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Simulated Laboratories - Vpython[1] ZAKARY NOEL, Lee College — With the ever-expanding scope of technology in the physics classroom, simple programming tools such as Vpython are becoming more relevant to STEM students who benefit from the introduction of computational modeling in their learning curriculum. By becoming immersed in a fairly easy to learn coding language, students are able to visualize and simulate three-dimensional laboratory environments by combining their knowledge of the mathematical and conceptual principles of a given system. Working with vectors and 3D space allows students to better understand how a system works, and in addition allows them to draw conclusions about how the math connects with the overall behavior of the system. However, besides representing simple forces and interactions, Vpython can also be used to describe wave phenomena, illustrate derived behaviors, and model subjects such as special relativity.

[1]Supported by the Lee College physics division and Tom O'Kuma

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