Using Physical Science Gadgets & Gizmos, Grades 6–8: Phenomenon-Based Learning

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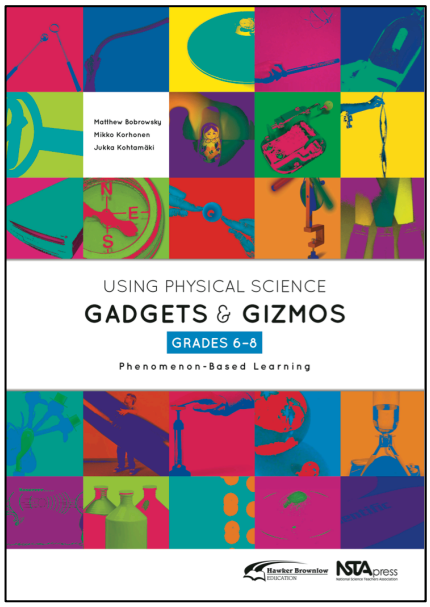

Summary

What student – or teacher – can resist the chance to experiment with Rocket Launchers, Sound Pipes, Drinking Birds, Dropper Poppers and more? The 35 experiments in *Using Physical Science Gadgets and Gizmos, Grades 6–8*, cover topics including pressure and force, thermodynamics, energy, light and colour, resonance and buoyancy.

The phenomenon-based learning (PBL) approach used by the authors – two Finnish teachers and a US professor – is as educational as the experiments are attention-grabbing. Instead of putting the theory before the application, PBL encourages students to first experience how the gadgets work and then grow curious enough to find out why. Working in groups, students engage in the activities now as a task to be completed but as exploration and discovery.

The idea is to motivate young scientists to go beyond simply memorising science facts. *Using Physical Science Gadgets and Gizmos* can help them learn broader concepts, useful thinking skills, and science and engineering practices (as defined by the Next Generation Science Standards). And – thanks to those Sound Pipes and Dropper Poppers – both your students and you will have some serious fun.

Other Resources

- *Using Physical Science Gadgets and Gizmos, Grades 3–5* (NST9129)
- *Using Physics Gadgets and Gizmos, Grades 9–12* (NST9242)
- *Uncovering Student Ideas in Physical Science, Volume 1: 45 New Force and Motion Assessment Probes* (NST1130)
- *Uncovering Student Ideas in Physical Science, Volume 2: 39 New Electricity and Magnetism Formative Assessment Probes* (NST9259)
- *Vocabulary for the Australian Curriculum: Science* (MRL6005)