Middle School

IQ Learning offers a comprehensive Math and ELA program for both <u>elementary</u> and middle school students. The program is divided into 5 levels: L1 through L5.

L1 and L2 are at the Elementary school Grade 4 and 5 levels while L3 through L5 are for the Middle school grades 6 through 8 students. At the end of level 5, students should be well prepared to take up algebra, geometry, and other advanced math courses in high school.

Each level not only meets but also exceeds the standards recommended by the Fort Bend ISD and the Texas Board curricula. Students may advance to any of the L1 - L5 levels depending on their performance at IQ Learning.

- <u>Regular Algebra</u>
- Math
- ELA
- Science

HOW IT WORKS

Students take our Assessment Test to join the program. Depending on their performance in the test, they are assigned to one of the levels. Students are taught through classroom style lectures and hands-on practice worksheets. The students' progress is monitored on a continuous basis. Whenever the student shows sufficient progress, s/he is recommended to the next level.

For more information about our reading programs <u>click here.</u>

OUR MATH CURRICULUM
LEVEL 3 (GRADE 6)

Ratios and proportions

Word problems on ratios and proportions

Percentages and their word problems

Word problems combining mixtures, percentages, fractions, ratio and proportions

Definitions of monomials, binomials, trinomials and polynomials from terms

Powers and exponents

Rules for multiplying and diving exponents of numbers

Exponents and powers of variables

Linear relations between variables

Independent and dependent variables

Setting up linear relationships from charts and word problems

Drawing graphs of linear relationships

Drawing triangles, quadrilaterals and polygons using protractors

Angle properties of polygons

Parallel lines and transversals

Probability – Word problems involving addition and multiplication of probabilities

Order of operations – PEMDAS involving fractions, decimals and mixed numbers

Fractions involving mixed numbers, decimals and whole numbers

Ladder fractions

Simple geometric and angle properties of circles

Draw bar graphs and circle graphs

Patterns among numbers

Critical thinking that combines several math skills

LEVEL 4 (GRADE 7)

Solve linear equations involving addition, subtraction multiplication and division of variables and real numbers

Definitions of integers, real numbers

Properties of numbers using variables (associativity, commutativity, distributive)

Reciprocal of numbers

Reciprocals of fractions

Division of fractions means multiplying by reciprocals

Simplify polynomial expressions using associative, commutative and the distributive laws

Division of unlike terms and variables

Powers and exponent rules using variables

Simplify expressions using power rules, exponents and the associative, commutative and the distributive laws

Relate transformations of coordinates to geometrical operations of translations, reflections and inversions on graphs

Equations of straight lines using slopes and intercepts

Quadrilaterals, circles and their geometric properties like perimeter and area

Word problems on the properties of 2-d polygons and circles

Surface areas and volumes of solids

Sets, Union and Intersection of sets

Solving probability using sample spaces and set concepts

Geometry: Congruence and similarity properties of triangles properties of quadrilaterals and parallelograms

Word problems combining all the skills above

LEVEL 5 (GRADE 8)

Definitions of rational numbers, integers, fractions and decimals

Associative, commutative and other algebraic properties using variables

Simplify rational expressions of variables

Irrational numbers: Calculating square roots through factoring and division

Word problems involving square roots

Fractional exponents on numbers and variables

Use of proportions in geometry (similar figures), mixture and other word problems

Set up linear equations to solve rates, work and other word problems

Word problem applications of Pythagorean theorem

Understand solid figures by drawing the figures and their projections

Surface areas and volumes of cylinders, cones, prisms and pyramids

Word problems on surface areas and volumes of solid shapes

Central tendencies (mean, mode and median)

Word problems based on central measures

Drawing Scatter plots and understanding them

More complicated cases of probability: Dependent and independent events

Solve linear and quadratic equations

Set up and solve word problems based on linear and quadratic equations