

INTERSTELLAR

NOVEMBER 7

DEAR EDUCATORS AND YOUTH ORGANIZATION FACILITATORS,

Welcome to the world of *Interstellar*, the fascinating new movie by director Christopher Nolan. *Interstellar* is based on the scientific theories of renowned physicist Kip Thorne. The movie depicts a heroic voyage to the farthest borders of our scientific understanding.

"The film *Interstellar* takes us to the stars with imagination and encourages us to look into the future, and the *Interstellar* study guide can help make that future a reality. It's an engaging teaching tool to inspire a new generation of students to value science and seek careers in science, technology, engineering, and even space exploration. These careers can introduce them to a universe of exciting possibilities."

— *Dr. June Scobee Rodgers*

Ph.D., Founding Director of Challenger Center for Space Science Education; Educator; Author and Speaker

This program offers activities and resources for high school science students, out-of-school high school **STEM** programs, and college science students, using the movie and its concepts as a basis for in and out-of-school classes and programs to explore and investigate scientific, mathematic, and humanitarian concepts of a changing world that will challenge students' understandings and beliefs and encourage them to think deeply about things they may never have thought of until this point.

The movie features an all-star cast, including **Matthew McConaughey**, **Anne Hathaway**, **Jessica Chastain**, and **Michael Caine**.

The activities in this program challenge students to learn about one of the many mind-expanding concepts explored in the movie—relativity—and offer flexibility to teachers and youth group facilitators as they introduce the concept to students. Activities are aligned to **NSTA Next Generation Science Standards** and **Common Core Math Standards** where applicable for ease of implementation in existing curricula. The activities can be done individually or in groups, and for maximum impact, should be completed prior to viewing the movie.

The website offers extensions of the program experience with links to resources to reinforce the lessons, along with a digital trivia game to test and stretch student understanding.

The movie opens in theaters on **November 7, 2014**, and we encourage you and your students to see it after completing these activities in order to fully explore the rich and dynamic world of *Interstellar*.



Target Audience

- High school science students and STEM programs
- Out-of-school high school science and STEM groups, classes, and programs
- College natural and physical science students
- Science centers, museums, and camps
- High school PTAs

Group Sales

Experience *Interstellar*—Plan Your Movie Event Today

Private advance screening events available for educators and student groups starting **Monday, November 3, 2014**.

**For pricing and additional details: 877-GRP-7878
or Interstellar_GroupSales@PARAMOUNT.COM
Visit www.interstellarmovie.com/groupsales**

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PROGRAM OBJECTIVE

The goal of this program is to introduce students to accepted and proposed theories and concepts of relativity in the context of a movie that will bring the content to life and engage students with multiple scientific, mathematic, and humanitarian concepts that will challenge their existing understandings.

COMPONENTS

- Program website, including:
 - » This teacher/facilitator guide
 - » Sections for teachers/facilitators, parents/PTAs, and students in grades 9-12 and college
 - » Link to movie trailer
 - » Movie field trip guide for parents/PTAs/administrators
 - » 3 educational activities aligned to NSTA Next Generation Science Standards and related Common Core State Standards
 - All activities are available in downloadable PDF format
 - A resource section on the website encourages further exploration of activity concepts
 - » An interactive digital trivial game, at www.interstellar-education.com, ideal for use on interactive whiteboards and computers
- Movie ticket sweepstakes for teens/students
- Poster, with movie information on one side and reproducible print versions of three educational activities on the other

HOW TO USE THE PROGRAM

The program is designed to be flexible, so these guidelines are merely suggestions—feel free to adjust them to meet your needs.

1. Have teens register for a chance to win free movie tickets!
2. Then, have teens complete the activities and discuss the questions they raise. It's okay if kids don't have all the answers—the program and movie are as much about raising questions as they are about answering them. These activities will lay the groundwork for concepts that the movie will further explore.
3. **Go see the movie!** After watching the movie, ask kids the following:
 - **What scientific, mathematic, and humanitarian questions did the movie raise?**
 - **What did you learn about relativity, or what questions do you have?**
 - **What was the importance of gravity in the movie?**
 - **What are your thoughts on time travel and wormholes after seeing the movie?**
 - **Do you think it's possible to sustain life on planets other than Earth? Why?**
 - **What challenges are presented in the movie that you can relate to? Explain.**
 - **What challenges are presented in the movie that you find hard to relate to? Discuss.**
 - **How has the movie changed your understanding of science, space-time, and what's important in our day-to-day lives?**
4. Encourage kids to play the digital trivia game to test their Earth and space-science mettle in a fun way.



STANDARDS USED FOR ALIGNMENT

The activities in this program have been based on and aligned to NSTA Next Generation Science Standards and Common Core State Standards in Mathematics for high school students.

Each activity in this program will enhance students' understanding of the concepts fleshed out in the movie, and the activities are arranged in order to build from a basic to a more complex understanding. Watching the movie will raise questions and in many cases provide answers that can lead to meaningful discussions and explorations of student understandings of space science, time, mathematical concepts, and humanitarian issues.

