

Grade Seven HLC Learning Progressions - DRAFT

(Expressions and Equations)

Expressions and Equations Grade Seven Expressions and Equations HLC Operate with signed numbers and create equivalent expressions. Grade Seven (EE) Learning Progressions September June Students must use visual representations to build understanding along this learning progression. Algebra tiles are strongly recommended since students use tiles to model in elementary through high school mathematics. **Be VERY cautious of introducing algorithms before conceptual understanding is SOLID** Critical Strategies: Zero pairs are useful tools when working with signed numbers. **Build and Create Equivalent Expressions Understanding Integers** Possible contexts: temperature, money/debt, elevation Possible contexts: temperature, money/debt, elevation, area, perimeter, emotions scale Models: **Collect Like Terms Algebra Tiles** Number line (horizontal + vertical) 3x + 2 + 2x + 13x + -2x + -2 + 1x+x+x = 3x2 sided chips/Algebra tiles X X 3 =3X Students should: • Compare integers by thinking about their distance from zero and using >, <, = Use zero pairs • 5(23) = 5(20 + 3)**Distributive Property** Make connections 20 + 3 between whole number and variable models 2 zero pairs 1 zero pair 00 15 2 + -2 = 0|+|=0

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