



# IXL Skill Plan for the TerraNova 3<sup>®</sup> 7th grade



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# Number and Number Relations

Standard	IXL skills
<b>Equivalent Forms</b>	<ol style="list-style-type: none"><li>1. Convert between decimals and fractions or mixed numbers 8XE</li><li>2. Convert between percents, fractions, and decimals 2HW</li></ol>
<b>Ratio, Proportion</b>	<ol style="list-style-type: none"><li>1. Understanding ratios ZTC</li><li>2. Identify equivalent ratios ZFM</li><li>3. Do the ratios form a proportion? MJQ</li></ol>
<b>Exponents, Scientific Notation</b>	<b>Scientific notation</b> <ol style="list-style-type: none"><li>1. Scientific notation 3S7</li></ol> <b>Exponents</b> <ol style="list-style-type: none"><li>2. Understanding exponents BFA</li><li>3. Evaluate exponents ZDS</li><li>4. Exponents with negative bases WFW</li></ol>
<b>Number Line</b>	<ol style="list-style-type: none"><li>1. Integers on number lines A5Y</li><li>2. Graph integers on horizontal and vertical number lines EM8</li><li>3. Decimal number lines BBX</li><li>4. Rational numbers: find the sign HSP</li></ol>
<b>Factors, Multiples, Divisibility</b>	<ol style="list-style-type: none"><li>1. Divisibility rules LVS</li><li>2. Greatest common factor YFF</li><li>3. Least common multiple 5WC</li></ol>
<b>Sets, Models</b>	

# Computation and Numerical Estimation

Standard	IXL skills
<p><b>Computation</b></p>	<p><b>Integers</b></p> <ol style="list-style-type: none"> <li>1. Add and subtract integers FNS</li> <li>2. Multiply and divide integers R8D</li> <li>3. Add, subtract, multiply, and divide integers B8A</li> </ol> <p><b>Positive decimals</b></p> <ol style="list-style-type: none"> <li>4. Add and subtract decimals BP2</li> <li>5. Multiply decimals TCU</li> <li>6. Divide decimals 6HB</li> </ol> <p><b>Positive fractions</b></p> <ol style="list-style-type: none"> <li>7. Add and subtract fractions NGL</li> <li>8. Multiply fractions PDK</li> <li>9. Divide fractions X7A</li> </ol> <p><b>Rational numbers</b></p> <ol style="list-style-type: none"> <li>10. Add and subtract rational numbers GKU</li> <li>11. Multiply and divide rational numbers BXW</li> </ol>
<p><b>Computation In Context</b></p>	<ol style="list-style-type: none"> <li>1. Add and subtract integers: word problems 2DD</li> <li>2. Add, subtract, multiply, and divide decimals: word problems TGN</li> <li>3. Add, subtract, multiply, and divide fractions and mixed numbers: word problems KR7</li> <li>4. Identify quotients of rational numbers: word problems JT9</li> </ol>
<p><b>Estimation</b></p>	<ol style="list-style-type: none"> <li>1. Estimate sums, differences, and products of decimals EGF</li> <li>2. Estimate sums and differences of mixed numbers 7HR</li> <li>3. Estimate products and quotients of fractions and mixed numbers JKK</li> <li>4. Estimate to solve word problems MQ6</li> </ol>
<p><b>Recognize When To Estimate</b></p>	

# Operation Concepts

Standard	IXL skills
<b>Model Problem Situation</b>	<ol style="list-style-type: none"><li>1. Add integers using number lines A63</li><li>2. Subtract integers using number lines FGG</li><li>3. Add and subtract integers using counters B8X</li></ol>
<b>Order of Operations</b>	<ol style="list-style-type: none"><li>1. Evaluate numerical expressions involving integers 7YN</li><li>2. Evaluate numerical expressions involving decimals FNM</li><li>3. Evaluate numerical expressions involving fractions XXQ</li><li>4. Evaluate numerical expressions involving exponents D7P</li></ol>

# Measurement

Standard	IXL skills
<b>Time</b>	1. Elapsed time word problems 7DR
<b>Perimeter</b>	1. Perimeter 7GQ
<b>Area</b>	1. Area of rectangles and parallelograms 62H 2. Area of triangles and trapezoids ENE 3. Area of circles YA8 4. Area of compound figures with triangles MRG
<b>Volume, Capacity</b>	1. Volume of cubes and prisms URT 2. Volume of pyramids CKU 3. Volume of cylinders FHC
<b>Rate</b>	1. Unit prices with unit conversions KJ8
<b>Scale Drawing, Map, Model</b>	1. Scale drawings: word problems 84H 2. Scale drawings: scale factor word problems KCM
<b>Convert Measurement Units</b>	1. Compare and convert customary units 4B8 2. Compare and convert metric units HW2 3. Convert between customary and metric systems E8Z

# Geometry and Spatial Sense

Standard	IXL skills
<b>Angles</b>	<ol style="list-style-type: none"> <li>1. Name, measure, and classify angles 2UG</li> <li>2. Identify complementary, supplementary, vertical, and adjacent angles HKG</li> <li>3. Find measures of complementary, supplementary, vertical, and adjacent angles CST</li> </ol>
<b>Triangles</b>	<ol style="list-style-type: none"> <li>1. Classify triangles N5Z</li> <li>2. Triangle inequality 5RX</li> </ol>
<b>Parts Of Circle</b>	<ol style="list-style-type: none"> <li>1. Parts of a circle 2VL</li> </ol>
<b>Coordinate Geometry</b>	<ol style="list-style-type: none"> <li>1. Coordinate plane review VXU</li> <li>2. Quadrants and axes 7TW</li> </ol>
<b>Congruence, Similarity</b>	<ol style="list-style-type: none"> <li>1. Similar and congruent figures DVS</li> <li>2. Congruence statements and corresponding parts KTR</li> <li>3. Side lengths and angle measures of congruent figures 8UC</li> <li>4. Side lengths and angle measures of similar figures JA5</li> </ol>
<b>Use Geometric Models To Solve Problems</b>	<ol style="list-style-type: none"> <li>1. Area and perimeter: word problems JFR</li> <li>2. Volume of cubes and rectangular prisms: word problems 8WV</li> </ol>
<b>Apply Geometric Properties</b>	<ol style="list-style-type: none"> <li>1. Similar figures and indirect measurement 8VJ</li> <li>2. Find missing angles in triangles 4U6</li> <li>3. Perimeter and area: changes in scale ZC6</li> </ol>

# Data Analysis, Statistics, and Probability

Standard	IXL skills
<b>Read Line Graph</b>	1. Interpret line graphs 4G2
<b>Interpret Data Display</b>	1. Interpret line graphs 4G2
<b>Draw Conclusions From Data</b>	1. Make predictions with scatter plots M8S
<b>Statistics</b>	1. Calculate mean, median, mode, and range U2A 2. Interpret charts and graphs to find mean, median, mode, and range CYK 3. Box plots SKN
<b>Probability</b>	1. Probability of simple events and opposite events F88 2. Probability of mutually exclusive events and overlapping events 8TP 3. Compound events: find the number of outcomes HZR 4. Probability of compound events YPQ
<b>Use Data To Solve Problems</b>	
<b>Describe, Evaluate Data</b>	1. Identify trends with scatter plots 7T5

# Patterns, Functions, Algebra

Standard	IXL skills
<b>Number Pattern</b>	<ol style="list-style-type: none"> <li>1. Number sequences: mixed review <small>BKY</small></li> <li>2. Number sequences: word problems <small>CR6</small></li> </ol>
<b>Function</b>	<ol style="list-style-type: none"> <li>1. Complete a table for a two-variable relationship <small>2LU</small></li> <li>2. Write a two-variable equation <small>94Q</small></li> <li>3. Identify the graph of an equation <small>WU5</small></li> </ol>
<b>Expression</b>	<p><b>Write expressions</b></p> <ol style="list-style-type: none"> <li>1. Write variable expressions: one operation <small>59K</small></li> <li>2. Write variable expressions: two or three operations <small>EGS</small></li> </ol> <p><b>Evaluate expressions</b></p> <ol style="list-style-type: none"> <li>3. Evaluate multi-variable expressions <small>T56</small></li> </ol> <p><b>Simplify expressions</b></p> <ol style="list-style-type: none"> <li>4. Add and subtract linear expressions <small>6BT</small></li> <li>5. Identify equivalent linear expressions I <small>DRB</small></li> </ol>
<b>Inequality</b>	<p><b>Solutions to inequalities</b></p> <ol style="list-style-type: none"> <li>1. Solutions to inequalities <small>8BA</small></li> </ol> <p><b>One-step inequalities</b></p> <ol style="list-style-type: none"> <li>2. Solve one-step inequalities <small>QWH</small></li> <li>3. Graph solutions to one-step inequalities <small>TFK</small></li> </ol> <p><b>Two-step inequalities</b></p> <ol style="list-style-type: none"> <li>4. Solve two-step inequalities <small>XGQ</small></li> <li>5. Graph solutions to two-step inequalities <small>6TT</small></li> </ol>
<b>Solve Linear Equation</b>	<ol style="list-style-type: none"> <li>1. Solve two-step equations <small>QEB</small></li> <li>2. Solve equations involving like terms <small>VSW</small></li> </ol>
<b>Use Algebra To Solve Problems</b>	<ol style="list-style-type: none"> <li>1. Write and solve equations that represent diagrams <small>FVH</small></li> <li>2. Solve equations: word problems <small>D2Y</small></li> </ol>



3. One-step inequalities: word problems 6HD

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**Equation**

1. Which  $x$  satisfies an equation? DJS

2. Write an equation from words N2T

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# Problem Solving and Reasoning

Standard	IXL skills
<b>Develop, Explain Strategy</b>	<ol style="list-style-type: none"> <li>1. Multi-step word problems JVU</li> <li>2. Model and solve equations using algebra tiles EGK</li> </ol>
<b>Generalize Solution</b>	<p><b>Operations with integers</b></p> <ol style="list-style-type: none"> <li>1. Integer addition and subtraction rules 6EV</li> <li>2. Integer multiplication and division rules 5R8</li> </ol> <p><b>Operations with rational numbers</b></p> <ol style="list-style-type: none"> <li>3. Apply addition and subtraction rules Y8T</li> <li>4. Apply multiplication and division rules V5V</li> </ol>
<b>Deductive/Inductive Reasoning</b>	<ol style="list-style-type: none"> <li>1. Use Venn diagrams to solve problems 2RH</li> </ol>
<b>Proportional Reasoning</b>	<p><b>Proportions</b></p> <ol style="list-style-type: none"> <li>1. Solve proportions: word problems WB7</li> <li>2. Estimate population size using proportions 3C9</li> </ol> <p><b>Constant of proportionality</b></p> <ol style="list-style-type: none"> <li>3. Find the constant of proportionality from a table LKZ</li> <li>4. Find the constant of proportionality from a graph ZUT</li> </ol> <p><b>Proportional relationships</b></p> <ol style="list-style-type: none"> <li>5. Write and solve equations for proportional relationships VKK</li> </ol>

# Communication

Standard	IXL skills
<b>Model Math Situations</b>	<b>Expressions</b> <ol style="list-style-type: none"><li>1. Write variable expressions: word problems XMD</li><li>2. Identify equivalent linear expressions using algebra tiles 38V</li><li>3. Identify equivalent linear expressions: word problems KWH</li></ol> <b>Equations, tables, and graphs</b> <ol style="list-style-type: none"><li>4. Solve word problems involving two-variable equations YJT</li><li>5. Complete a table and graph a proportional relationship 5DR</li><li>6. Write an equation from a graph using a table MXS</li></ol>
<b>Make Conjectures</b>	<ol style="list-style-type: none"><li>1. Make predictions using theoretical probability 9UW</li></ol>
<b>Explain Thinking</b>	<ol style="list-style-type: none"><li>1. Write equivalent expressions using properties 6XR</li></ol>
<b>Explain Solution Process</b>	<ol style="list-style-type: none"><li>1. Solve equations: complete the solution 66R</li></ol>