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The author will present real world applications of Mathematics to Science, Technology, and Engineering. The author will demonstrate how he uses these in a literacy class for pre-service mathematics teachers and in outreach presentations in both middle school and high school settings. Some of the possible topics include relating: nano-polyhedra to chemistry, prime numbers to encryption, divisibility to check digit schemes, parabolas to spin casting telescope lenses, ellipses to lithotripsy and quantum computing, fractals to data compression, origami to medical and industrial uses, complex numbers to aerodynamics. The author will make available any requested assignments or powerpoints. (Received September 14, 2014)