

NGSS Correlations

Seismic Accelerator (Astro-Blaster) SS-150

Elementary

K-PS2-1

Students can use the Seismic Accelerator to plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.

4-PS3-4

Students can use the Seismic Accelerator to design, test, and refine a device that converts energy from one form to another.

3-5-ETS1-3

Students can use the Seismic Accelerator to plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Suggested Science Idea(s)

K-PS2-1

3-5-ETS1-3

4-PS3-4

MS-PS3-5

MS-ETS1-4

HS-PS3-4

Using a Seismic Accelerator in combination with a ping pong ball creates a dramatic demonstration of energy transfer—and much more.

Middle School

MS-PS3-5

Students can use the Seismic Accelerator to construct, use and present arguments or experiments to support the claim that when the motion energy of an object changes, energy is transferred to or from the object.

MS-ETS1-4

Students can use the Seismic Accelerator to develop a model or experiment to generate data for iterative testing and modification of a proposed object, tool, or process such that an optimal design can be achieved.

High School

HS-PS3-4

Students can use the Seismic Accelerator to design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

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