

## Invitation to Participate in NASA's Stardust NExT Education Materials Evaluation

You are invited to participate in an exciting pilot study of Stardust NExT Education and Public Outreach (E/PO) learning materials. We are looking for middle and high school teachers who would be willing to use one or more of the Stardust NExT activities with students during a one week period in Spring 2010.

### What is Stardust NExT Education and Public Outreach?

Stardust NExT (<http://stardustnext.jpl.nasa.gov/>) is a NASA Discovery mission that will utilize the existing Stardust spacecraft to flyby comet Tempel 1 and observe changes since NASA's Deep Impact mission visited in 2005. Stardust-NExT will provide NASA with a first-time opportunity to compare observations of a single comet made at close range during two successive perihelion passages, at low risk and low cost.<sup>1</sup>

For this mission, a team of highly-qualified Education and Public Outreach (E/PO) providers has developed a variety of informational learning materials for the general public, as well as formal and informal education audiences based on the science and engineering necessary for the mission to be successful.

### What can you tell me about the Stardust NExT education activities?

The Stardust NExT E/PO team offers a variety of online supplementary science resources for formal and informal education audiences that are aligned to national standards and allow students of all ages to engage in inquiry-based, hands-on learning activities. Educators and students can access the Stardust NExT activities and other learning resources on the Stardust NExT Web site. There are three activities<sup>2</sup> being evaluated in this study:

1. [Extreme Navigation](#) is a classroom activity designed for students in grades 5-8. In this activity, students take on the roles of a navigation team, spacecraft, comet, Earth, and Sun to simulate how mission planners design a spacecraft/comet rendezvous.
2. [Seeing in 3-D](#) is intended for students in grades 5-8. As a result of this educational activity, students will learn how to use 2-D images to create 3-D images. They will gain a better understanding of visible images retrieved from distant spacecrafts and what mission scientists and engineers do to make sense of them. Using this technique, students will study images taken of comet Tempel 1 in 2005 as well as images from other NASA missions.
3. [In Comet Lingo Bingo](#), student teams will participate in a game in which they answer questions of varying complexity highlighting pertinent vocabulary and concepts relating to comets and their NASA missions. Their reference? *The Comet Chronicle*, an entertaining resource written using a newspaper tabloid format. The combination of Comet Lingo Bingo and *The Comet Chronicle* is designed to engage students in developing a thorough and flexible knowledge of comet science, as well as the NASA missions of Discovery that are helping scientists and engineers expand that knowledge.

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<sup>1</sup> [http://stardustnext.jpl.nasa.gov/mission/mission\\_details.html](http://stardustnext.jpl.nasa.gov/mission/mission_details.html)

<sup>2</sup> <http://stardustnext.jpl.nasa.gov/education/index.html>

## **Who is conducting the Stardust NExT study and why?**

In order to determine the effectiveness of its education materials, the Stardust NExT EPO team has contracted with Magnolia Consulting, LLC, an external, independent, and experienced consulting firm in education and public outreach evaluation (for more information visit [www.magnoliaconsulting.org](http://www.magnoliaconsulting.org)).

The purpose of the study is to address the following key evaluation questions:

1. How do teachers use the activities with their students?
2. What are teachers' perceptions of the quality and utility of the activities and what are their suggestions for improvement?
3. What are student perceptions of and experiences using the materials?

The lead evaluator for this study is Dr. Stephanie Baird Wilkerson of Magnolia Consulting. If you are interested in participating in the study, please contact Dr. Wilkerson by email at [Stephanie@magnoliaconsulting.org](mailto:Stephanie@magnoliaconsulting.org) or by phone at 877.967.5540.

## **How long is the study and when will it be conducted?**

The length of your participation in the study will depend on which activities you choose to evaluate. Therefore, implementation and study duration will vary from one day to one week. The study will be conducted during Spring 2010 with consideration of your current curriculum and spring testing schedule.

## **What will be expected of participants?**

Educators will be expected to participate in three data-collection efforts after using each activity:

1. an online educator feedback survey,
2. a student survey, and
3. a brief follow-up phone interview.

All data collected from this study will be kept confidential and no teacher or student names or identifying information will be reported.

## **What are the benefits of participating in the Stardust NExT study?**

The Stardust NExT study is an exciting opportunity for educators and students to participate in timely, relevant, and engaging supplemental space science activities. Participating educators will receive a mission sticker for each student and a certificate of appreciation for their time and contributions to the study.

## **Who do I contact if I want to participate or if I have any questions?**

Interested individuals need to respond to this invitation in order to coordinate your participation and involvement in the study. If you have any questions, please contact Dr. Stephanie Baird Wilkerson by phone at 877.967.5540 or by email at [stephanie@magnoliaconsulting.org](mailto:stephanie@magnoliaconsulting.org).

**We look forward to hearing from you!**