Abstract Submitted
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Creating interesting computer simulations with Excel[1] CALEB MAHONEY, LARRY ENGELHARDT, Francis Marion University — I will describe a student project that involved creating computer simulations using Excel for some fairly complex physical situations. These include falling through the Earth using an accurate model for the density of the earth (since the density of the Earth actually varies a lot as a function of depth); and falling from the top of the stratosphere using an accurate model of the atmosphere (since the density of the atmosphere also varies a lot as a function of altitude). These simulations are based upon materials that already existed in the PICUP Collection (https://www.compadre.org/PICUP/), and these Excel implementations are being added to the PICUP Collection. The motivation for creating these Excel implementations is to allow these interesting topics to become accessible to students who might not have experience using a procedural programming language.

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