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Creative use of online tools to enhance teaching of Mathematics.

The advent of new online programs provides vast opportunities for instructors for creative classroom teaching. Too often we rely on formal lectures and Power Point presentations and then find it awkward to encourage dialogue with students. Two tools that are both flexible and engaging for students are graphing and online homework programs. Using the homework program WebWork and the online graphing program Desmos, I will illustrate both prepared and improvised techniques for addressing topics in different levels of math classes. These approaches can be used for many subjects. Applications will include Shifting Parabolas and the Unit Circle for Algebra and Trigonometry, the Normal Distribution and applications for Statistics, analysis of domains for Pre-Calculus and introducing limits and the difference quotient for Calculus. (Received September 22, 2018)