

NATIONAL GEOGRAPHIC ENTERTAINMENT  
PRESENTS

# WILDEST WEATHER

IN THE SOLAR SYSTEM

YOU'LL BE GLAD YOU  
LIVE ON EARTH.



NATIONAL GEOGRAPHIC ENTERTAINMENT PRESENTS "WILDEST WEATHER IN THE SOLAR SYSTEM" A DAY'S END PICTURES PRODUCTION NARRATED BY MICHAEL TRUCCO  
WRITTEN BY LAWRENCE GAY EXECUTIVE PRODUCER LISA TRUETT PRODUCED BY JIM DURR VISUAL EFFECTS SUPERVISOR ANTOINE DURR EDITED BY ANDY YAMADA MUSIC COMPOSED BY CATALIN MARIN SOUND DESIGN BRIAN EIMER



IN PARTNERSHIP WITH **LOCKHEED MARTIN** 

[WWW.WILDESTWEATHERSHOW.COM](http://WWW.WILDESTWEATHERSHOW.COM)

# WILDEST WEATHER IN THE SOLAR SYSTEM

## Educator Resources Overview

### About the show

Join National Geographic on a spectacular journey to witness the most beautiful, powerful, and mysterious weather phenomena in the solar system. From a storm the size of a 100-megaton hydrogen bomb, to a 400-year-old hurricane, to a dust tempest that could engulf entire planets, you'll be glad you live on Earth!

### Education Resources

National Geographic Education has developed activities to bring students grades 2-8 content about the Earth-sun connection and extreme weather on Earth and other planets in our solar system to your classroom. Explore this collection to find hands-on multimedia activities, worksheets, lessons, interactive whiteboard and more!

### Available Educator Resources

- **Classroom Posters and Teacher Guides**
  - The inner and outer planets have some of the wildest weather in our solar system. Use the teacher guides to engage students with two posters that are perfect for the classroom.
  
- **Online Lessons and Activities**
  - Hands on Activities for Grades 3-8
    - Suite of 6 activities for use in the classroom and beyond. Standards-based.
  
  - Lessons for Grades 2-5
    - Students investigate extreme weather on Earth and other planets, learn about instruments used to measure weather, and design a space probe that will gather weather information on a planet.
  
  - Lessons for Grades 6-8
    - Students explore the difference between weather and climate, analyze environmental conditions on Earth and other planets, and design a probe that can withstand extreme weather on a planet.
  
- **Interactive Whiteboard**
  - Learn about the solar system and the wicked weather in the solar system with interactive content for Promethean whiteboards.
  
- **Companion Game**
  - Build space probes that will withstand the extreme weather conditions on each of our solar system's planets. Learn about weather and space while you play this online game!
  
- **Image galleries, videos and interactives**
  - Multi-media resources complement the *Wildest Weather in the Solar System* activities and lessons. Additional videos and interactives can be found at <http://beta.education.nationalgeographic.com/education/program/wildest-weather-solar-system/>

Visit [www.wildestweathershow.com](http://www.wildestweathershow.com) for links to all resources  
and to find a theater in your market.

# WILDEST WEATHER IN THE SOLAR SYSTEM

## COMPANION POSTERS AND TEACHER GUIDES

Use visual reference to enhance your solar system lessons with these classroom posters.



Contact your theater for a print copy of this poster!

An electronic copy of the "Saturn's Wildest Weather" poster can be found at <http://images.nationalgeographic.com/wpf/media-content/file/Saturns-Wildest-Weather-2pg-cb1287075737.pdf>



An electronic copy of the "Inner and Outer Planets" poster can be found at [http://images.beta.education.nationalgeographic.com/wpf/media-content/file/InnerOuter\\_Planets-cb1315428501.pdf](http://images.beta.education.nationalgeographic.com/wpf/media-content/file/InnerOuter_Planets-cb1315428501.pdf)

Use the companion Teacher Guide found in the appendix and online at: [http://images.beta.education.nationalgeographic.com/wpf/media-content/file/PioneerPathfinder\\_TG\\_Grades2\\_5-cb1315428602.pdf](http://images.beta.education.nationalgeographic.com/wpf/media-content/file/PioneerPathfinder_TG_Grades2_5-cb1315428602.pdf) to extend classroom learning.

# WILDEST WEATHER

## IN THE SOLAR SYSTEM

### MULTI-MEDIA STEM-BASED RESOURCES

#### Online STEM Activities

The online education resources, created to complement the themes of *Wildest Weather in the Solar System*, are standards-based materials developed to engage students in STEM concepts. The activities help bring content about extreme weather on Earth and other planets in our solar system to the classroom.

Activities and lessons are available for grades 2-5 and 6-8. Each activity contains all the related content (photos, worksheets, links) for that activity, or a teacher is able to mix and match from the individual resources to customize their own curriculum.

Activity themes include:

- Extreme Weather on Earth
- Extreme Weather in Our Solar System
- Measuring Weather
- Space Probes
- Design a Space Probe

The online resources can be found at

<http://beta.education.nationalgeographic.com/education/program/wildest-weather-solar-system/>

**Activity: Extreme Weather in Our Solar System (Grades 2-5)**

Our solar system is the sun and all of the objects that travel around it. Those objects include planet Earth, as well as Mercury, Venus, Mars, Jupiter, Saturn, Uranus, and Neptune.

**ACTIVITY TITLE:** Extreme Weather in Our Solar System

**GUIDING QUESTION:** What is the weather like on other planets? What odd weather might there be on other planets?

**GRADE LEVEL:** 2, 3, 4, 5

**TIME:** 45 minutes

**DIRECTIONS:**

- Compare ways of investigating weather on Earth and on other planets in our solar system. Explain to students that scientists and meteorologists investigate weather on Earth in several ways.
  - They measure weather with thermometers and other tools.
  - They use the weather from satellites above Earth's atmosphere.
  - They use photography and video to capture images of major weather events.
- Ask, "What is weather like on other planets? How do you think scientists investigate weather on other planets?" Have students draw their ideas about what weather is like on other planets and how scientists investigate it. Then ask students that they will explore the answers to these questions in this activity.
- View and discuss the video "Solar System 101."

Show students the National Geographic video Solar System 101. Ask students what types of information about the planets might help us understand what the environments are like on each planet. Write students' ideas on...

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Sample Activity

**Photo Gallery: Extreme Weather on Earth (Grades 2-5)**

**Tornado**

Photograph by Gordon Poirer

Tornadoes are a type of extreme weather. Tornadoes include clouds, strong wind, rain, and sometimes hail.

**Share**

- Facebook
- Twitter
- Google Buzz
- Digg
- StumbleUpon
- Send to a Friend

**Teachers!** Win a Visit From An Astronaut for Your Class. Enter the Space Probe Challenge!

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Companion Photo Gallery

# WILDEST WEATHER IN THE SOLAR SYSTEM

## Interactive Whiteboard

The student benefits of interactive whiteboard lessons are numerous and the ability to integrate videos, photography, interactive diagrams and more create a robust learning experience. In their daily lives, students are consuming more media than ever before. By tapping into a medium that excites them, we see a positive impact on material retention.

Three interactive whiteboard lessons are available to complement the suite of resources developed for this program tying in the themes of weather in the solar system as well as probe development and relevant instruments. Photos and videos embedded within the lessons allow students to see a probe's launch rather than just reading about it.

Interactive whiteboard lessons are developed for Promethean ActivBoards and are free to teachers.

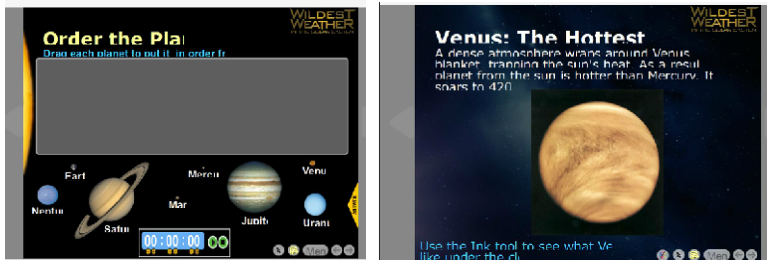
## Saturn's Wildest Weather

<http://www.prometheanplanet.com/en-gb/Resources/Item/66259/a-national-geographic-lesson-saturn%E2%80%99s-wildest-weather>



## Wildest Weather in the Solar System

<http://www.prometheanplanet.com/en/Resources/Item/109342/wildest-weather-in-the-solar-system>



## Earth's Magnetospheres and Auroras

[http://beta.education.nationalgeographic.com/education/multimedia/earths-magnetosphere-and-auroras/?ar\\_a=1&ar\\_r=999](http://beta.education.nationalgeographic.com/education/multimedia/earths-magnetosphere-and-auroras/?ar_a=1&ar_r=999)



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## COMPANION GAME

Inspired by *Wildest Weather In the Solar System*—National Geographic’s original production for planetariums—*Wildest Weather* the game takes you into the future to lead a crucial mission on the hypothetical space probe, Erion. Choose your materials carefully and build probes that will withstand the extreme weather conditions on each of our solar system’s planets. If you build incorrectly, your probes will be destroyed!

Play now and become the first hero to conquer some of the universe’s wildest weather.

<http://movies.nationalgeographic.com/movies/wildest-weather/game/>



# WILDEST WEATHER IN THE SOLAR SYSTEM

## APPENDIX

A. Teacher Guide to use as companion to “Inner and Outer Planets” Classroom Poster

**Your feedback is important to us!**

**After reviewing the resources please complete a short survey to help us better the materials we provide.**

<https://www.surveymonkey.com/s/Z58T9FM>