interactive white board
- Frayer Model
- Card Sort
- Graphic Organizers
- Manipulatives

Goal (Probability and Statistics 7.9)

Given a set of data, the student will analyze, and compare histograms with other graphs, such as line plots, circle graphs, and stem and leaf plots with 85 % accuracy in 9 of 10 work samples by the end of the school year.

Standards-Based IEP Sample Measureable Goals

Strategies/Ideas for Instruction

- Mathematics Instruction Plan: [All Graphs are not the Same](#)
- Newspapers and other examples
- Vocabulary
- Compare/Contrast graphic organizers and foldables
- Collect age appropriate data from various sources including: Weather Data, Tides, Animal Populations, Nielsen Ratings

Goal (Patterns, Functions, and Algebra 7.13)

When given two-step inequalities with one variable, the student will solve the inequality and graph the solutions on number line with 75% accuracy by the end of the year.

Strategies/Ideas for Instruction

- Co-Teaching Mathematics Instructional Plan: [Inequalities](#)
- Number Lines
- Highlighters
- Algebra Tiles
- Concrete-Representational-Abstract Approach

Measurable Mathematics Standards Based IEP Goals for 8th Grade

Goal (Probability and Statistics 8.11a)

When presented with two dependent or independent events, the student will compare and events and determine if the events are dependent or independent with 85% accuracy in 3 out of 4 trials by the end of the first semester.

Strategies/Ideas for Instruction

- Mathematics Instructional Plan: [Probability](#)
- Games (dice, flipping coins, cards, picking names out of hat –with and without replacement
- Comparison matrix

Goal (Probability and Statistics 8.13 – scatterplots only)

When provided with, or required to collect data, the student will organize and interpret the data in a variety of formats, such as tables, scatterplots, graphs, and tables with 80% accuracy by the end of the third marking period.

Strategies/Ideas for Instruction

- Mathematics Instructional Plan: [Constructing and Analyzing Scatterplots](#)
- Models of graphs
- [Desmos Graphing calculator](#)
- Graphic organizers

Standards-Based IEP Sample Measureable Goals

Goal (Patterns, Functions, and Algebra 8.14a,b)

When given algebraic expressions, the students will substitute numbers for variables and simplify the expressions by using the order of operations with 80% accuracy by the end of the year.

Strategies/Ideas for Instruction

- Mathematics Instructional Plans: [Evaluating Algebraic Expressions](#), [Simplifying Algebraic Expressions](#)
- Use simpler computations
- Review mnemonic, GEMDAS
- Teach gestures to represent the order of operations
- Use Concrete-Representational-Abstract approach

Measurable Mathematics Standards Based IEP Goals for Algebra I

Goal (Expressions and Operations A2.b)

When given two polynomials, the student will determine like terms, combine the coefficients, and find the sum of the polynomial correctly on 6 out of 8 problems by the end the second grading period

Strategies/Ideas for Instruction

- Mathematics Instructional Plan: [Adding and Subtracting Polynomials Using Algebra Tiles](#)
- Highlight like terms
- Vocabulary activities
- Algebra tiles
- Use Concrete-Representational-Abstract approach

Goal (Equations and Inequalities A.6b)

When given a set of five graphs of lines, the student will write an equation of each line with 80% accuracy by the end of the second grading period.

Strategies/Ideas for Instruction

- Co-Teaching Mathematics Instructional Plan: [Writing Equations for Lines](#)
- [Desmos Graphing Calculator](#)
- [“Find the Equation of the Line” applet](#)

Goal (Functions A.7e)

When given a set of five graphs of a function, the student will identify the x y coordinates and determine the domain of the function with 80% accuracy by the end of the third quarter.

Standards-Based IEP Sample Measureable Goals

Strategies/Ideas for Instruction

- Mathematics Instructional Plan: [Functions 1: Investigating Relations and Functions](#)
- Provide the domain and range of a function and direct students to create a graph
- Create a card sort activity to match various graphs of functions and sets of ordered pairs.

*This document is provided as a resource of sample goals and strategies/ideas for instruction and is not designed to be used as official prototype. Goal development must be based on the individual needs of the student with a disability. The links in the documents were active at the time of development.