MATH 425 — Teaching Mathematics in the Middle School

Van de Walle, J. A., Bay-Williams, J .M., Lovin, L.H., & Karp, K. (2014). *Teaching Student-Centered Mathematics, Grades 6-8.* Boston, MA: Pearson Education.

Part I: Establishing a student-centered environment

	Introduction, The Reform Movement, NCTM, CCSS Practice Standards and Doing mathematics	*1 week*
Ch 1, 2	Teaching mathematics for understanding; Teaching mathematics through Problem Solving	*1 week*
Ch 3, 4	Assessing for learning, questioning techniques, Differentiating instruction	*1 week*
Ch 5, 6	Planning, teaching, and assessing culturally, linguistically diverse learners; Planning, teaching, and assessing students with exceptionalities	*1 week*

Part II: Teaching student-centered mathematics

Ch 8	Fraction concepts and computation (Examining fraction models, Fraction tasks and problem sequencing)	*2 weeks*
Ch 9	Decimal concepts and computation (Models and percent concepts)	*2 weeks*
Ch 10	The number system (Integers)	*1 week*
Ch 11	Proportional reasoning (Developing concepts of ratio and proportion)	*1 week*
Ch 12	Exploring algebraic thinking, expressions, and equations (Exploring Functions)	*2 weeks*
Ch 15	Working with data and doing statistics	*1 week*
Ch 16	Investigating concepts of probability	*1 week*
	Semester review	*1 week*

NOTE:
1. There are two tests implemented during the semester, in total of one week.
2. Other topics may be included if time permits.

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