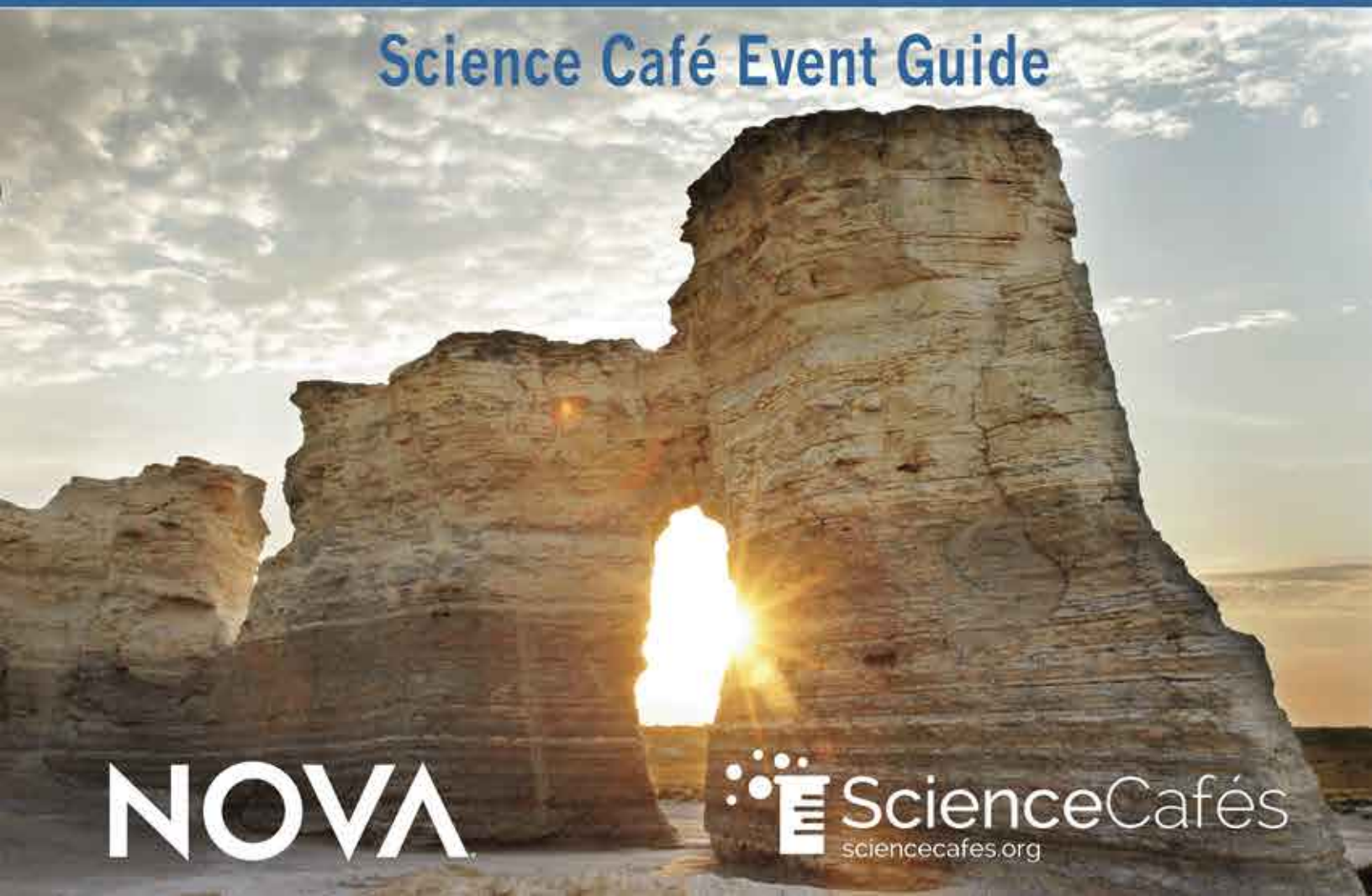




Rock the Café

Science Café Event Guide



NOVA



ScienceCafés
sciencecafes.org

Welcome to the ***Rock the Cafe* Event Planning Guide**. This guide will provide tips and resources to help you run a successful Science Café on current topics in the geology and the geosciences—such as paleontology, petrology, geophysics, climatology, and oceanography.

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NOVA

Background

About NOVA's *Making North America* Series

Making North America (MNA) is a three-part series airing on PBS in fall 2015. It presents a bold and sweeping biography of how mighty forces such as fiery eruptions, titanic floods, great ice sheets, and massive impacts from space have all shaped this land.

Hosted by renowned paleontologist Kirk Johnson, this spectacular road trip through our nation's tumultuous deep past answers three fundamental questions: How was the continent built? How did life



evolve here? And how has the continent shaped us? Enhanced by dazzling, hyper-realistic CGI animations, immersive geological field missions, and the latest scientific research, MNA will reveal the incredible story of a majestic continent and, in doing so, helps increase the public's appreciation of how geology and Earth science deeply affect our everyday lives—and our future.

Making North America is ideally suited for adults and children of middle-school age and older. The content is presented in a lively, engaging, and visual style—with sweeping cinematography, CGI, and narration that is accessible to a non-scientific audience.

About Science Cafés

Science Cafés welcome people who may or may not typically get involved with scientific discussions. They are not academic gatherings for scientists and science majors, nor do they take place exclusively in lecture halls or science museums. Rather, Science Cafés can (and do) happen in informal community gathering spaces all over the world, where all feel encouraged to participate.

Science Cafés are dynamic interactions between a scientist and the public: the public feels empowered to learn, and the speaker gains valuable perspectives on his or her own work. Watch this [YouTube video](#) about starting your own Science Café.

Why Hold a *Rock the Café* Event?

Because geology rocks! Geology and geosciences affect and intersect with nearly every aspect of our lives and our physical surroundings. *Rock the Café* events can increase the public's understanding of Earth science through informal, fun, and lively exchanges with experts. Café events will provide an ideal context and forum to explore some of the most critical geology-related issues that North America and the global community face today—such as natural hazards (earthquakes and volcanoes), the use of fossil-based energy, and the impacts of climate change.

Before Your Event

Find Your Target Audience

Understanding your audience will help make your café a success. In the beginning, you might want to gather a few likely attendees together to talk about what topics, scientists, venues, etc. they would find interesting. Or, if you have an ongoing series of cafés, convene an informal “focus group” now and then for feedback and fresh ideas.

But how do you find your target audience? When targeting an audience, consider parameters such as age, education background, and even other interests and hobbies. Your target audience may be very broad and include people who are not already science enthusiasts, or you may want to reach out to a specific audience. Of course, cafés are open to all. Choosing a target audience is not about whom you will let in, it's about whom you are trying to attract to the event.

Certain Earth science topics may help you reach out to groups that are not traditionally science oriented. For instance, a Science Café on climate change may be an opportunity to partner with environmental advocacy and policy groups. A café on soil quality may be interesting to local gardeners, farmers, and locavores. Be flexible and get creative. Your café will benefit both from the growth of your audience and the diversity of opinions they present.



Select a Venue

Pick a venue that people are excited to visit and invite their friends to. Typical venues for science education events, such as science centers or lecture halls, often do not make the best meeting spots for Science Cafés. An unconventional venue is an important part of the atmosphere for the overall event and will reach new audiences. Go where your audience already congregates naturally. Science Cafés have been held in pubs, coffeehouses, bookstores, restaurants, art galleries, malls, and even bowling alleys.

Logistical issues are important in choosing a venue. Keep in mind acoustics, background noise, line of sight, the ability to reserve a block of time, flexible seating arrangements, public accessibility, and the availability of food and drink. Many venues have in-house

audiovisual equipment, making it easy to show slides and videos and to provide a microphone for the presenter and/or the audience. Whenever possible, visit the venue prior to your Science Café event and ask for a quick tour as a final check of the facility.

Schedule Dates

- Ideally, your Science Café will occur on the same day of the week and time every month (e.g., the first Monday, second Tuesday, etc.). You may want to consider a bi-weekly schedule if the audience demand is there, or bi-monthly if that would result in a higher turnout per event.
- Set the dates far enough in advance to allow for adequate planning and publicity. Our recommendation is a minimum of two months ahead of time (i.e., a month to plan and a month to implement), depending on the size of the event.
- Check public schedules for community events, holidays, elections, school breaks, etc., to avoid unnecessary conflicts that could diminish your potential audience.
- After you have determined your venue, date, and time, [contact NOVA Education](#) and let us now so that we can include it on the ScienceCafes newsletter.



Choose a Topic and Format

The world of geology and geosciences covers a remarkable range of topics from which to draw inspiration for your Rock the Café events. The best topics provoke a reaction in everyone—research that is inherently fascinating or changes the way people think, developments that have social or environmental impact, and events in the news are all good starting points. Please see [Suggested Topics for Rock the Café Events](#) on page 6 for ideas, as well as summaries of the *Making North America* episodes.

Some cafés do a “mini series,” two or three short (8-10 minutes) presentations by different speakers on related topics. For instance, a *Rock the Café* event with a “mini series” might include a climate scientist, an engineer, and a science journalist.

Find a Speaker

Your Science Café may include one scientist or a panel of experts. The setup may vary from meeting to meeting. Although many scientists are happy to have the opportunity to share their work, not every scientist is a good fit for a Science Café. Be selective—look for someone who is:

- personable, friendly, and enthusiastic
- broadly knowledgeable about the topic
- comfortable answering questions
- able to discuss research and concepts without using jargon

It is best to choose a speaker who is engaged in research that the general public will find exciting and relevant to their interests. University professors, researchers, PhD students,

and Earth science educators are excellent candidates. In addition, groups such as the [American Geosciences Institute](#) and the [National Association of Geoscience Teachers](#) may be able to help identify speakers (see [Additional Resources](#) on page 9).

Are you interested in inviting a local scientist who was involved in the *Making North America* series to appear at your event? Please contact [NOVA Education](#) to discuss.

Prepare the Speaker for the Event

It's best if you can actually meet and speak with the scientist before extending an invitation so you can get a sense of his or her style and personality. If you can see him or her speaking live or on video, even better! The guest scientist helps set the overall tone of the event. Don't be shy about coaching the speaker on presenting to your audience.

- Be specific about the scientist's role. He or she is not there to give a speech, lecture, or formal presentation.
- Describe the informal atmosphere that you are trying to create. Remind the scientist that the conversation should be casual and fun.
- The scientist's presentation should be a brief overview or conversation starter, approximately 20 to 25 minutes (or less, if you have multiple speakers).
- Ask the scientist to include some open-ended questions so that the audience will feel comfortable about starting a discussion.
- Help the moderator and scientist establish a rapport. Introduce them just before the café or a few days ahead of time.
- Share your promotional materials in advance with the scientist to make sure your description of the topic is accurate.



Suggested Topics for *Rock the Café* Events

The *Making North America* episodes and preview clips cover a range of big ideas and research in geology and related sciences. Read through the series and episode descriptions below for inspiration, or watch preview clips from the series in the [MNA Partner Toolkit](#).



MAKING NORTH AMERICA



Mighty, elemental forces molded North America. Fiery eruptions, titanic floods, the grinding of great ice sheets, and massive impacts from space all shaped our land. Now, for the first time, NOVA presents a bold and sweeping biography of our continent and how it came to be. This epic story unfolds in a forgotten world that existed long before our own, crossed by long-lost mountain ranges, deserts the size of Africa, and vast inland seas spanning the length of the continent. Beloved landmarks like the Grand Canyon, Yellowstone, and the Rockies are explored from the inside out as we witness the clash of nature's creative and destructive forces—the uplifting of Earth's crust and the violent eruptions, earthquakes, and impacts that destroy it. Hosted by renowned paleontologist Kirk Johnson, this spectacular road trip through our nation's tumultuous deep past sets out to answer three fundamental questions: How was the continent built? How did life evolve here? And how has the continent shaped us? Enhanced by dazzling, hyper-realistic CGI animations, immersive geological field missions, and the latest scientific research, *Making North America* will reveal the incredible story of a majestic continent.

- **Episode 1 – *Origins*:** The epic 3 billion-year story of how our continent came to be. From the palm trees that once flourished in Alaska to titanic eruptions that nearly tore the Midwest in two, we discover how forces of almost unimaginable power gave birth to North America. Premieres on November 4, 2015.
- **Episode 2 – *Life*:** How did life emerge on our primeval continent? Why was North America home to so many iconic dinosaurs like T.rex? And how did a huge sea filled with giant marine reptiles end up covering Kansas? We tell the surprising intertwined story of life and the landscape in North America. Premieres on November 11, 2015.
- **Episode 3 – *Humans*:** From the gold rush to the oil boom, the hidden riches of our landscape have helped Americans prosper. But as our cities grow, so do the risks of catastrophic natural disasters, such as the supervolcano under Yellowstone that could one day obliterate half the continent. Premieres November on 18, 2015.

Additional suggested topics of contemporary relevance include:

Continents and Plate Tectonics

- What are mechanisms that cause tectonic plates to move and drift?
- Where will the North American Plate be 10, 50, or 100 million years from now?

Evolution

- Is evolution happening now?
- Are humans influencing the process of evolution?
- Is culture the result of evolution?
- If extinction is a natural part of life on Earth, why should we care about protecting endangered species?
- Are the concepts of Evolution and Faith incompatible?

Humans and North America

- When—and how—did humans first arrive on the continent?
- How did early humans shape the North American landscape?

Energy

- What is the impact of coal, oil, and natural gas industries on the environment?
- What are the environmental impacts of hydraulic fracturing (“fracking”)? Is there a connection between fracking and earthquakes?
- Is nuclear power the key to reducing global warming? Can the frequency and severity of nuclear plant accidents ever be sufficiently reduced or eliminated?
- What is the future of solar, wind, and geothermal energy production?

Climate Change

- What are the latest findings on how humans are contributing to climate change?
- Can the rate of climate change be significantly slowed or even reversed?
- What are the opportunities for sequestering carbon and reducing carbon emissions?
- How will ecosystems, wildlife, and humans adapt—or fail to adapt—to climate change?

Earthquakes

- What’s causing the dramatic increase in earthquakes throughout the central U.S. in recent years? Is human activity a factor?
- Can earthquakes be predicted?
- Does fracking cause or contribute to the occurrence of earthquakes?

Need more ideas? Check out the [Planet Earth](#) topics covered by **NOVA scienceNOW** for further inspiration for your *Rock the Café* event planning.

Promote Your Event

Register Your Science Café and Your Events

Is your Science Café organization registered and on the sciencecafes.org map? [Register now and be more visible!](#)



[Register your *Rock the Café*](#) event here to receive free geology-themed coasters and door prizes! Giveaway items and prizes can be effective icebreaker or a fun contest activity for an organizer to use to either kick off or conclude a café event.

Spread the Word

- Create a press release describing your *Rock the Café* events and your Science Café organization.
- Engage with social media networks such as Facebook, Twitter, Craigslist, Meet-Up.org and other websites to increase your audience size and knowledge of upcoming events.
- Set up a listserv, either as you begin your café or after your first meeting, so that you can send notices about upcoming and related events.
- Send notices to local online and print calendar listings. Many newspapers and TV and radio stations will list events for free, as do websites (such as patch.com).
- Create a flyer and post copies where they are most likely to be seen by your target audience: restaurants, pubs, cafés, supermarkets, convenience stores, and laundromats are just some of the local businesses where you can advertise. Don't forget libraries, university and college campuses, student unions, and other public gathering spaces. Need a sample flyer? See the customizable *Making North America* flier in the [MNA Partner Toolkit](#).
- Ask your funders, partners, and sponsors to reach out to their members in e-newsletters and other communications.

During Your Event

It's the big night! As the café begins, don't forget to take a deep breath, relax, and have fun! For a more detailed agenda, see a [Sample Schedule](#), a resource on sciencecafes.org.

Set Up the Room

- Arrive early and arrange the room accordingly.
- Double-check the audiovisual equipment.
- Be sure to bring your supplies, such as a sign-in sheet to collect names and email addresses, evaluation survey or questionnaire, pens and pencils, any audiovisual equipment that is not provided by the venue, and flyers or announcements about the next Science Café.



Break the Ice

Strangers often need an icebreaker to help them jump into a conversation. Of course, food and drink often help! Here are other icebreakers you can use:

- As people arrive, hold a quick trivia contest to get them talking together and thinking about a topic. For sample trivia questions, register your café and check out “Using trivia” in the Further Your Café section of sciencecafes.org.
- Be creative with your introductions—and make them short and sweet. Find an interesting fact about the scientist to share or a provocative aspect of the topic. Using humor always helps break the ice.
- It is amazing how quickly a crowded room will pay attention when a video begins. A short clip from *Making North America* or NOVA scienceNOW can provide brief background information and stimulate ideas and questions. Check out “Using technology” in the Further Your Café section of sciencecafes.org.
- A short 5- to 10-minute break after the scientist's presentation may allow people to chat and connect with each other.
- If there's an awkward silence at first, have a question ready to get conversation going.

Encourage Conversation

Use these tips to get the most out of the evening.

- Pay attention to the audience. You'll sense when an idea has grabbed the group's interest or when people are disengaged.
- When a particularly good question comes up, try having the audience answer it.
- Polling the audience, electronically or by a show of hands, is a good way to keep people engaged and encourage them to offer their opinions.

Wrap Up

- Be sure to announce upcoming Science Café events and topics before people leave.
- If you want to evaluate the café via a survey or questionnaire, distribute the survey early so that people have plenty of time to fill it out.
- After the event is over, some people may stay to chat. Encourage the scientist to mingle and continue the conversation. Some of the best interactions occur in these smaller groups.

Additional Resources

These web sites provide information and resources about geology and the geosciences and could be helpful as you plan your Science Café events.

The [Making North America home page](#) offers descriptions and links to all of NOVA's educational resources developed to complement and extend the MNA learning experience. Resources include:

- MNA preview clip (4 minutes)
- MNA series and episode descriptions
- MNA full episodes (available for streaming one day after airing on PBS in early-mid November 2015)
- **Making North America Interactive Topographical Map** (available in November 2015): This website puts users in charge on an interactive, animated journey throughout our continent past and present. Users can visit geologic locations across North America and zoom in on billion-pixel "GigaPan" images for extremely detailed close-ups.
- [PBS Learning Media](#)'s MNA short clips and classroom education materials (available in November 2015).

[ScienceCafes.org](#) is a website created and managed by NOVA that contains everything you'll need to start and run your own Science Café organization, as well as a map and directory to over 350 registered Cafés from around the U.S. and abroad.

The [American Geosciences Institute](#) (AGI) plays a major role in strengthening geoscience education and strives to increase public awareness of the vital role the geosciences play in society's use of resources, resilience to natural hazards, and the health of the environment.

The [American Geophysical Union](#) (AGU) promotes discovery in Earth and space science for the benefit of humanity. They are a leader, collaborator, and sought-after partner for scientific innovation, rigor and interdisciplinary focus on global issues.

The [National Center for Science Education](#) (NCSE) provides resources for schools, parents, and concerned citizens working to keep evolution and climate science in public school education. They educate the press and public about the scientific and educational aspects of controversies surrounding the teaching of evolution and climate change.

The [U.S. Geological Survey](#) (USGS) is a science organization that provides impartial information on the health of our ecosystems and environment, natural hazards, natural resources, the impacts of climate and land-use change, and the core science systems that help us provide timely, relevant, and useable information.

[Glossary of Geologic Terms](#). Compiled by Iowa State University's Department of Geological & Atmospheric Sciences, and based on the glossary in *Earth: An Introduction to Geologic Change*, by S. Judson and S.M. Richardson (Englewood Cliffs, NJ: Prentice Hall, 1995).

NOVA

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