FLUOR®

Dear Local Fluor Community Partners:

Fluor is a global engineering, procurement and construction firm that designs and builds some of the world's most complex projects, often in remote locations, across six continents. Every year, Fluor volunteers across the globe share with students our enthusiasm for math and science, how it applies to everyday life and details on career opportunities in engineering. For nearly 50 years, one of the ways we've done this is by celebrating Engineers Week, a time when tens of thousands of companies and volunteers focus on raising public understanding and appreciation of engineers' contributions to society.

This year, I am excited to invite you to join us in celebrating Engineers Week by participating in the Fluor Engineering Challenge. The inaugural Fluor Engineering Challenge, "Moving on the Moon", is available now on www.sciencebuddies.org/fluor-challenge. This Fluor Challenge was originally developed by Fluor engineers in our Houston office as part of Fluor's annual company-wide Engineers Week employee competition. With the help of an expert team of scientists and educators at Science Buddies, the Fluor Engineering Challenge allows us to share a truly hands-on and highly engaging experience designed specifically for middle and high school students just in time for this year's Engineers Week celebrations!

To help add to the fun, we're inviting schools and organizations that serve the Houston, Lamar Consolidated and Fort Bend County School Districts (collectively referred to as Houston in this toolkit) to complete this year's challenge and submit their results via a special Houston Fluor Challenge link on the Science Buddies website between February 22 and March 15, 2015. Fluor will award a $2,500 grant to the school or organization whose middle or high school team posts the winning score for Houston. Additionally, every participating team will be entered into Fluor's global random drawing to win a $1,500 grant for their qualifying community organization or school.

To learn more, please join us for a 45 minute webinar on Thursday, February 12 at 3:00pm Pacific Time/6:00pm Eastern Time where Science Buddies will explain how to take advantage of this unique opportunity. The attached toolkit will help make your participation simple and easy. Included you will find:

- **Project Overview and Timeline (pages 2-3)**
- **Roles and Responsibilities for Local Community Partners (page 3)**
- **FAQs on the Fluor Engineering Challenge (pages 4-5)**
- **Social Media Posts and Helpful Webpage Links (page 6)**
- **Sample Media Release / Newsletter Story (page 7)**

Fluor is thrilled for this opportunity to share the fun we enjoy every year as we celebrate the great profession of engineering. We hope you and your students find this project to be as enjoyable as we do, both during Engineers Week and throughout the year. For questions, please contact fluorchallenge@sciencebuddies.org. Best of luck to you and your students!

Sincerely,

Barbara Jones
Senior Manager, Community and Public Affairs, Houston Office
Fluor Corporation

Fluor Engineering Challenge
2015 Houston Toolkit

Project Overview and Timeline

Each year of the Fluor Engineering Challenge will adapt past Fluor Friendly Competitions into engaging, student friendly activities. The inaugural 2015 Fluor Engineering Challenge is based on the "Moving on the Moon" challenge created by Fluor's Houston office, and features *The Balloon-Powered Car Challenge*. This project uses materials that are readily available. All Fluor Challenge instructions are available on the Fluor Engineering Challenge Landing Page at www.sciencebuddies.org/fluor-challenge. For questions or concerns, please contact fluorchallenge@sciencebuddies.org.

Scoring

As a teacher, educator or adult mentor, you will use the scoring instructions and tools that are provided on the Fluor Challenge Landing Page, which we will review in detail in the Webinar on February 10th. It will be up to you or another responsible adult at your organization to help the students organize and complete the Fluor Challenge, and submit their results via a special Houston Fluor Challenge link at http://www.sciencebuddies.org/fluor-challenge/local between February 22 and March 15, 2015.

Fluor Engineering Challenge Winners

Science Buddies will collect scores and determine the Houston Fluor Challenge winner, whose qualifying organization or school will be awarded a Fluor Engineering Challenge Prize of $2,500. To qualify, you must be classified as a U.S. 501(c)3 public charity, a public primary or secondary school, or an international non-profit, non-government charity with a valid registration number. If your organization is the winner, we would like to hold a special check presentation at your site where a Fluor representative will celebrate your accomplishment. If you win, you will receive a specially developed toolkit to help you plan this event in partnership with the Houston Fluor Community Relations Department.

In addition, your organization is eligible for a $1,500 award that will be made by random drawing from all organizations who participate around the globe, not just those in your area. The $1,500 drawing is open to all Science Buddies K-12 students. By submitting your results as outlined above, you will be automatically entered in the global random drawing.

Project Timeline

Thursday, February 12

45 minute Webinar at 3:00pm Pacific Time/6:00pm Eastern Time for local teachers and community partners. The Webinar with cover the timeline and specifics of implementing the Fluor Challenge with students. Please email fluorchallenge@sciencebuddies.org to sign up for the webinar. You will receive an email back with all the information you'll need to participate in the Webinar. Details will also be available on the Science Buddies website at http://www.sciencebuddies.org/fluor-challenge/local, and the Webinar will be archived for viewing later in case you can't attend live.

Project Timeline, cont.

Sunday, February 22 – Sunday, March 15 Fluor Engineering Challenge window.
All challenges MUST be performed and reported during this window in order to be eligible for $2,500 Fluor Engineering Challenge Prize AND the $1,500 random award. *Deadline for entries is 12:00 midnight Pacific Time on Sunday, March 15.*

Tuesday, March 17
Winners will be notified via email. Winners will receive event toolkit and will begin planning check presentation event in partnership with the local Fluor Community Relations Manager.

Wednesday, March 25 or Thursday, March 26
Dissemination of $2,500 Fluor Engineering Prizes at celebratory event to be held at your school or organization.

Roles and Responsibilities for Local Community Partners

1) Register for the Fluor Engineering Challenge Webinar (to be held at 3:00pm Pacific Time/6:00pm Eastern Time on Thursday, February 12) by sending an email to fluorchallenge@sciencebuddies.org. The Webinar will also be archived at www.sciencebuddies.org/fluor-challenge/local for viewing later in case you can't attend live.

2) Complete the Fluor Challenge with your students during the Challenge window, February 22-March 15.

3) *Let the world know how your students did!* Visit the Science Buddies Facebook page at www.facebook.com/ScienceBuddies or send a tweet using #FluorChallenge or @FluorCorp to let people see your photos, scores, and interesting Challenge solutions.

4) Go to the Science Buddies website to submit your scores using the link to your specific location at www.sciencebuddies.org/fluorengineeringchallenge/local by midnight Pacific Time on March 15.

5) In addition to competing for the local $2,500 prize, your organization will also be eligible for the $1,500 USD award that will made by random drawing from all organizations who participate around the globe, not just those in your area. By entering into the Houston Fluor Challenge, you will be automatically entered in the global random drawing.

6) If you are the winner of the Houston Fluor Challenge, partner with your local Fluor Community Relations Manager to hold a check presentation celebration at your school or organization on March 25 or 26, 2015. Winners will receive a specialized toolkit to help them organize the event and message it to the local media.

FAQs on the Fluor Engineering Challenge

1.) ***Do I have to follow the project exactly as outlined to be eligible for the grant?***
Yes. The project procedures for Balloon-Powered Car Challenge are clearly laid out in the Procedures Tab of the Project Idea on the Science Buddies website, and will also be reviewed in detail during the Webinar on February 12.

2.) ***Can we do the project later in the year?***
You are welcome to do the project later in the year, but in order to be considered for the Fluor Engineering Challenge prizes, you will need to complete the Fluor Challenge and submit your results by midnight Pacific Time on Sunday, March 15.

3.) ***What kind of credit should I give Fluor and Science Buddies?***
When referring to the project, please use the term Fluor Engineering Challenge and mention that the challenge was created by Science Buddies. We also encourage you to share details about the fun you had on the Science Buddies Facebook page at www.facebook.com/ScienceBuddies or by sending a tweet using #FluorChallenge or @FluorCorp.

4.) ***Will Fluor Cares Volunteers be available to assist us?***
As you can imagine, our Fluor Cares volunteers assist with many activities during Engineers Week, but are only able to directly engage a limited number of students. That's why we are so pleased to offer the Fluor Engineering Challenge to students throughout Houston. And if your school or organization submits the top score and wins the $2,500 award or is the lucky winner of the $1,500 random drawing, representatives from Fluor will personally congratulate your students and present a check to your organization.

5.) ***Do I need to submit results on my students' scores to be eligible for the $1,500 random drawing?***
No, you do not. By submitting your scores following the procedures outlined in this kit, you will be automatically entered into the $2,500 competition, plus the $1,500 drawing.

6.) ***What are the qualification requirements to receive the $2,500 or $1,500 award?***
Benefitting organization must be classified as a U.S. 501(c)3 public charity, a public primary or secondary school, or international non-profit, non-government charity with a valid registration number. Any organization that serves the Houston, Fort Bend and Lamar Consolidated School Districts is eligible to participate in the Houston Fluor Challenge.

7.) ***Can I submit results for more than one team?***
We request that you submit the top 3 scores from your organization. We will also ask for the total number of students who participated. This will help us to learn more about how students are interacting with the Challenge.

8.) ***What standards were applied to adapt this project for the classroom?***
These materials were created using the Engineering Design Process, which is a critical part of the Next Generation Science Standards. For more information, see the Science Buddies Engineering Design Project Guide and Helping Teachers Approach Next Generation Science Standards.

FAQs on the Fluor Engineering Challenge, cont.

9.) ***Why is Fluor offering this?***
Fluor has been celebrating Engineers Week for 50 years, and through the Fluor Engineering Challenge we are excited to provide a new tool for students to perform a real-world, engineer-designed project in their local classrooms or community organizations. The Fluor Engineering Challenge uses the Engineering Design Process and can help teachers adhere to the new Next Generation Science Standards.

10.) ***Can elementary school students compete?***
Only students in middle and high school can compete for the $2,500 Houston Fluor Engineering Challenge Prize. However, any K-12 student or team who completes the Fluor Challenge is eligible for entry into the $1,500 random drawing award.

11.) ***What will be expected of my school/organization if one of our teams win?***
You will be notified via email on March 17 if you are the winner of the Houston Fluor Challenge. At that time, you will receive a special toolkit to help you organize a check presentation celebration on March 25 or 26, in partnership with the Houston Fluor office.

12.) ***Can we hold the project before February 22?***
Not if you want to submit your scores to be eligible for the $1,500 random drawing and the $2,500 Houston Fluor Engineering Challenge Prizes. The Fluor Challenge window is February 22 – March 15.

13.) ***What other locations will be competing?***
Four different Fluor locations have been selected to compete for this year's Fluor Engineering Challenge Prizes of $2,500. One $2,500 prize will be given to a school or organization in each of these locations, which are: all of Canada (through the Calgary office); Greenville, South Carolina; Orange County, California; and Houston, Texas. The random drawing for $1,500 is open to students K-12 across the globe.

14.) ***What are the basic principles that are explored with this year's Fluor Challenge?***
This year's Fluor Challenge will explore the physics of how a balloon-powered car works, providing opportunities to study Newton's third law of motion (including potential energy, kinetic energy, and reaction force).

15.) ***I've noted that the toolkit includes suggested posts for social media. Can we include pictures of the students in our posts?***
Yes, we love seeing pictures of students and their projects. We ask that when posting to social media, you adhere to your organizations' individual policies on posting student photos. See page 6 of this toolkit for more suggestions on social media engagement.

16.) ***Who can I contact if I have any questions or concerns?***
For questions or concerns, please contact fluorchallenge@sciencebuddies.org.

Social Media Engagement



Share your enthusiasm for the Fluor Engineering Challenge through Twitter or the Science Buddies Facebook page at www.facebook.com/ScienceBuddies. Please be sure to use the special Twitter handle we have created for this project, #FluorChallenge. Fluor's Twitter account is @FluorCorp.

Sample Posts

- [Insert name of your school or organization] is celebrating Engineers Week by taking the 2015 Fluor Engineering Challenge. Best of luck to [insert name of your school or organization] students, and all competitors!
- [Insert name of your school organization] students are designing a balloon-powered car for a chance to win a grant for our [insert word "school" or "organization"] through the 2015 Fluor Engineering Challenge. Thanks to our friends at Fluor for a fun engineering challenge designed by your own engineers!
- Congratulations to the [insert name of team in picture] team at [insert name of your school organization]! They are competing to win a grant for [insert name of your organization] and just earned a score of [insert score] on the 2015 Fluor Engineering Challenge by building an awesome balloon-powered car.
- We are proud of the [insert name of team in picture] team at [insert name of your school organization]! They've designed a very cool balloon-powered car for the 2015 Fluor Engineering Challenge. Thanks for the chance to compete for a grant for our [insert word "school" or "organization"], Fluor!

Helpful Webpage Links

- Fluor Engineering Challenge Landing Page ***for General Public Participants*** on Science Buddies: http://www.sciencebuddies.org/fluor-challenge
- Fluor Engineering Challenge Landing Page ***for Beta Market Participants*** on Science Buddies: http://www.sciencebuddies.org/fluor-challenge/local
- The Fluor Design a Balloon-Powered Car Challenge on Science Buddies: http://www.sciencebuddies.org/science-fair-projects/project_ideas/Phys_p099.shtml
- Engineering Design Project Guide: http://www.sciencebuddies.org/science-fair-projects/engineering-design-process-guide.shtml
- Comparing the Engineering Design Process and the Scientific Method: http://www.sciencebuddies.org/engineering-design-process/engineering-design-compare-scientific-method.shtml
- DiscoverE: http://www.discovere.org/
- Fluor Corporation: http://www.fluor.com/sustainability/community/Pages/default.aspx

To be printed on charity letterhead or insert charity logo here.
This release is pre-approved by Fluor.

Fluor is Helping Students at [LOCAL SCHOOL OR ORGANIZATION NAME] Celebrate Engineers Week (or Build Real-World Engineering Solutions)

CITY, STATE (DATE) – Students at [local school or organization name] are celebrating Engineers Week by taking the 2015 Fluor Engineering Challenge. Using limited materials and their imaginations to build the strongest balloon-powered car possible, students are designing their cars, loading them up with pennies, and testing them across a 30 inch corridor to the finish line. They are joining with teams from all over Houston to compete for the Fluor Engineering Challenge Prize of $2,500.

The Fluor Engineering Challenge helps educators meet the latest standards for science and engineering literacy. This year's Fluor Challenge, "Moving on the Moon," was originally developed by engineers from Fluor's Houston office as part of the global company's annual employee competition held in celebration of Engineers Week. With the help of an expert team of scientists and educators from Science Buddies, this employee competition has been adapted to provide students the opportunity to experience how real-life engineers design solutions, and to show students first-hand how fun engineering can be.

"The annual Fluor Engineering Challenge, designed by and for employees, has been an important part of Fluor's 50 year tradition of celebrating Engineers Week" said Glenn Gilkey, executive vice president of Human Resources for Fluor Corporation, who is a licensed professional engineer in the state of Texas. "Thanks to our innovative partnership with Science Buddies, we're pleased to be able to share this fun and engaging resource with students across the globe."

<<Insert details on your local event and a quote from your local spokesperson>>

The winners for this year's Fluor Engineering Challenge Prize will be announced the week of March 23. To learn more about this year's Fluor Engineering Challenge and explore other project ideas adapted from previous Fluor challenges, visit visit www.sciencebuddies.org/fluor-challenge.

Fluor is a global engineering, procurement and construction firm that designs and builds some of the world's most complex projects, often in remote locations, across six continents. Fluor is committed to helping communities address their toughest and most challenging issues, with a focus on science, technology, engineering, and math (STEM) education for middle and high school students and their teachers. In 2013 alone, more than 900,000 hours of STEM training and enrichment were made possible through Fluor's financial and employee volunteer support of community organizations. To learn more visit www.Fluor.com.

About Fluor

Fluor Corporation is a global engineering and construction firm that designs and builds some of the world's most complex projects. The company creates and delivers innovative solutions for its clients in

engineering, procurement, fabrication, construction, maintenance and project management on a global basis. For more than a century, Fluor has served clients in the energy, chemicals, government, industrial, infrastructure, mining and power market sectors. Headquartered in Irving, Texas, Fluor ranks 109 on the FORTUNE 500 list. With more than 40,000 employees worldwide, the company's revenue for 2013 was $27.4 billion. Visit Fluor at www.fluor.com and follow on Twitter @FluorCorp.

About [Local School or Organization] [insert boilerplate]

For further information contact:
[Local School or Organization]
[insert contact information]

Fluor
Eric Krantz, 281.263.6030, eric.krantz@fluor.com