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Position & Title:

Third Grade Teacher

Project Title:

Moving Beyond the Standard Curriculum with IXL Math

This project is designed for:

Elementary

Target Grade Level(s)

Third

Subject Areas or Discipline

Third Grade Math

Project Summary (500 characters or less)

IXL is an immersive online program that improves student understanding, performance and confidence in math. A differentiated learning environment generates questions at the right level of rigor for every student and continues to adapt with students as they grow. The questions mirror the VA SOLs and help students at every level excel.

Project Description: Please describe your project in as much detail as possible. Be sure to include a brief description of plans and activities for your project.

I currently use the IXL program, but it will expire in November and funds are not available for me to renew the program. I have used this program for four years and it has proven to be a great success. I can't imagine teaching without it. Reaction from my students has been overwhelmingly positive. They love earning virtual prizes and watching their scores climb. They love seeing how many skills they have mastered and how much time they have spent practicing. This program allows me to work with small groups of students from both third grade classes for direct instruction during class time and Intervention, while the others spend time practicing specific skills. Before I used IXL it was difficult to keep students on task and engaged during their independent work time. IXL provides a more meaningful and productive solution that supports independent learning during small group rotations. Students that choose an incorrect answer receive Immediate feedback and step- by- step explanations of the correct answer. This immediate feedback helps students work more independently. Best of all students are constantly learning at their own level of readiness and are making real progress!

Standards of Learning Objectives: What are the learning objectives with this project? How do they correlate with the Virginia Standards of Learning?

The students will participate in an individualized program where skills are carefully crafted and introduced to them in an order that is like building blocks that guide students towards fluency. As students complete each level, they move on to a more challenging level.

The following are the skills and objectives that students will practice using the program. IXL also provides a skill alignment with our enVisionMath textbook.

NS Number and Number Sense

NS.3.1 The student will

NS.3.1.a read, write, and identify the place and value of each digit in a six-digit whole number, with and without models;

Write numbers in words (3-A.7)
Place value models up to thousands (3-B.1)
Place value names up to thousands (3-B.2)
Place value names up to hundred thousands (3-B.3)
Value of a digit (3-B.4)
NS.3.1.b round whole numbers, 9,999 or less, to the nearest ten, hundred, and thousand; and

Rounding - nearest ten or hundred only (3-P.1)
Rounding (3-P.2)
NS.3.1.c compare and order whole numbers, each 9,999 or less.

Order numbers (3-A.11)
NS.3.2 The student will

NS.3.2.a name and write fractions and mixed numbers represented by a model;

Identify equal parts (3-W.1)
Understand fractions: fraction bars (3-W.2)
Understand fractions: area models (3-W.3)
Match fractions to models: halves, thirds, and fourths (3-W.6)
Match unit fractions to models (3-W.7)
Match fractions to models (3-W.8)
Fractions of number lines: unit fractions (3-W.9)
Fractions of number lines (3-W.10)
Identify unit fractions on number lines (3-W.11)
Identify fractions on number lines (3-W.12)
Match mixed numbers to models (3-W.21)
NS.3.2.b represent fractions and mixed numbers with models and symbols; and

Show fractions: fraction bars (3-W.4)
Show fractions: area models (3-W.5)
Graph unit fractions on number lines (3-W.13)
Graph fractions on number lines (3-W.14)
Unit fractions: word problems (3-W.17)
Fractions of a whole: modeling word problems (3-W.18)
Fractions of a whole: word problems (3-W.19)
Fractions of a group: word problems (3-W.20)
Match mixed numbers to models (3-W.21)
NS.3.2.c compare fractions having like and unlike denominators, using words and symbols (>, <, =, or ≠), with models.

Graph smaller or larger fractions on a number line (3-W.15)
Find equivalent fractions using area models (3-X.1)
Identify equivalent fractions on number lines (3-X.2)
Find equivalent fractions using number lines (3-X.3)
Compare fractions using models (3-Y.1)
Compare fractions using number lines (3-Y.2)
Graph and compare fractions with like denominators on number lines (3-Y.3)
Graph and compare fractions with like numerators on number lines (3-Y.4)
Graph and compare fractions on number lines (3-Y.5)
CE Computation and Estimation

CE.3.3 The student will

CE.3.3.a estimate and determine the sum or difference of two whole numbers; and

Estimate sums up to 1,000 (3-P.5)
Estimate differences up to 1,000 (3-P.7)
CE.3.3.b create and solve single-step and multistep practical problems involving sums or differences of two whole numbers, each 9,999 or less.

Add two numbers up to three digits - word problems (3-C.3)
Add three numbers up to three digits each: word problems (3-C.7)
Subtract numbers up to three digits - word problems (3-D.3)
Addition and subtraction word problems (3-M.8)
Interpret data in tables (3-M.10)
Multi-step word problems (3-M.12)
CE.3.4 The student will

CE.3.4.a represent multiplication and division through 10 × 10, using a variety of approaches and models;

Count equal groups (3-E.1)
Identify multiplication expressions for equal groups (3-E.2)
Write multiplication sentences for equal groups (3-E.3)
Relate addition and multiplication for equal groups (3-E.4)
Identify multiplication expressions for arrays (3-E.5)
Write multiplication sentences for arrays (3-E.6)
Make arrays to model multiplication (3-E.7)
Write multiplication sentences for number lines (3-E.8)
Divide by counting equal groups (3-I.1)
Write division sentences for groups (3-I.2)
Relate multiplication and division for groups (3-I.3)
Write division sentences for arrays (3-I.4)
Relate multiplication and division for arrays (3-I.5)
CE.3.4.b create and solve single-step practical problems that involve multiplication and division through 10 x 10; and

Multiplication word problems (3-H.6)
Multiplication word problems: find the missing factor (3-H.7)
Division word problems (3-L.5)
CE.3.4.c demonstrate fluency with multiplication facts of 0, 1, 2, 5, and 10; and

Multiply by 0 (3-F.1)
Multiply by 1 (3-F.2)
Multiply by 2 (3-F.3)
Multiply by 5 (3-F.6)
Multiply by 10 (3-F.11)
CE.3.4.d solve single-step practical problems involving multiplication of whole numbers, where one factor is 99 or less and the second factor is 5 or less.

CE.3.5 The student will solve practical problems that involve addition and subtraction with proper fractions having like denominators of 12 or less.

MG Measurement and Geometry

MG.3.6 The student will

MG.3.6.a determine the value of a collection of bills and coins whose total value is $5.00 or less;

Count coins and bills - up to $5 bill (3-S.1)
MG.3.6.b compare the value of two sets of coins or two sets of coins and bills; and

Which picture shows more? (3-S.3)
MG.3.6.c make change from $5.00 or less.

MG.3.7 The student will estimate and use U.S. Customary and metric units to measure

MG.3.7.a length to the nearest ½ inch, inch, foot, yard, centimeter, and meter; and

Measure using an inch ruler (3-BB.3)
Which customary unit of length is appropriate? (3-BB.4)
Which metric unit of length is appropriate? (3-BB.13)
MG.3.7.b liquid volume in cups, pints, quarts, gallons, and liters.

Which customary unit of volume is appropriate? (3-BB.6)
Which metric unit of volume is appropriate? (3-BB.15)
MG.3.8 The student will estimate and

MG.3.8.a measure the distance around a polygon in order to determine its perimeter using U.S. Customary and metric units; and

Perimeter of rectangles (3-FF.1)
Perimeter of polygons (3-FF.3)
MG.3.8.b count the number of square units needed to cover a given surface in order to determine its area.

Find the area of figures made of unit squares (3-FF.6)
Select figures with a given area (3-FF.7)
MG.3.9 The student will

MG.3.9.a tell time to the nearest minute, using analog and digital clocks;

Match clocks and times (3-T.1)
Match analog and digital clocks (3-T.2)
Read clocks and write times (3-T.3)

MG.3.9.b solve practical problems related to elapsed time in one-hour increments within a 12- hour period; and

MG.3.9.c identify equivalent periods of time and solve practical problems related to equivalent periods of time.

Convert between hours and fractions of hours (3-T.9)
Relate time units (3-T.10)
MG.3.10 The student will read temperature to the nearest degree.

Read a thermometer (3-BB.1)
MG.3.11 The student will identify and draw representations of points, lines, line segments, rays, and angles.

Lines, line segments, and rays (3-CC.5)
MG.3.12 The student will

MG.3.12.a define polygon;

Is it a polygon? (3-CC.4)
MG.3.12.b identify and name polygons with 10 or fewer sides; and

Identify two-dimensional shapes (3-CC.1)
MG.3.12.c combine and subdivide polygons with three or four sides and name the resulting polygon(s).

MG.3.13 The student will identify and describe congruent and noncongruent figures.

Identify congruent shapes (3-CC.9)
PS Probability and Statistics

PS.3.14 The student will investigate and describe the concept of probability as a measurement of chance and list possible outcomes for a single event.

Certain, probable, unlikely, and impossible (3-V.1)
PS.3.15 The student will

PS.3.15.a collect, organize, and represent data in pictographs or bar graphs; and

Create bar graphs (3-U.7)
Create pictographs (3-U.11)
PS.3.15.b read and interpret data represented in pictographs and bar graphs.

Interpret bar graphs (3-U.5)
Use bar graphs to solve problems (3-U.6)

Interpret pictographs (3-U.10)
PFA Patterns, Functions, and Algebra

PFA.3.16 The student will identify, describe, create, and extend patterns found in objects, pictures, numbers and tables.

Skip-counting puzzles (3-A.4)
Addition input/output tables - up to three digits (3-C.2)
Subtraction input/output tables - up to three digits (3-D.2)
Repeating patterns (3-R.1)
Growing patterns (3-R.2)
Find the next shape in a pattern (3-R.3)
Complete a repeating pattern (3-R.4)
Make a repeating pattern (3-R.5)
Find the next row in a growing pattern (3-R.6)
PFA.3.17 The student will create equations to represent equivalent mathematical relationships.

Balance addition equations - up to three digits (3-C.5)
Balance subtraction equations - up to three digits (3-D.5)

Evaluation: How will you know if the objectives have been met? How will the outcomes be measured?
IXL Analytics provides reports to help teachers monitor classroom performance, pinpoint trouble spots in real time, and guide individual students and entire classes toward mastery. Using these reports I can see where my students need extra practice or additional direct instruction. The trouble spots report helps me organize Tier groups and helps me decide what to work on in small group instruction. I can also use these reports to share with parents, and parents can also support the learning at home using IXL.

Dissemination: Would your project be of value to other educators? How would you share your ideas? (Sharing your project idea could include things such as school events, social media, school division meetings, conferences, etc...)
This program will be valuable to the entire third grade (three classes). We can all use the program during Intervention and Morning Math Spiraling. I have also used this program with my summer school students the past two years, and I plan to do the same in 2019.

Budget: 1 year IXL Math Classroom License for 50 students

Total amount requested (If your total project cost exceeds this grant request, please describe how the additional funds will be obtained. If unable to raise all funds and project is not completed, HEF grant funds awarded must be repaid).
I am requesting $415.00 to pay for the IXL License for one year.

Electronic Signature

Tina Becouvarakis