THE DEMONSTRATION CORNER

Superposition Principle – Kicking the Canister
by Diana Hall, St. Charles North HS, Illinois

My students have fun predicting which canisters will get knocked down in an interference demonstration. We stretch out a long spring across the classroom floor. We then line up film canisters (or other substitutions) alongside the spring. Students predict which ones will get knocked over and which will be left standing. They must also say why.

Constructive Interference

![Diagram of constructive interference]

Due to constructive interference, these particles have increased amplitude. Therefore these canisters are knocked down.

Destructive Interference

![Diagram of destructive interference]

Due to destructive interference, these particles do not move much. Therefore these canisters stay standing.

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Submissions describing demonstrations will be gladly received by the column editor.