

"A Theme-Based Course: Hydrogen as the Fuel of the Future"

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There have been numerous reports of capturing student interest in basic chemistry topics by connecting the topics to applications. A search of this *Journal* for the topic "applications" netted 335 references including topics such as fuels and CO₂ (1), clathrates (2), swimming pool chemistry (3), chemistry of cement (4), grease (5), and biodiesel (6). Here we report the result of basing an entire course around a single application: the question of "Is hydrogen the fuel of the future?" It was found that focusing on this relevant topic *enhanced student performance in the course by nearly a full grade level* (Figure 1). Since a search on "hydrogen fuel" in this *Journal* netted only one hit more recent than 1988 (7), (and that is a discussion of ethanol) several resources are included in the online material including laboratory exercises in support of the hydrogen question (Supplement A and topics listed in Table 1). At the end of the course, students are required to write a paper supporting their position on the hydrogen question. The paper must include data they collected in the laboratory. Examples of student papers are available in the online material.