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| **opportunity for growth** | **performance meets standard of learning (Grade 8)** | **advanced** |
|  | Big Ideas and Content at a glance   * Represent and compare rates, ratios, percents * Computational fluency with fractions * Discrete linear relationships have many representations & are used to connect and generalize * Surface area/Volume of 3D objects can be used to describe, measure, and compare spatial relationships * Determining averages helps us make sense of large data sets * perfect squares and cubes * square and cube roots * percents: <1% , >100% * rates, ratio, percent, proportions * operations with fractions * discrete linear relations * algebraic expressions * two-step equations (integer coefficients, constants, solutions) * surface area and volume * Pythagorean theorem * construction/views/nets * central tendency * theoretical probability with 2 independent events * financial literacy - best buys |  |
| Learning: Takes Time and Patience, Experiential, Embedded in Story, . . . | | |
|  | Reasoning and Analysis   * Logic and Patterns – observe, predict, generalize * Estimation * Mental math strategies * Model math concepts &/or ‘mathematically model’ |  |
|  | Understanding and Solving   * Strategies (incorporate, develop) * Use mathematical concepts * Problem Solving (unfamiliar, inquiry - connect to place, story, culture, First Peoples) * Visualizing |  |
|  | Communicating and Representing   * Mathematical justifications (written &/or spoken) * Concrete, Pictorial, Symbolic * Contribute to mathematical discussions |  |
|  | Connecting and Reflecting   * Reflect upon mathematical thinking (self, others) * Pose new problems/extensions * Connect to other math, other subjects, world around us, First Peoples |  |