

Explorer Classroom Event Guide: Grades 4-8
The Scale of Planetary Systems | Munazza Alam
September 30, 2021, 10:00AM & 2:00PM Eastern Time

Help your students get the most out of their Explorer Classroom experience by choosing one or more of the activities from each section below:

FIRST THINGS FIRST

Register here! Registering your class gives you a chance to be featured on screen with the Explorer, a shout out during the intro, and helpful email reminders before the event. Remember, the further in advance you register the more likely you are to be selected to be onscreen.

BEFORE THE EVENT

Research the Explorer and pick 1 or more activities to complete before the event date:

- ❑ **Read [this article](#)** about astrophysicist Munazza Alam to learn about her work and what inspired her to study the cosmos. **Watch [Star Search](#)** (4:21) to see Munazza in action as she searches beyond our solar system for signs of life. *Discuss:* What tools does Munazza use to conduct her work? What questions do you have about Munazza's work?
- ❑ **Read [this article](#)** about planets, large objects that orbit a star. *Discuss:* How does a planet form? What are the names of the planets in our solar system? What is an exoplanet?
- ❑ **Choose** an activity from [this list of ideas](#) related to the September 2021 issue of *National Geographic Magazine*, which features an article and poster providing scientists' latest understanding of our solar system, especially the small objects discovered in the far reaches beyond Pluto.
- ❑ **Brainstorm questions for the Explorer** Help your learners revise their questions, making sure they are specific and are asking only one thing. You may need to work together through a few drafts to arrive at a solid final question. Consider using question words like **WHERE, WHAT, WHEN, HOW, WHY, & WHO** to brainstorm a long list of questions, then choosing your favorites from the list to ask the Explorer.

DURING THE EVENT

Pick 1 organizer to help you out during the event:

- ❑ **[Two-Column Chart](#)**: Print copies or ask your students to draw their own two-column chart. Have your students write things they are learning in one column and in the other, write questions about that information, or draw something related to it.
- ❑ **[Cause-and-Effect Diagram](#)**: Have your students use this organizer to identify what happened (effect) and why it happened (cause).
- ❑ **Your list of questions**: write your list of questions you came up with for the explorer on the board, or print copies of the list for the class. As the Explorer presents, see how many answers your class can find!

AFTER THE EVENT

Choose from the discussion questions and reflection activities to process the event:

DISCUSSION QUESTIONS

1. What was your favorite part of today's talk? Why?
2. What was one new thing you learned during the Explorer Classroom event you didn't know before?
3. Are there any similar issues in your area?
4. What skills, tools, or knowledge do you think are needed to explore?
5. What do you think the most important message was from the Explorer?

REFLECTION ACTIVITIES

- ❑ Write a short news article to tell others what the Explorer is working on and why that work is important.
- ❑ Produce a short video or social media post explaining one thing you learned today and one thing you're curious to learn more about.
- ❑ Make a map that plots where the Explorer works. You can use a digital tool like MapMaker Interactive or a physical map in the classroom. Add details from the presentation to it. As you attend more Explorer Classroom events, keep adding to the map!

SHARE YOUR EXPERIENCE

We LOVE to see student work and share it with the Explorers who inspired it! Please feel free to share student projects and reflections by using the *#ExplorerClassroom* and tagging *@NatGeoEducation* on Twitter, or by emailing them to explorerclassroom@ngs.org

OPTIONAL EXTENSION RESOURCES

Try one of these related resources and keep exploring with National Geographic Education.

- *Join in the Explorer's Mission:* What are some themes from the event today? Did the Explorer inspire you in some way? How?
- *Want to keep exploring the solar system and beyond?* Check out [this collection](#) of resources!

Looking for more ways to engage your students online, in-person, or at home? Find more on our [Learn Anywhere](#) page or in our [Resource Library](#).