

Science by Design

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Launch a new generation of students into catapult- and boat-building—plus glove- and greenhouse-making—with this newly refreshed resource. Four sets of well-loved activities have been repackaged in one convenient volume that seamlessly combines hands-on experience with intriguing engineering concepts.

Perfect for inspiring interest in STEM topics, the activities encourage high school classes to learn by doing and to successfully develop and carry out product design. The activities will get your students fully engaged in meaningful explorations of concepts such as

- buoyancy and friction (through boats);
- torsion and elasticity (catapults);
- heat transfer and insulation (gloves); and
- plant biology, thermodynamics, and energy transfer (greenhouses).

Best of all, *Science By Design* is written with the needs of time-starved teachers in mind. Each of the four units provides thorough explanations, materials lists, cost and timing estimates, and teaching suggestions. There are also ideas for assessment and student portfolios, plus lists of connections to national standards. Bonus resources called "side roads"—off-the-beaten-path investigations that let teachers and students delve further into the links between inquiry and design.

