**Introduction:** One of the biggest challenges facing the U.S. economy—and NASA and the aerospace industry in particular—is an adequate workforce that is highly trained in science, technology, engineering and mathematics (STEM) fields. During the summer of 2005, we developed and taught a novel course, which utilizes ‘space science’ as the overarching theme to provide inquiry-based, hands-on activities, which combine mathematics and science content, and is targeted primarily at pre-service teachers. The inquiry-based delivery method of the class will model good teaching practices and the content is aligned with Florida’s Sunshine State Standards. The course is associated with the highly successful Project LAUNCH [1], a grant funded K-12 teacher professional development program, which was developed jointly by the Whitaker Center for Science, Technology, Engineering and Mathematics Education at Florida Gulf Coast University and the Florida Space Research Institute (FSRI).

**Goals:** The goals of the Introductory Space Science class can be summarized as:

- Increase science content knowledge among general student body, with a special emphasis on pre-service teachers
- Cover a wide range of topics in introductory space science, including the use of models for exploration, an introduction of the instruments used by astronomers and space scientists, an investigation of extrasolar planets and an introduction to the Big Bang Theory.
- Focus on hands-on, inquiry-based activities wherever possible. The amount of ‘lecture’ time was held to a minimum.
- Improve and sustain knowledge about and interest in space programs.
- Increase the use of inquiry-based teaching methodologies—in both formal (pre-service teachers) and informal (general student body) settings.

**Implementation:** The original Project LAUNCH curriculum is delivered during a two week professional development summer institute. The curriculum utilized for the Introductory Space Science class presented here is based on that developed for Project LAUNCH, but had to be modified in several ways:

- Project LAUNCH includes several pedagogy pieces. Since the class is designed as a General Education Science class, not an education class, we had to remove most—but not all of these activities. Activities for which the pedagogy was an integral part had to be rewritten.
- To address the target audience, instead of only math and science teachers, our audience consisted mainly of non-science major college freshman.

**Preliminary Results:**

- Class was effective in illustrating an inquiry approach to science and mathematics.
- Students responded well to the inquiry approach and had significant gains in the pre/post tests.
- Student assessment of class was overwhelmingly positive.

**Future Work & Expansion:**

- A detailed analysis of the pre/posttest results is under way. This together with a comprehensive review of the class evaluations will be used to assess the effectiveness of specific activities.
- Compare the outcome of the class taught to University students to the Project LAUNCH summer institutes with participating middle and elementary school math and science teachers.


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