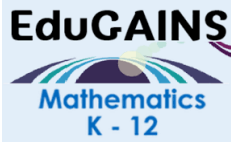
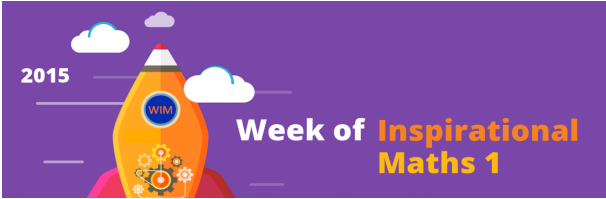
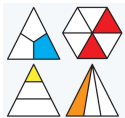


Resources to Support the Big Ideas in Intermediate Math

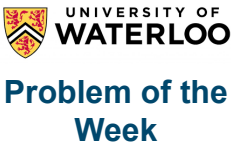
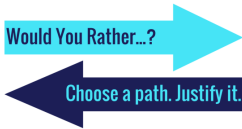
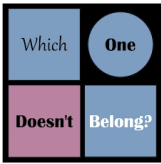
5-Day Mathematics Planning Guide and Template
Effective Mathematics Learning, Teaching, and Assessment over a 5-day cycle



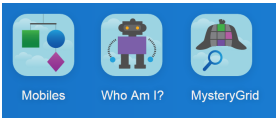
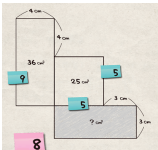
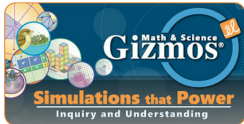
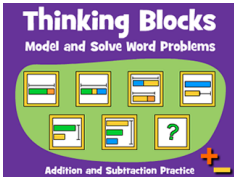
Developing Proficiency with Addition and Subtraction
Developing Proficiency with Multiplication and Division



Fraction Talks



Interactive Math Games



SolveMe Puzzles

Number Sense and Numeration

Quantity Relationships

Represent, compare, and order whole numbers (including integers), decimals, fractions, percents, and exponents.

GAP CLOSING

Representing Whole Numbers
Comparing and Ordering Whole Numbers
Comparing Fractions
Representing Fractions
Representing and Comparing Decimals
Integers
Powers and Roots

GAP CLOSING
ePractice

Representing One Half
Representing Proper Fractions as Parts of a Whole
Representing Proper Fraction as Parts of Measures
Representing Proper Fractions as Parts of a Set
Representing Improper Fractions as Parts of Wholes
Representing Improper Fractions as Parts of a Set
Comparing Fractions Using Pictures
Comparing Fractions to One Half and to One
Comparing Fractions with the Same Denominator
Comparing Fractions with the Same Numerator
Naming Equivalent Fractions
Comparing Fractions



Fraction Garden (Comparing Fractions)
Toy Factory (Set Models of Fractions)
Comparing and Ordering Decimals
Percents, Fractions and Decimals
Rational Numbers, Opposites, and Absolute Values
Part-to-Part and Part-to-Whole Ratios
Finding Factors with Area Models
Order of Operations
Square Roots

TIPS4RM Three-Part Lessons and Supports

Describing Patterns and on to Integers (Full Unit)
Fractions and Decimals (Full Unit)
Integers and Algebraic Expressions
Fractions and Percents

CLIPS

Critical Learning Instructional Path Supports (# of activities)

Using Integers to Describe Location (6)
Comparing and Ordering Integers (7)
Using Integers to Describe Change (8)
Representing Integers (4)
Representing Simple Fractions (7)
Forming and Naming Equivalent Fractions (6)
Comparing Simple Fractions (8)
Forming Equivalent Fractions by Splitting or Merging Parts (7)
Representing Improper Fractions as Mixed Numbers (4)



(Resource ID)

Prime Time! (ELO1414870)
Making Sense of Exponents (ELO1414850)
Exponents (ELO1033350)
Exponents Part 1 (ELO1414850)
Exponents Part 2: The Power of Ten (ELO1414860)
Integers... Negative or Positive? (ELO1033460)
Squares and Square Roots (ELO1414400)
Representing Integers and the Zero Principle (ELO1414350)



Fraction Matcher



Give Me Four Clues
Multiply Multiples 1
Multiply Multiples 2
Multiply Multiples 3
Always a Multiple?
Legs Eleven
Curious Number
Light the Lights
Light the Lights Again
Counting Cogs
Flashing Lights
What is a Ziffle?
I Like...
What's in the Box?
Factors and Multiples Game
Multiples Grid
The Moons of Vuvv
Zios and Zepts
One Wasn't Square
Crossings
Factors and Multiples Puzzle
Sieve of Eratosthenes
Gabriel's problem
Multiple Surprises
Power Mad!
How Much Can We Spend?
Sissa's Reward
Matching Fractions, Matching Decimals
Farey Sequences
Fractions Jigsaw
Going Round in Circles
Nice or Nasty
Dicey Operations
A Question of Scale
Tiny Nines



Fraction Models
Fraction Game
Factorize
Factor Game
Hotel Snap

Number Sense and Numeration

Operations

Solve problems involving whole numbers, decimal numbers, fractions, percents, and integers, using a variety of computational strategies.

GAP CLOSING

Multiplying and Dividing
Decimal Computation
Relating Situations to
Mathematical Operations
Integers

GAP CLOSING
ePractice

Adding Fractions
Subtracting Fractions
Multiplying Fractions
Dividing Fractions



Chocomatic (Multiplication,
Arrays, and Area)
Multiplying with Decimals
Sums and Differences with
Decimals
Estimating Sums and
Differences with Fractions
Dividing Fractions
Dividing Mixed Numbers
Multiplying Fractions
Multiplying Mixed Numbers
Adding and Subtracting
Integers
Adding Integers on the Number
Line



Operations (Factors,
Multiplication, Division)



TIPS4RM Three-Part
Lessons and Supports

Fractions and Decimals (Full
Unit)
Integers and Algebraic
Expressions
From Powers to Circles
Fractions and Percents



Adding Fractions (ELO1414340)
Representing the Addition of
Integers with Bingo Chips
(ELO1414360)
Order Matters (ELO1414880)
Order of Operations Part 2
(ELO1417920)
Guitar Star Part 2
(ELO1413870)
Which is the Better Deal?
(ELO1411780)
Subtraction of Integers
(ELO1033400)
Multiplying with Integers
(ELO1033260)



Primary Krypto
KenKen
Product Game
Pick-a-Path

CLIPS

Critical Learning Instructional Path
Supports (# of activities)

Adding Fractions
Subtracting Fractions
Multiplying and Dividing Fractions



Peaches Today, Peaches Tomorrow...
Ben's Game
Fair Shares
Matching Fractions, Matching
Decimals
Number Daisy
Have You Got It?
Cryptarithms
Where Can We Visit?
Overlaps
Up, Down, Flying Around
Magic Letters
First Connect Three
Connect Three
Consecutive Negative Numbers
Making a Difference
Weights
Fractions Jigsaw
Going Round in Circles
Forwards Add Backwards
Add to 200
Difference Sudoku
Countdown
Power Countdown
Remainders
The Remainders Game
A Chance to Win?
Largest Product
Impossibilities
Cinema Problem
Can You Make 100?
Missing Multipliers

Number Sense and Numeration

Proportional Reasoning

Demonstrate an understanding of proportional relationships using percent, ratio and rate, and solve problems in a variety of meaningful contexts.



Proportional Reasoning



Percent of Change
Percents and Proportions
Beam to Moon (Ratios and Proportions)
Proportions and Common Multipliers
Part-to-Part and Part-to-Whole Ratios



Unit Rates

TIPS4RM Three-Part Lessons and Supports



How Many Balloons? (ELO1414330)
Rate My Groceries (ELO1414380)
Guitar Star Part 1: Percents Greater than 100 (ELO1413860)
Guitar Star Part 2 (ELO1413870)
Which is the Better Deal? (ELO1411780)



Place Your Orders
Thousands and Millions
Nutrition and Cycling
Mixing Lemonade
Triathlon and Fitness
Olympic Measures
Speeding Boats



Free Ride

Measurement

Measurement Relationships

Determine the relationship among units and measureable attributes, including the area of a 2D shapes (rectangle, parallelogram, triangle, trapezoid, circle) and volume and surface area of 3D solids (right prisms, right triangles, and cylinders).

GAP CLOSING

Two-Dimensional Measurement (Student Book)
Measurement - Volume and Surface Area (Student Book)



Unit Conversions
Perimeter and Area of Rectangles
Area of Parallelograms
Area of Triangles
Circumference and Area of Circles
Volume of Prisms and Cylinders
Volume of Pyramids and Cones
Surface and Lateral Areas of Prisms and Cylinders



Area Building



Circle Tool
Computing Pi
Area of Trapezoids
Area of Parallelograms
Investigating Connections Between Measurements and Scale Factors of Similar Figures

TIPS4RM Three-Part Lessons and Supports



(Resource ID)

Design a Kite (ELO1414740)
Summertime Painting (ELO1414710)
Dog Run Construction (ELO1414730)
Green, Green, Grass of Summer (ELO1414720)
Just When You Thought There Weren't Any More Shapes (ELO1414830)
More Than Just Area (ELO1414840)
Circle Circus (ELO1413960)
Pi Please...with a Side of Baseball (ELO1416660)
Toss me a Circle (ELO1413950)
Feeling Better about Volume (ELO1413920)
Pool Capacity (ELO1413930)
Volume and Capacity: The Same but Different (ELO1417910)

Critical Learning Instructional Path Supports (CLIPS)



Perimeter Challenge
Perimeter Possibilities
Changing Areas, Changing Perimeters
On the Edge
Can They Be Equal?
Fence It
Isosceles Triangles
Triangles in a Square
Pick's Theorem
Warmsnug Double Glazing
Colourful Cube
Cuboid Challenge
Changing Areas, Changing Volumes
Painted Cube
Cuboids
Sending a Parcel
Efficient Cutting
Cola Can
Gutter
Nine Colours
Marbles in a Box
Tet-trouble

Measurement

Attributes, Units, and Measurement Sense

Estimate, measure, and record quantities, and report on research into real–life applications of area, volume, and capacity measurements.



Unit Conversions
Volume of Prisms and
Cylinders
Volume of Pyramids and
Cones

TIPS4RM Three-Part
Lessons and Supports



Geometry and Spatial Sense

Geometric Relationships

Develop understanding of similarity and congruence, and develop geometric relationships by solving problems involving lines, polygons, and polyhedra.



Similar Figures
Constructing Congruent
Segments and Angles
Constructing Parallel and
Perpendicular Lines
Isosceles and Equilateral
Triangles
Polygon Angle Sum
Triangle Angle Sum
Distance Formula
Pythagorean Theorem
Pythagorean Theorem with a
Geoboard

TIPS4RM Three-Part
Lessons and Supports



(Resource ID)
Congruency TV (ELO1409410)
Describing Triangles - Are They
Congruent? (ELO1409480)
Pythagorean Rocket
(ELO1415340)
Rocket Race Rectangles
(ELO1415350)
Shape Street (ELO1412080)
The Big Skate (ELO1418470)
Quadrilateral World
(ELO1412030)



Geometric Solids
Tessellation Creator
Cube Nets
Angle Sums
Shape Sorter
Isometric Drawing Tool
Polygon Capture



Quadrilateral Property Chart
Completing Quadrilaterals
Guess my Quad
Quadrilaterals Game
Square Coordinates
Circles in Quadrilaterals
Shapely Pairs
Square It
Eight Hidden Squares
Opposite Vertices
Estimating Angles
Triangles in Circles
Semi-regular Tessellations
Which Solids Can We Make?
Making Sixty
Kite in a Square
Nicely similar
Right Angles
Cyclic Quadrilaterals
Cyclic Quadrilaterals
Tilted Squares
Subtended Angles
Of All the Areas

Geometry and Spatial Sense

Geometric Properties

Construct related lines, and classify triangles, quadrilaterals, and prisms and demonstrate an understanding of the geometric properties of quadrilaterals and circles and the applications of geometric properties in the real world.



Classifying Quadrilaterals
Inscribed Angles in a Circle
Classifying Triangles
Special Parallelograms
Segment and Angle
Bisectors
Rock Art (Transformations)
Rotations, Reflections, and
Translations

TIPS4RM Three-Part
Lessons and Supports



(Resource ID)
Sorting and Classifying Shapes



Constructing Triangles



Polygon Capture

Geometry and Spatial Sense

Location and Movement

Describe location in the using the Cartesian coordinate plane, dilatate two–dimensional shapes, and apply transformations to create and analyse designs and make connections between transformations and the real world.



Dilations
Rotations, Reflections, and
Translations
Translations
City Tour (Coordinates)
Points in the Coordinate Plane
Holiday Snowflake Designer

TIPS4RM Three-Part
Lessons and Supports



(Resource ID)
Alien Coordinates
(ELO1409440)
Transforming Ben’s Bedroom
(ELO1410060)
Rotating Rotations into Reality
(ELO1413460)
Translating Translations into
Reality (ELO1413450)
Translations and Reflections
(ELO1411980)



Shady Symmetry
Reflecting Squarely
Mirror, Mirror...
...on the Wall
Who is the Fairest of Them All?
Attractive Rotations
Attractive Tablecloths
Transformation Game



Algebraic Transformations

Patterning and Algebra

Patterns and Relationships

Represent linear growing patterns (where the terms are whole numbers) using concrete materials, graphs, algebraic expressions, and equations.

GAP CLOSING

Algebraic Expressions
Solving Equations



Finding Patterns
Arithmetic and Geometric
Sequences
Introduction to Functions
Function Machines 1 (Functions
and Tables)
Function Machines 2 (Functions,
Tables, and Graphs)
Function Machines 3 (Functions
and Problem Solving)
Points, Lines, and Equations
Linear Functions
Solving Equations on the
Number Line
Modeling One-Step Equations
Modeling and Solving Two-Step
Equations
Using Algebraic Equations
Using Algebraic Expressions



Function Builder
Graphing Lines

TIPS4RM Three-Part
Lessons and Supports



(Resource ID)

Harry's House of Horrors Part 1 -
Linear Growing Patterns
(ELO1412100)
Harry's House of Horrors Part 2 -
General Term (ELO1412110)
Harry's House of Horrors Part 3 -
Patterns, Tables and
Graphs...Oh My! (ELO1412120)
Invasion Force Part 1: Home
Guard (ELO1412480)
Invasion Force Part 2: Mars
Guard (ELO1412490)
Invasion Force Part 3: Space
Guard (ELO1412500)
Code Breakers Part 1
(ELO1412430)
Code Breakers Part 2 - Variable
Veronica's Substitution Solution
(ELO1412440)
Code Breakers Part 3 -
Cybercrypto's Computer
(ELO1412450)
When Will We Use This
Anyways? (ELO1412510)
Evaluating Algebraic
Expressions Using Substitution
(ELO1087680)
Rex and Tex: Balancing Act
(ELO1413890)



Which Is Cheaper?
Which Is Bigger?
Charlie's Delightful Machine
A Little Light Thinking
Shifting Times Tables
Squares in Rectangles
Odds, Evens and More
Evens
Picturing Square Numbers
Picturing Triangle Numbers
Days and Dates
Growing Surprises



Patterning and Algebra

Expressions, Variables, and Equations

Model linear relationships graphically and algebraically, and solve and verify algebraic equations, using a variety of strategies, including inspection, guess and check, and using a balance model.



Arithmetic and Geometric Sequences
Function Machines 1 (Functions and Tables)
Function Machines 2 (Functions, Tables, and Graphs)
Function Machines 3 (Functions and Problem Solving)
Points, Lines, and Equations
Linear Functions
Solving Equations on the Number Line
Using Algebraic Equations



TIPS4RM Three-Part Lessons and Supports



Harry's House of Horrors Part 1 - Linear Growing Patterns (ELO1412100)
Harry's House of Horrors Part 2 - General Term (ELO1412110)
Harry's House of Horrors Part 3 - Patterns, Tables and Graphs...Oh My! (ELO1412120)
Invasion Force Part 1: Home Guard (ELO1412480)
Invasion Force Part 2: Mars Guard (ELO1412490)
Invasion Force Part 3: Space Guard (ELO1412500)
Code Breakers Part 1 (ELO1412430)
Code Breakers Part 2 - Variable
Veronica's Substitution Solution (ELO1412440)
Code Breakers Part 3 - Cybercrypto's Computer (ELO1412450)
When Will We Use This Anyways? (ELO1412510)
Evaluating Algebraic Expressions Using Substitution (ELO1087680)
Rex and Tex: Balancing Act (ELO1413890)



Which Is Cheaper?
Which Is Bigger?
Charlie's Delightful Machine
A Little Light Thinking
Shifting Times Tables
Squares in Rectangles
Odds, Evens and More Evens
Picturing Square Numbers
Picturing Triangle Numbers
Days and Dates
Growing Surprises
Painted Cube
Mystic Rose
Parallel Lines
Diamond Collector
Translating Lines
Reflecting Lines

Data Management and Probability

Collection and Organization of Data

Collect and organize categorical, discrete, or continuous primary data and secondary data and display the data using charts and graphs, including frequency tables with intervals, histograms, and scatter plots.



- Graphing Skills
- Reaction Time 1 (Graphs and Statistics)
- Reaction Time 2 (Graphs and Statistics)
- Stem-and-Leaf Plots
- Polling: Neighborhood
- Polling: City
- Time Estimation
- Box-and-Whisker Plots

TIPS4RM Three-Part Lessons and Supports



- (Resource ID)
- Reading and Interpreting Graphs (ELO1414590)
- Sky Power (ELO1413830)
- Bar Graphs and Histograms (ELO1414610)
- Winter Wonderland Part 1 (ELO1413660)
- Winter Wonderland Part 2 (ELO1413730)
- Fishing Frenzy (ELO1411790)
- Mean, Median, Mode - Which Should I Use? (ELO1414600)
- Survey Bias (ELO1412000)
- Big and Tall for Basketball (ELO1412090)



- Fill Me Up
- Maths Filler
- How Far Does It Move?
- Speeding Up, Slowing Down
- Up and Across
- Picturing the World



- Averages and the Phantom Tollbooth

Data Management and Probability

Data Relationships

Apply a variety of data management tools and strategies to make convincing arguments about data.



Correlation
Histograms
Real-Time Histogram
Populations and Samples
Mean, Median, and Mode
Movie Reviewer (Mean and Median)

TIPS4RM Three-Part Lessons and Supports



(Resource ID)
Reading and Interpreting Graphs (ELO1414590)
Sky Power (ELO1413830)
Bar Graphs and Histograms (ELO1414610)
Winter Wonderland Part 1 (ELO1413660)
Winter Wonderland Part 2 (ELO1413730)
Fishing Frenzy (ELO1411790)
Mean, Median, Mode - Which Should I Use? (ELO1414600)
Survey Bias (ELO1412000)
Big and Tall for Basketball (ELO1412090)



About Average
M, M and M
Searching for Mean(ing)
Litov's Mean Value Theorem
Statistical Shorts
Unequal Averages
Half a Minute
How Would You Score It?
Wipeout



Data Management and Probability

Probability

Use probability models to determine the theoretical probability of an outcome in an experiment, and to predict the frequency of an outcome in real-life events, including those involving two independent events.



Theoretical and Experimental Probability
Independent and Dependent Events
Geometric Probability
Probability Simulations
Spin the Big Wheel! (Probability)



[Plinko Probability](#)



TIPS4RM Three-Part Lessons and Supports



(Resource ID)
Winter Wonderland Part 1 (ELO1413660)
Probability Experiments - Comparing (ELO1411850)
Representing Outcomes (ELO1411860)
What are the Chances Part 1 (ELO1411830)
What are the Chances Part 2 (ELO1411840)
Dice Throw and Coin Toss (ELO1050760)
Odds Are... (ELO1413570)
To Win or Not to Win! (ELO1413550)
What Aren't the Chances? (ELO1413560)



Statistical Shorts
Sociable Cards
Do You Feel Lucky?
What Does Random Look Like?
Which Spinners?
Who's the Winner?
The Better Bet
At Least One...
Same Number!
Interactive Spinners
Flippin' Discs
Non-transitive Dice
Odds and Evens
Two's Company
Cosy Corner
Chances Are
Odds and Evens Made Fair
In a Box
Last One Standing
Mathsland National Lottery