## **Fluid Density and Impact Cavity Formation**

Monday 21 May 2018 14:45 (15 minutes)

As part of the KVIS-ISB Student Research Collaboration Program, we collaborated on designing, conducting, and analyzing research into the formation of an impact cavity when a steel ball is dropped into a liquid. The relationships between the characteristics of impact cavity formation and the density of the liquid into which the ball is dropped were investigated. Densities ranging from 0.98 g/cc to 1.63 g/cc were tested. A high-speed camera was used to record cavity formation and decay. The results showed that cavity volume, depth and diameter are all independent of density. For unknown reasons, the cavities formed at densities of 1.34 g/cc and 1.45 g/cc were significantly smaller and qualitatively different. Participation in the program increased our research and collaboration skills, critical thinking skills, and problem-solving abilities. We also benefited from increased understanding of the rigor of the research and publishing process.

## NOTE

KVIS-ISB Student Research Collaboration Program Presentation

Kamnoetvidya Science Academy (KVIS) and International School Bangkok (ISB) have established the KVIS-ISB Student Research Collaboration (SRC) Program to develop students'skills in experimental research and the journal review and publishing process. This presentation describes the published work of one group of program participants, along with their perspectives on the KVIS-ISB SRC Program.

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