Homework Help: Grade 8 Mathematical Units

Please use the list below as a way to demonstrate the 'Big Ideas' to your class or post as a list for the class to see where they can get help on a specific topic. All Session titles are web linked to make this process easier for you and your students. Remember too, that the students have the ability to log in and 'Ask a Tutor' specific questions that may not be answered in the lists below. A Glossary of Terms is also available on the Homework Help site to help with clarifying terms as the students require.

** This is a working list which will be updated as resources become available.

Number Sense and Numeration

Big Idea	Resource Type	Session Title
Powers, exponents and roots	Best Sessions	
	Listen and Learns	**Exponents and Square Roots** Runtime: 53min
	Interactive Tutorials	Powers
Percents and decimals	Best Sessions	
	Listen and Learns	
	Interactive Tutorials	Decimal Numbers Percentages
Fractions +, -, x, /	Best Sessions	**Fractions: subtracting using common denominators** Find a common denominator so that you can subtract fractions. **Fractions: Add, subtract, multiply and divide using BEDMAS** Solve an expression using BEDMAS to work with fractions.
	Listen and Learns	**Fractions - Multiplication and Division** Runtime: 41min
	Interactive Tutorials	Fractions

Integers	Best Sessions	
	Listen and Learns	**Integers - Multiplying and Dividing** Runtime: 23min **Order of Operations with Exponents and Integers** Runtime: 47min
	Interactive Tutorials	
Prime factorization	Best Sessions	**Prime factorization: Use a factor tree to find the prime factors of a number** Learn how to find the prime factors of a number using a factor tree.
	Listen and Learns	
	Interactive Tutorials	

Measurement

Big Idea	Resource Type	Session Title
Volume / capacity	Best Sessions	**Volume of 3D shapes** Learn some hints for remembering formulas for volume.
	Listen and Learns	
	Interactive Tutorials	Volume Calculation
Surface area	Best Sessions	**Surface area of a triangular prism.** Identify a triangular prism and learn to find the surface area.
	Listen and Learns	**Calculating the Area of a Trapezoid** Runtime: 30min **Calculating the Surface Area of a Cylinder** Runtime: 30min
	Interactive Tutorials	
Circumference and Diameter	Best Sessions	**Circles: Find the circumference given the diameter** Find the circumference of a circle given the radius. **Circles: Circumference and diameter** Find the diameter of a circle given the circumference. **Circles: Find the area when given the diameter** Find the area of a circle given the diameter.
	Listen and Learns	
	Interactive Tutorials	

Geometry and Spatial Sense

Big Idea	Resource Type	Session Title
Quadrilaterals, triangles, circles	Best Sessions	**Angle measure of regular polygon: pentagon** Learn how to find the angle measures of any regular polygon. **Angles: Find the missing angles in a triangle** Use angle relationships to find the missing angles in this triangle.
	Listen and Learns	**Circle Measurement** Runtime: 44min
	Interactive Tutorials	
Pythagorean theorem	Best Sessions	**Pythagorean Theorem: Solving for c** Use the Pythagorean Theorem to find the length of the hypotenuse, c. **Pythagorean Theorem: solve for a or b** Use Pythagoras' Theorem to find the length of one of the
	Listen and Learns	**Pythagorean Theorem** Runtime: 27min
	Interactive Tutorials	Pythagorean Theorem
Platonic solids	Best Sessions	**Euler's formula: using a formula to find the number of faces, vertices or edges in a 3D shape** Use Euler's Formula to find the number of faces on a 3D shape.
	Listen and Learns	
	Interactive Tutorials	

Patterning and Algebra

Big Idea	Resource Type	Session Title
Solve and verify algebraic equations	Best Sessions	**Algebra: 2x-1=-3 How would you solve this? (AUDIO)** Isolate and solve for x using reverse order of operations. **Algebra: expanding algebraic expressions** Learn how to expand an algebraic expression
	Listen and Learns	**Collecting Like Terms** Runtime: 41min **Solving Equations in the Form $ax + b = c$** Runtime 26min
	Interactive Tutorials	Solving Equations Identifying Like Terms
Linear patterns	Best Sessions	**Patterns: Determine an algebraic expression for the nth term of the sequence 7, 10, 13, 16,… (pattern is increasing by 3)** Find the expression for this pattern: 7, 10, 13, 16.
	Listen and Learns	
	Interactive Tutorials	Linear Relations
Word problems to algebra	Best Sessions	**Rates: Mr. Costescu sold 42 calculators in 5 days. At this rate, how many could he sell in 19 days?** Use the unit rate to find how many calculators were sold in 19 days.
	Listen and Learns	
	Interactive Tutorials	Word Problems: Finding a Pattern

Data Management and Probability

Big Idea	Resource Type	Session Title
Graph and histogram	Best Sessions	
	Listen and Learns	
	Interactive Tutorials	The XY-Plane
Mean, median, mode	Best Sessions	**Mean - how to calculate the mean of three numbers** Find the mean of three numbers.
	Listen and Learns	
	Interactive Tutorials	
Conduct experiments	Best Sessions	
	Listen and Learns	
	Interactive Tutorials	Word Problems: Using a Logic Box Word Problems: Using a Table