

**G**OODMAN RESEARCH GROUP, INC.  
Program Evaluation • Consultation • Market Research

**Evaluation Report of  
NOVA scienceNOW Season 3:  
Series, Website, and  
Science Café Conference**

***Prepared By:***

Elizabeth Bachrach, Ph.D.  
Karen Peterman, Ph.D.  
Laura Houseman  
Irene F. Goodman, Ed.D.  
Colleen F. Manning

***Submitted to:***

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## INTRODUCTION

WGBH has produced NOVA scienceNOW (NsN) since 2005, with funding from the National Science Foundation and the Howard Hughes Medical Institute, among others. NsN comprises a science news and magazine television series, a companion website, and a science café outreach initiative. All NsN offerings share the common goals of (a) increasing public awareness and understanding of cutting edge science content, and (b) increasing public engagement in science-related activities.

- The NsN **series** airs five to six times per year, and highlights the latest developments in science by featuring several short science segments per episode. Season Three of the series aired in summer 2008 across six consecutive weeks.
- The NsN **website** features individual segments from each show that can be streamed for viewing in multiple formats. Reading material, interviews and Q&A's with scientists, interactive features, podcasts, and links to related resources are also provided. The website is updated after each new episode to provide visitors with the latest NsN stories as well as additional information about each segment topic. In addition, the NsN team updated the entire site in fall 2008.
- The final component of NsN is the **Science Café** outreach initiative. NOVA scienceNOW Science Cafés are hosted around the country and based on Café Scientifique, which began in the UK in 1998. Science Cafés gather groups of people in non-academic environments such as a local bar or café to discuss the latest developments in science. Each NsN Science Café features a local scientist presenting information on his or her latest work.

Goodman Research Group, Inc. (GRG), a research firm specializing in the evaluation of educational programs, materials, and services, has served as the summative evaluator of NOVA scienceNOW (NsN) since the first season. Since that time, GRG has completed an evaluation for each season's initiatives. Our evaluation of Season Three included three individual components, including evaluation of the series, the website, and the Science Cafés.

This report presents findings from GRG's evaluation of the following:

- 1) The NOVA scienceNOW **series**, including viewer feedback on Season Three and the knowledge gained from viewing the six new episodes,
- 2) The NOVA scienceNOW **website**, and
- 3) Focus groups conducted at the **Science Café conference** in June 2008.

Each section includes a brief summary of the methods used for the particular evaluation activity and a full description of results. Results from GRG's previous evaluations are cited throughout to note consistencies in the data collected over time. The final report section summarizes the evaluation findings and provides recommendations for the NsN team as they move into their fourth season. The Appendix contains all instruments used in the evaluation.

## EVALUATION OF NOVA SCIENCENOW SERIES: SEASON THREE

To obtain feedback about Season Three of NsN, GRG developed and programmed a web-based survey and a series of quizzes. The survey was designed to gather feedback about the new episodes, the series overall, and its influence on viewers. The quizzes were designed to include key content from each episode. Both the survey and the quizzes were hosted on the NsN website immediately after the sixth new episode aired.

Viewers learned about the survey and quizzes in one of two ways. First, Neil deGrasse Tyson, NsN’s host, encouraged viewers to visit the website to complete the survey and quizzes at the end of his Cosmic Perspective for the sixth episode. WGBH also placed the links to the surveys in a visible location on the website homepage; visitors to the website could have learned about the survey and quizzes in this way as well. One link invited website visitors to provide feedback about the series and a second link invited visitors to “test” themselves by completing a quiz about the episodes. After completing either the survey or the quiz, visitors were provided with the link to the other instrument.

### RESULTS OF FEEDBACK SURVEY

The Feedback Survey was active on the NsN website for approximately three weeks; 257 NsN viewers responded to the survey during that time. Table 1 displays demographic information to describe this group of viewers. Slightly more men than women completed the Feedback Survey. Most respondents were Caucasian. Respondents were from a wide range of age groups, with the majority 35-64 years of age. This overall profile is quite similar to that from GRG’s previous evaluations as well as similar to the NOVA viewing audience.

Table 1  
Profile of Respondents to Series Feedback Survey

		% Respondents
<b>Gender</b> (n=248)	Male	57%
	Female	43%
<b>Race</b> (n=257)	African American or black	4%
	Asian or Pacific Islander	8%
	Caucasian or White	80%
	Latino or Hispanic	6%
	Native American	1%
	Other	<1%
<b>Age Group</b> (N=255)	17 years or younger	10%
	18-34 years	14%
	35-49 years	25%
	50-64 years	37%
	65 years or older	14%

Feedback survey respondents prefer to watch NsN on television rather than online. The majority (71%) indicated they prefer to watch the program at the time of the broadcast, and an additional 21% prefer to watch via DVR.

Regardless of their viewing preferences, most respondents also reported that they visit the NsN Website from time to time. Even still, approximately one in four (39%) were visiting the site for the first time on the day they completed the survey. While we cannot assume that all of these respondents were guided to the site by Tyson’s comments at the end of episode six, it seems likely that some of these respondents were recruited through the on-air tag.

**Feedback about the NOVA scienceNOW Series**

Each season, GRG has asked viewers to share their perceptions of NsN by choosing the top two statements (from a list of six) that describe the purpose of the series. Table 2 presents viewers’ responses to this question for Season Three.

Table 2  
Phrases that Best Describe the Purpose of NOVA scienceNOW

	% Respondents
To make science approachable for all viewers	66%
To introduce viewers to cutting edge science topics	57%
To encourage viewers to engage with science	42%
To demonstrate the various implications of science	15%
To demonstrate the importance of staying up-to-date about science research	15%
To combat negative stereotypes about scientists	3%

N=253

The results from this question have been identical for all three years of the series, indicating that NsN consistently portrays itself as a program designed to make cutting edge science topics approachable for all viewers. Given this pattern of results, it is not surprising that 98% of respondents indicated that NsN content is presented in a way that is either *fairly* or *very easy* to understand.

Viewers’ opinions of the NsN series have also been consistent across the three years of evaluation to date. As with previous years, the majority of Season Three viewers (88%) rated the program as *very good* or *excellent* (the top two ratings of a five point scale).

In addition to providing their overall opinions of the series, viewers also provided feedback about their favorite segments from Season Three. As shown in Table 3, each of the 18 segments was picked as a favorite by some viewers, indicating that the series provides “something for everyone.” Even so, there were also clear favorites among viewers; the segments about dark matter and digital forensics, for example, received the most nominations as favorite segment.



Table 3  
Top Three Favorite Stories across the Season

	# Who Watched the Segment	% Favorite Story	% Second Favorite Story	% Third Favorite Story
Dark Matter	212	30%	12%	9%
Digital forensics and photography	184	29%	6%	4%
The Phoenix Mars Space Mission	175	12%	10%	9%
The next Hubble mission (to repair the camera)	212	11%	12%	4%
Research on restoring memories in mice	176	10%	5%	10%
Advances in stem cell research with skin cells	216	9%	10%	11%
Research on communication between birds	192	6%	3%	10%
Concussions	153	6%	3%	6%
Searching for intelligent life using SETI technology	217	5%	13%	10%
Space weather and its effects on the Northern Lights	212	5%	7%	6%
Detecting art forgeries with digital technology	208	5%	5%	4%
Identifying that the earliest primate as a mouse-like animal	197	5%	6%	4%
Genetic testing to identify diseases	215	4%	6%	4%
The mammoth mystery fossils	162	3%	5%	8%
Creating artificial trees to gather carbon dioxide from the air	180	3%	5%	2%
Developing bridges that could help foresee potential collapse	193	3%	4%	4%
The Iraqibacter bacteria	151	3%	1%	2%
Using leeches to aid in healthcare	220	1%	5%	5%

Viewers were also asked to indicate their least favorite segments from Season Three. Though most respondents provided information to share their favorite segments, close to half chose not to select “least favorite” segments from the list. Viewers’ decision not to provide this feedback may be interpreted as another indication of the broad appeal of the series to its audience.

Table 4 presents the percentage of viewers who nominated segments as a least favorite. For ease of comparison, the order of segments presented in Table 4 matches that used for Table 3 above.

Table 4  
Least Favorite Stories across the Season

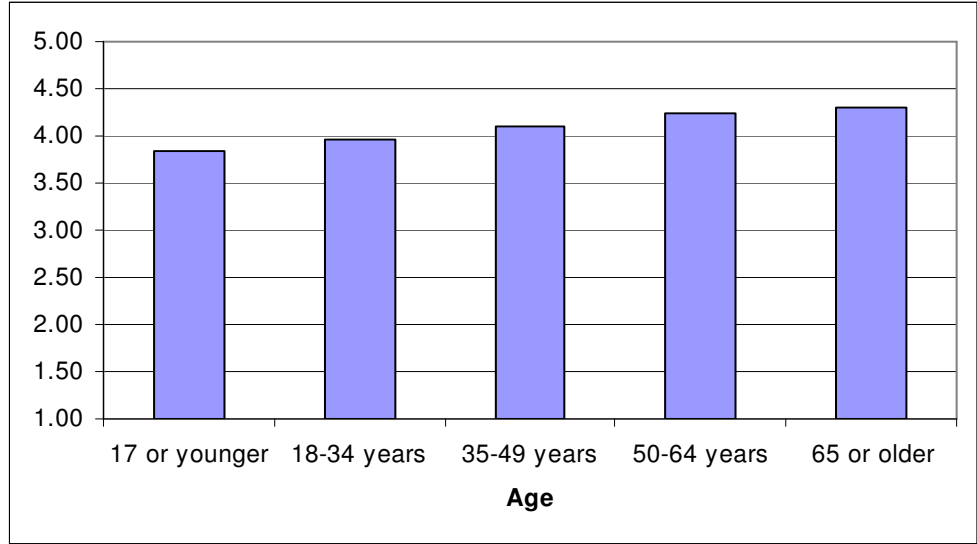
	# Who Watched the Segment	% Least Favorite Story	% 2nd Least Favorite Story	% 3 <sup>rd</sup> Least Favorite Story
Dark Matter	212	3%	2%	2%
Digital forensics and photography	184	8%	1%	4%
The Phoenix Mars Space Mission	175	1%	0%	3%
The next Hubble mission (to repair the camera)	212	3%	1%	2%
Research on restoring memories in mice	176	4%	1%	2%
Advances in stem cell research with skin cells	216	1%	1%	1%
Research on communication between birds	192	4%	7%	2%
Concussions	153	2%	8%	2%
Searching for intelligent life using SETI technology	220	2%	3%	2%
Space weather and its effects on the Northern Lights	212	0%	2%	2%
Detecting art forgeries with digital technology	208	4%	8%	3%
Identifying that the earliest primate as a mouse-like animal	197	4%	4%	3%
Genetic testing to identify diseases	215	2%	1%	3%
The mammoth mystery fossils	162	2%	7%	7%
Creating artificial trees to gather carbon dioxide from the air	180	4%	2%	3%
Developing bridges that could help foresee potential collapse	193	6%	4%	3%
The Iraqibacter bacteria	151	7%	7%	3%
Using leeches to aid in healthcare	220	6%	6%	3%

The Season Three Feedback Survey also gathered specific feedback from viewers about the profiles included in each episode. In past seasons, viewers have provided consistent and moderate feedback about these segments, and requested that profiles include a more balanced presentation of the scientists' work and personal characteristics. When possible, the NsN team incorporated this feedback into the Season Three profiles.

The results from the Feedback Survey provide preliminary evidence that the new format for profiles is a step in the right direction. When asked to rate their interest in the profile segments, viewers reported that they were *very interested*, on average (mean rating was 4.12 out of 5). This rating is just slightly lower than the average rating for the series overall, and it is higher than the moderate interest ratings provided by viewers in previous seasons.

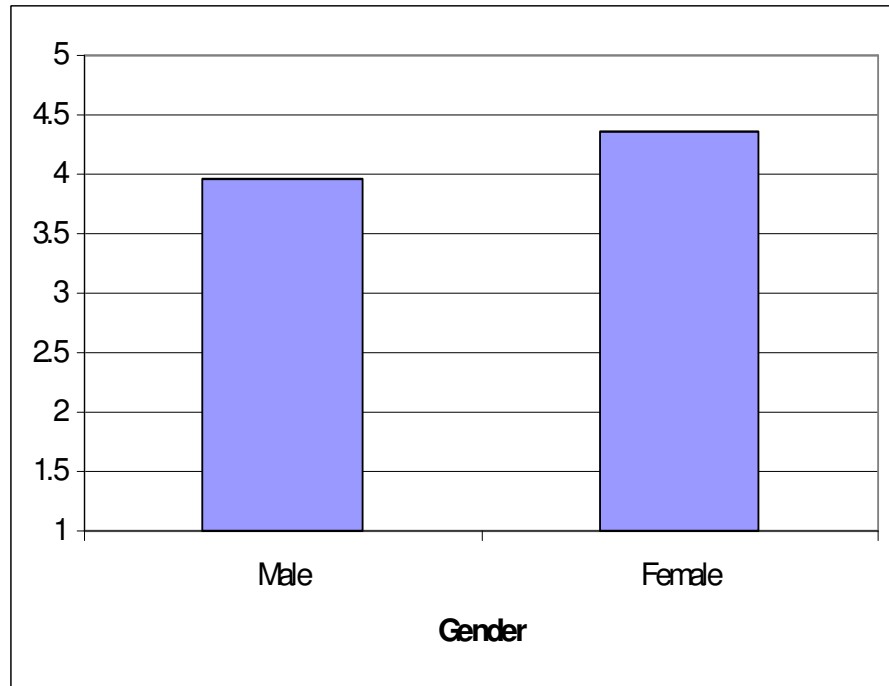
Positive ratings of the Profile segments increased with age. As shown in Figure 1, respondents younger than 18 years old rated the Profiles the lowest, and viewers 65 and older rated them the highest.

Figure 1  
Differences in Profile Ratings, by Age Group



Additionally, women assigned higher average ratings to the Profiles (4.30 out of 5) than did men (4.00 out of 5). See Figure 2.

Figure 2  
Difference in Profile Ratings, by Gender





As with the other Season Three segments, the survey prompted viewers to choose their favorite profiles. Results varied, with each profile being selected as a favorite by some viewers. The profile of Dr. Quinones-Hinojosa was the clear favorite, as shown in Table 5

Table 5  
Favorite Profile

	<b>% of Respondents</b>
Alfredo Quinones-Hinojosa	30%
Yoky Matsuoka	19%
Judah Folkman	18%
Edith Widder	13%
Pardis Sabeti	12%
Harry Farid	7%

N=257

### **Prior Knowledge about NOVA scienceNOW Topics**

As in previous years, NOVA scienceNOW included topics that were both familiar to and entirely new to viewers. Table 6 presents the percentage of respondents who learned about each topic for the first time by watching NsN.

- Approximately half of the viewers (or more) learned about each of the following topics for the first time by watching Season Three: creating artificial trees to gather carbon dioxide from the air, detecting art forgeries with digital technology, research on restoring memories in mice, the Iraqibacter bacteria, and identifying that the earliest primate was a mouse-like animal.
- As a result of watching Season Three, just under half learned for the first time about the mammoth mystery, bridges, and communication between birds.
- Most viewers were familiar with the topics of genetic testing, using leeches to aid in healthcare, dark matter, and the use of SETI technology prior to watching NsN.

Table 6  
Viewers who Learned About a Segment Topic for the First Time by Watching  
NOVA scienceNOW

	% respondents
Creating artificial trees to gather carbon dioxide from the air	61%
Detecting art forgeries with digital technology	55%
Research on restoring memories in mice	53%
Identifying that the earliest primate as a mouse-like animal	52%
The Iraqibacter bacteria	52%
Developing bridges that could help foresee potential collapse	47%
The mammoth mystery fossils	46%
Research on communication between birds	44%
Digital forensics and photography	37%
Advances in stem cell research with skin cells	29%
Concussions	27%
The next Hubble mission (to repair the camera)	26%
Space weather and its effects on the Northern Lights	23%
The Phoenix Mars Space Mission	16%
Searching for intelligent life using SETI technology	14%
Using leeches to aid in healthcare	11%
Dark Matter	11%
Genetic testing to identify diseases	10%

N=257

### **Projected Influence of NOVA scienceNOW on Attitudes and Behavior**

The results from previous GRG evaluations have provided consistent evidence to demonstrate that viewers believe NsN has influenced both their attitudes and behaviors toward science. The results from Season Three provide further evidence to support this trend.

As in previous evaluations, Season Three viewers used a scale from 1 (*Not at all*) to 5 (*Extremely*) to report their perceptions of how effective the series was at influencing them in key ways. As shown in Table 7, viewers believed the series was *very effective* at increasing their motivation and interest in science. Ratings were slightly lower for the extent to which the series expanded their perspectives of what it means to be a scientist and increasing the extent to which they engaged in science.

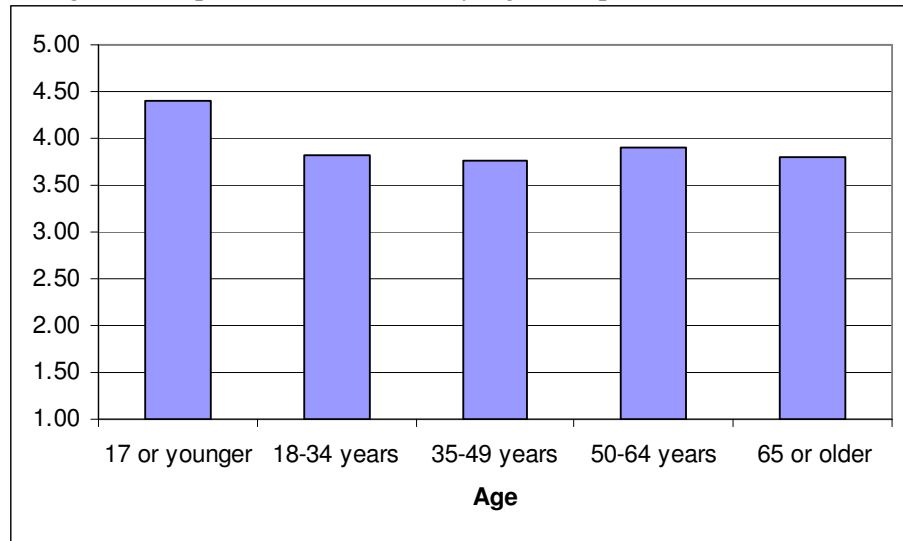
Table 7  
Series Influence on Attitudes

	<b>Average Rating (Scale: 1-5)</b>
Increasing how motivated you have felt to learn more about current events in science	4.02
Increasing your interest in science	3.99
Expanding your perspective of what it means to be a scientist	3.89
Increasing the extent to which you have sought out science-related learning experiences	3.75

N=257

The youngest viewers – those under 18 years old – gave the highest ratings for the extent to which the summer season expanded their perspective on what it means to be a scientist – these viewers said the program was *very to extremely successful* in this regard (mean rating 4.40 out of 5). See Figure 3.

Figure 3  
Changes in Perspective of Scientists, by Age Group



At the time they took the survey, approximately three-quarters had already engaged with NsN content in four of the seven ways presented (see Table 8). For instance, the vast majority had already discussed NsN topics with family, friends, or colleagues and most of the rest planned to do so. The same was true for watching science-based TV more often, recommending others to watch NsN, and trying to stay up to date with cutting edge science in general.

Demonstrating the potential for cross-over between various NsN offerings, four in ten respondents indicated they were planning to attend a NsN science café or other science event as a result of watching the series. The overall pattern of the data in Table 8 is consistent with those found in previous evaluations.

Table 8  
Influence of Series on Science-Related Actions

	Yes, I have done this	Not yet, but I plan to	No, and I don't plan to
Discussed NOVA scienceNOW topics with family, friends, or colleagues	81%	12%	7%
Watched science-based television programs more often	77%	14%	9%
Recommended the NOVA scienceNOW program to others	74%	18%	8%
Tried to stay more up-to-date on cutting edge science topics in general	72%	20%	8%
Visited other Web sites to learn about a NOVA scienceNOW topic	57%	29%	14%
Read a book about a topic from NOVA scienceNOW	21%	53%	26%
Attended a NOVA scienceNOW Science Café event or another presentation on a science topic	7%	41%	52%

N=254

## RESULTS OF CONTENT QUIZZES

To measure viewers' recall for NsN content, GRG developed a quiz comprised of approximately three multiple choice questions per segment for each of the six Season Three episodes. By design, all quizzes were posted on the NsN website after the sixth episode aired. As such, the time between an episode's air date and the availability of the quiz was longer for earlier than for later episodes.

The NsN team created a Web page to host the quizzes, and each episode's quiz had its own link. To help respondents differentiate between Season Three episodes, an image from one of the episode's segments and a description of the episode's topics were included with each link. When they arrived at the quiz page, respondents had the option to complete as many quizzes as they wanted.

The number of visitors who completed each quiz varied. Respondents were most interested in taking the quizzes for the first and final Season Three episodes. Far fewer visitors completed quizzes from episodes two through five. More specifically,

- 159 people completed the quiz for Episode 1,
- 39 completed the Episode 2 quiz,
- 34 completed the Episode 3 quiz,
- 27 completed the Episode 4 quiz,
- 57 completed the Episode 5 quiz, and
- 101 people completed the Episode 6 quiz.

The demographic profile of those who completed the NsN quizzes varied slightly across episodes. A similar number of men and women completed each quiz, and approximately three-quarters of all quiz respondents were White. The largest

group of respondents for each quiz were 50-64 years of age, though at least 20% of respondents to each quiz were below the age of 35.

### Viewing Behavior of NOVA scienceNOW Quiz Respondents

About three-quarters of those who completed the online quiz viewed the episode at the time of its original broadcast, as shown in Table 9. Though we have no way of knowing if quiz respondents also completed the feedback survey, this viewing preference is similar across these groups of evaluation participants; recall that nearly three quarters of the respondents to the feedback survey indicated they prefer to watch NsN on TV at the time it airs.

Table 9  
Method of Watching each Episode

	Episode 1 (n=151)	Episode 2 (n=38)	Episode 3 (n=35)	Episode 4 (n=27)	Episode 5 (n=56)	Episode 6 (n=99)
On television at the time of broadcast	70%	71%	71%	67%	73%	80%
On DVR	18%	16%	23%	26%	22%	18%
Online	12%	13%	6%	7%	5%	2%

Quiz respondents' reports of when they watched an episode confirmed that most had watched the episode at the time of its initial broadcast. Recall that all six quizzes were posted on the NOVA scienceNOW site immediately after the sixth new episode aired. As shown in Table 10, the majority of respondents indicated that they had seen Episode 6 the same week that they completed the quiz. In contrast, for Episodes 1 and 2, viewers reported that it had been a month or so since they had viewed the episode, a timeframe that roughly corresponds to the broadcast schedule.

Table 10  
Time since Viewing each Episode

	Episode 1 (n=147)	Episode 2 (n=38)	Episode 3 (n=35)	Episode 4 (n=27)	Episode 5 (n=57)	Episode 6 (n=99)
Less than a week ago	19%	19%	14%	19%	16%	78%
About a week ago	4%	--	6%	11%	21%	5%
Between a week and two weeks ago	9%	5%	11%	19%	23%	4%
Between two and three weeks ago	11%	13%	26%	22%	16%	4%
About a month ago	20%	26%	17%	7%	8%	5%
More than a month ago	37%	37%	26%	22%	16%	4%

## Viewers' Recall of Content Knowledge

To assess viewers' recall for Season Three content, GRG scored the quiz for each episode to determine the number of items that each respondent answered correctly. The average scores for each episode are presented in Table 11, by the percentage of responses that viewers got correct.

Performance was fairly similar across all six episodes. Scores ranged from 45% to 69% correct across the six episodes, and participants performed best on the last two quizzes.<sup>1</sup> Higher scores on the quizzes for episodes five and six are likely related to the Recency Effect (i.e., a naturally-occurring cognitive process whereby people recall more information from recent rather than less recent experiences).

Table 11  
Average Percent Correct per Episode Quiz

	N	% correct
Episode 1	173	53%
Episode 2	44	45%
Episode 3	38	58%
Episode 4	29	48%
Episode 5	61	63%
Episode 6	105	70%

Though these results may indicate a Recency Effect, it is important to point out that recall was not drastically lower for Episode 1 compared to Episode 6. In GRG's Season Two evaluation, we demonstrated that recall of NsN content had declined slightly after two years, but that viewers' understanding of the series content was still greater than it had been prior to watching the series.

Table 12 shows the average number correct per segment for each NsN episode. GRG investigated performance on individual segments to see whether respondents scored highest on the segments with the highest ratings or those for which most had some prior knowledge. Consistent patterns were not found for either of these variables.

- There were two instances in which ratings and content knowledge were consistent. The Dark Matter and Hubble segments were each the highest rated stories in their respective episodes, and both had the highest average content scores.
- There were three instances in which prior knowledge and content scores were consistent. The Dark Matter, Genetic Testing, and Hubble stories were those for which respondents reported the most background knowledge and they were the stories with the highest average content scores for each of their respective episodes.

<sup>1</sup> As quizzes were being developed, GRG conducted informal pilot tests of quiz items with respondents who had not seen the Season Three episodes. Average scores for these pilot tests were in the range of 1 to 4 correct for each episode, far below the scores achieved by viewers.



Table 12  
Average Number Correct by Segment and Episode

		Average Number Correct	Total Number of Questions
<b>Episode 1 (n=173)</b>	Dark Matter	1.91	3
	Memory	1.43	3
	Digital Photography	1.43	3
	Wisdom in a Crowd	.52	1
	<b>Total:</b>	<b>5.27 out of a possible 10</b>	
<b>Episode 2 (n=44)</b>	Genetic Testing	2.00	3
	Art Authentication	1.25	3
	Synthetic Trees	1.43	3
	Natural Selection	.75	3
	<b>Total:</b>	<b>5.43 out of a possible 12</b>	
<b>Episode 3 (n=38)</b>	Hubble Space Mission	1.95	2
	Primates	1.39	2
	Iraqibacter	1.84	2
	<b>Total:</b>	<b>5.18 out of a possible 9</b>	
<b>Episode 4 (n=29)</b>	Bird Brain	1.10	3
	Space Weather	1.55	3
	Prosthetic Hands	1.62	3
	Bridges	1.44	3
	<b>Total:</b>	<b>5.72 out of a possible 12</b>	
<b>Episode 5 (n=61)</b>	Leeches	1.95	3
	Alien Intelligence	2.11	3
	Stem Cell Research	1.90	3
	Bioluminescence	1.54	3
	<b>Total:</b>	<b>7.50 out of a possible 12</b>	
<b>Episode 6 (n=105)</b>	Phoenix Mars	2.03	3
	Concussions	1.96	3
	Mammoth Mystery	1.97	3
	Angiogenesis	2.35	3
	<b>Total:</b>	<b>8.32 out of a possible 12</b>	

## EVALUATION OF THE NOVA SCIENCE NOW WEBSITE

To gather feedback on the NOVA scienceNOW website, GRG developed and programmed a web-based survey. At the time of the evaluation WGBH had recently conducted an internal evaluation of the NOVA website. The NsN team was interested in obtaining similar information as part of GRG's current evaluation and so several questions from the NOVA survey were included. Questions from GRG's previous evaluations were also included to learn about NsN visitors and their opinions of the site. This season, the survey also obtained visitors' interest in potential new site features, and about websites that may compete with NsN (i.e., other sites that provide science content online).

GRG programmed the survey of the NsN website, after which a link to the survey was posted on the website itself. The NsN team programmed the link so that it would appear after a visitor had clicked on three Website features. After three weeks, 138 visitors to the NsN website had completed the survey.<sup>2</sup>

### A DESCRIPTION OF NOVA SCIENCE NOW WEBSITE VISITORS

This year's website survey was designed to gather information to provide a more complete portrait of website users, compared to previous evaluations. The survey included basic demographic questions similar to those included on previous GRG surveys, and then elaborated on those to document respondents' internet use and behavior.

The basic demographic characteristics of survey respondents are presented in Table 13. As in previous evaluations of the NsN website, the survey was completed by a larger number of male visitors than female visitors. The largest group of respondents were in the 18-34 year age range, though a similar number of visitors aged 35-49 and 50-64 also completed this year's survey. Respondents were highly educated, with 31% having earned a graduate degree.

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<sup>2</sup> Survey response (i.e., sample size) has been higher for GRG's web surveys in previous seasons. It is unclear why fewer visitors responded to this season's web survey.

Table 13  
 Profile of Respondents the NOVA scienceNOW Website Survey

		<b>% of Respondents</b>
<b>Gender</b>	Male	70%
	Female	30%
<b>Race/Ethnicity</b>	American Indian or Alaska Native	2%
	Asian	7%
	Black or African American	6%
	Native Hawaiian or Other Pacific Islander	1%
	Hispanic or Latino	10%
	White	65%
	Other	6%
<b>Age</b>	17 years or younger	6%
	18-34	31%
	35-49	29%
	50-64	27%
	65 and over	7%
<b>Highest Degree Received</b>	Some high school	5%
	High school diploma or equivalent	20%
	Associate's Degree	13%
	Bachelor's Degree	29%
	Master's Degree	23%
	Professional Degree (e.g., MD, DDS, DVM, LLB, JD, DD)	4%
	Doctoral Degree (Ph.D., Ed.D.)	4%
	Other	1%

Visitors to the NsN website are active Internet users, with the majority reporting that they look up information, get the news, and watch online videos on a weekly basis. (Their typical online behaviors are shown in Table 14.) In comparison, respondents spend relatively little time using the Internet for social purposes (networking, blogging, sharing bookmarks or personal videos/photos).

Table 14  
NOVA scienceNOW Visitors' Typical Online Behaviors

	<b>One to Three Times a Month</b>	<b>Once a Week or More</b>
Look up information about a topic of interest	14%	82%
Get news	12%	65%
Watch video clips	25%	61%
Watch long-form video	23%	52%
Seek information related to a hobby	29%	47%
Find out about upcoming events in my area	21%	29%
Visit social networking/community sites	12%	25%
Read or comment on blogs	17%	18%
Look for TV schedule information	19%	18%
Look for podcasts or other downloadable media to take with me on the go	21%	17%
Shop/Make a purchase	26%	10%
Share bookmarks or recommendations (Digg, del.icio.us, etc.)	11%	8%
Post/Share my own videos or photos	14%	4%
Update my own blog	8%	3%

While the table above presents Internet usage for the entire sample, it is important to note that the frequency of these behaviors varied by age group. Six behaviors, in particular, were found to differ by age; in almost every case, younger audiences spent more time engaged in a given Internet activity, compared to older audiences (as indicated by the check marks in Table 15 below). The one exception to this trend was online shopping.

Table 15  
Differences in Online Behavior, by Age Group

	<b>17 or younger</b>	<b>18-34</b>	<b>35-49</b>	<b>50-64</b>	<b>65+</b>
Watch video clips		✓			
Watch long-form video		✓	✓		
Seek information related to a hobby		✓			
Visit social networking / community sites		✓			
Look for podcasts or other downloadable media to take with me on the go		✓			
Shop / Make a purchase		✓	✓	✓	✓

Note: Check marks indicate an age group that participates in an online behavior at a statistically higher level than other groups.

## FEEDBACK ABOUT THE NOVA SCIENCENOW WEB SITE

The website survey gathered feedback from respondents to document their perceptions of the site, as well as their opinions of website features. First, respondents were asked to rate the extent to which 14 statements described the NsN website. Average ratings for all statements were positive. See Table 16.

Nearly all respondents agreed that accurate descriptions of the NsN website included: *presents science in a way that is easy to understand*, *allows visitors to learn more about topics that interest them*, and *introduces visitors to cutting edge science topics*. Note that two of these statements were also those that viewers identified as the primary purpose of the television series, indicating the success of the program at reinforcing key goals across different media.

Table 16  
Descriptions of the NsN Website

	<b>Average Rating (Scale: 1 to 10)</b>
Presents science in a way that is easy to understand	9.09
Allows visitors to learn more about topics that interest them	8.89
Introduces visitors to cutting edge science topics	8.74
Encourages visitors to engage with science	8.67
Provides a useful teaching tool	8.61
Provides access to reliable information	8.54
Gives visitors current science information	8.53
Has a distinct personality	8.53
Demonstrates the various implications of science	8.52
Inspires me in my own life to think differently	8.33
Demonstrates the importance of staying up-to-date about science research	8.13
Sets the standard of quality for science websites	8.07
Combats negative stereotypes about scientists	7.71
Has content that affects me emotionally	7.19

N=138

Positive feedback about the site was also shared by visitors when they were asked to rate specific features of the website that they had used in the past. As seen in Table 17, the videos, interviews with scientists, and interactive features were those that had been used by the largest number of respondents. Moreover, they were the features that received the highest ratings. The remaining features had been used by fewer respondents and received ratings that were more moderate (though still positive).

Table 17  
Ratings of Features related to Video Stories

	N	Average Rating (Scale: 1 to 10)
Video of the program	109	9.36
Interviews with scientists	103	8.81
Interactive media (flash animation of hieroglyphs, solar system, slide shows, etc.)	92	8.60
Links & Books	75	8.04
Film “extras” (behind the scenes, bonus footage)	84	7.86
Ask the Expert Q&A	70	7.20
Audio podcasts	71	7.17
Teachers guide	46	6.35
Discussion Board	55	5.78

Respondents reiterated their positive overall feedback about the NsN website, in response to an open-ended question, as illustrated in Table 18. The majority expressed general appreciation for the site. Some provided suggestions: adding programs more frequently, adding more new programs, and providing videos to watch in their entirety. Both the positive feedback and suggestions received are similar to those from previous GRG evaluations.

Table 18  
Feedback about the NOVA scienceNOW Website

<b>Positive Comments</b>	▪ It is GREAT!
	▪ Thank you... great videos! Would like to see more if possible. So glad I came across this on my search for mirror neurons. Looking forward to viewing other areas of science! Great job.
	▪ This website is great. Thank you
	▪ This is by far the best website I have visited recently. It has much to offer and is easily understood. I look forward to returning.
<b>Suggestions/ Issues</b>	▪ Extremely useful
	▪ I would appreciate it if new programs were added more frequently.
	▪ I would like to see less generalization when referring to "Scientists."
	▪ I would like to see more stories on astronomy and quantum mechanics.
	▪ Offer video in Flash format.
	▪ I perused the excellent selection of topics to choose from and after much deliberation when I finally decided; the link I clicked on took me to a confusing page where I couldn't watch the program.
▪ Slow. Unreliable. Difficult.	

## COMPARING NOVA SCIENCENOW AND OTHER SCIENCE WEBSITES

Respondents to the NsN website included both regular and first-time visitors. The largest group of respondents (52%) consisted of regular visitors who frequent the website at least two to three times a month. An additional one third (31%) were visiting for their first time on the day they completed the survey, and the remaining 17% reported that they visit the site a few times a year (but less than



once a month). As shown in Table 19, the majority of respondents visit the NsN website for the purpose of watching video and learning more – both about science in general and about new developments.

Table 19  
Primary Reasons for Visiting the NsN Website

	<b>% of Respondents</b>
To watch video stories	73%
To browse and learn more about science	57%
To learn about new developments in science (Science News)	52%
To find information about a specific topic	35%
To see extra video clips	33%
To learn more about the series	26%
To explore interactive content	23%
To learn more about scientists and how they work	20%
To use for a part of a classroom lesson	12%
To listen to audio podcasts	9%
To read program transcripts	8%
To review Ask the Expert pages	5%
To share an idea or comment	2%
To visit the discussion boards	1%
To help my kids with their homework	1%

N=138

New to this year’s evaluation were a series of questions designed to document how visitors learned of the NsN site and other sites they might use to look for similar content.

Overall, the results demonstrate a loyal and devoted audience that relies on NOVA and NsN for their science content. For example, just over half of the respondents reached the NsN site by visiting the NOVA website first, and an additional 11% came directly to the site via a bookmark or by typing the URL themselves. Those who described an “other” means of finding the NsN website primarily noted they found about the site from “a TV program,” with a few mentioning NOVA or NsN by name. See Table 20.

Table 20  
How Visitors Found the NOVA scienceNOW Website

	<b>% of Respondents</b>
Link from NOVA website	52%
Search	22%
Link from another site: (e.g., PBS.org, Google.com)	9%
Had site bookmarked	7%
Typed in URL	4%
Podcast	1%
Other	14%

N=138

Results from the survey also demonstrated that the NOVA and NOVA scienceNOW sites are those that respondents visit most frequently when seeking science content. Table 21 displays the frequency with which respondents reportedly visit various websites with science content.

- NOVA and NsN were the clear frontrunners among respondents, with a similar percentage reporting that they visit each site one a month or more.
- Other popular sites included NASA, National Geographic, and Discovery Channel, though far fewer respondents reported visiting these sites on a regular basis.

Table 21  
Frequency of Visits to Websites Providing Science Content

	<b>% who visit once a month or more</b>
NOVA	68%
NOVA scienceNOW	59%
NASA ( <a href="http://www.science.nasa.gov">www.science.nasa.gov</a> )	37%
National Geographic ( <a href="http://www.nationalgeographic.com">www.nationalgeographic.com</a> )	33%
Discovery Channel ( <a href="http://www.dsc.discovery.com">www.dsc.discovery.com</a> )	31%
HowStuffWorks ( <a href="http://howstuffworks.com">howstuffworks.com</a> )	22%
Science Channel ( <a href="http://science.discovery.com">http://science.discovery.com</a> )	16%
BBC’s Science and Nature site <a href="http://www.bbc.co.uk/sn">www.bbc.co.uk/sn</a> )	16%
Scientific American ( <a href="http://www.sciam.com">www.sciam.com</a> )	15%
Popular Science Magazine ( <a href="http://www.popsci.com">www.popsci.com</a> )	11%
Wired ( <a href="http://wired.com">wired.com</a> )	10%
Smithsonian ( <a href="http://smithsonianmag.com">smithsonianmag.com</a> )	10%
Slashdot ( <a href="http://slashdot.org">slashdot.org</a> )	7%
Science Daily ( <a href="http://www.sciencedaily.com">www.sciencedaily.com</a> )	7%
LiveScience ( <a href="http://www.livescience.com">www.livescience.com</a> )	7%
I, Cringely ( <a href="http://pbs.org/cringely">pbs.org/cringely</a> )	7%
American Association for the Advancement of Science (AAAS) publication ( <a href="http://www.sciencemag.org">www.sciencemag.org</a> )	7%
<a href="http://www.extremescience.com">www.extremescience.com</a>	2%

The pattern of results from Table 21 was reiterated when respondents were asked to share their favorite sites for engaging with science content online: NOVA and NOVA scienceNOW were the clear favorites, followed by Discovery Channel, NASA, National Geographic, and BBC’s Science and Nature. See Table 22.

Table 22  
 Preferences When Seeking Engaging Science Content Online

	<b>Total Nominations</b>
NOVA	75%
NOVA scienceNOW	54%
Discovery Channel (www.dsc.discovery.com)	30%
NASA (www.science.nasa.gov)	24%
National Geographic (www.nationalgeographic.com)	24%
BBC's Science and Nature site www.bbc.co.uk/sn)	21%
Scientific American (www.sciam.com)	17%
HowStuffWorks (howstuffworks.com)	14%
Wired (wired.com)	9%
Smithsonian (smithsonianmag.com)	6%
Science Channel (http://science.discovery.com)	5%
Slashdot (slashdot.org)	5%
American Association for the Advancement of Science (AAAS) publication (www.sciencemag.org)	4%
LiveScience (www.livescience.com)	4%
Popular Science Magazine (www.popsoci.com)	3%
Science Daily (www.sciencedaily.com)	2%
I, Cringely (pbs.org/cringely) www.extremescience.com	2%
	0%

Respondents listed a few other sites they visit for science content, with one or two respondents each listing:

- Wikipedia
- Various medical sites (e.g., PubMed)
- Space.com
- How it works
- Technologyreview.com
- Fuelcellworks.com
- Sites about specific content areas (e.g., earth science, astronomy)

Given the clear preference for the NOVA sites, it is not surprising that the majority of survey respondents (78%) believe that the NsN website is better than other similar sites that provide science content. Respondents find NsN videos easier to access and download, they believe the content is easier to understand, and they find the aesthetics of the site more pleasing than competitors' sites. See Table 23 for examples of these comments, as well as feedback from the minority of those who do not prefer the NsN site to competitors.

Table 23  
 Comparative Feedback about NOVA scienceNOW and Other Websites

<b>Positive Comments</b>	<ul style="list-style-type: none"> <li>• <i>Video content clear and easy to find/watch. Cleanly explains fundamental concepts to complex subjects. Well thought out and detailed material. I appreciate that complex subjects (such as quantum physics) are discussed, especially in depth.</i></li> <li>• <i>The layout is easy to navigate and is searchable.</i></li> <li>• <i>I like the videos, explanations and interactive content. I can find all realms of science that interest me; including ones I don't know much about, so I can learn about them.</i></li> <li>• <i>It provides content of interest in basically layman's terms and then offers additional content for those who want to look further.</i></li> <li>• <i>Contents are displayed in a way that is clear and professional but also has a 'fun' element to them. It is very easy to understand and engage myself. Other sites are just too scientific and professional.</i></li> </ul>
<b>Suggestions/ Issues</b>	<ul style="list-style-type: none"> <li>• <i>The others are much more detailed and have bibliographies.</i></li> <li>• <i>Different format, I find it hard to find specific topics.</i></li> <li>• <i>Slower. Unreliable video footage. Inconvenient.</i></li> <li>• <i>Many video links are broken, can not watch videos.</i></li> <li>• <i>Color</i></li> </ul>

**LOOKING FORWARD: FEEDBACK ABOUT POTENTIAL NEW FEATURES ON THE NOVA SCIENCENOW SITE**

At the time of the website survey, the NsN team was in the process of brainstorming ideas for new features that could be included on the site. The survey provided the opportunity to gather feedback from visitors to gauge their interest in each of these new ideas. As shown in Table 24, survey respondents expressed strong interest in two new search features (searching by content area and by feature type), as well as in having links to additional content related to NOVA scienceNOW topics.

Respondents expressed relatively lower interest in adding personal communication features to the site (blogging, tagging, and reading other users' comments); this finding is not surprising given the earlier results indicating that respondents do not typically participate in these online endeavors.

Table 24  
Interest in Potential New Website Functions

	<b>Average Rating (Scale: 1 to 10)</b>
Search by Content Area	8.32
Displaying links to related NOVA scienceNOW content	8.29
Search by Feature Type	8.10
Video content that can be downloaded and remixed	6.32
Ability to customize home page to reflect content of personal interest	6.25
E-Mail to a Friend	6.00
Rate a feature or video	5.57
User comments	5.37
Tagging	5.24
Blogging	3.46
N=125	

Recall that respondents' typical internet behavior varied by age groups. Not surprisingly, different age groups also provided varying feedback about their interest in the above-listed features.

- Respondents under 18 years old expressed significantly more interest than did those 55 and older in rating a feature or video (8.25 vs. 4.38) and in user comments (7.88 vs. 4.25).
- Those under 18 years of age and aged 35 to 54 years (8.76 and 6.87, respectively) expressed more interest in being able to customize the home page than did respondents 18 to 34 and those 55 years and older (5.39 and 4.54, respectively).

In a follow-up question, respondents were asked to provide additional feedback about the blogging feature by sharing feedback about who the blogger should be. Respondents were most interested in the possibility of having a scientist fill the role of blogger (average rating = 8.36 out of 10), followed by a journalist (5.71 out of 10), and an everyday person (4.49 out of 10).

## SCIENCE CAFÉS: FOCUS GROUPS WITH ORGANIZERS AND PARTNERS

Since the first season of NsN, WGBH has offered Science Cafés as a way to help increase the public's engagement with science in general and with NsN content in particular. Science Cafés are informal events that bring scientists face-to-face with the public to talk about a current science topic. They typically begin with a short presentation from the scientist and then unfold in a variety of ways to encourage the participation of Café attendees.

Currently there are approximately 100 Science Cafés in the United States, and interest in this outreach model continues to grow. Across the three years of the NsN initiative, WGBH has taken a lead role in growing and strengthening Science Cafés in the United States. Support is provided at the individual Café level, as needed and requested. In addition, WGBH convened the first conference of Science Café organizers held in the United States in 2006.

In June 2008, WGBH and Sigma Xi co-hosted the second U.S. conference on Science Cafés, which brought together both seasoned and prospective Café organizers to learn more about and discuss the Science Café movement and its resources. The conference began with a Science Café hosted at a local bar on a Friday evening. This event served as a model for moderating Cafés, and provided the chance for attendees to get to know each other in an informal context. The conference continued with an all-day meeting on Saturday that was divided into several sessions related to starting and hosting a Science Café.

As part of our evaluation of NsN, GRG attended the conference in its entirety. During the final Saturday session, GRG conducted four focus groups with participants to document the perceived successes and challenges in organizing cafés, the role of the national partners, hopes for the science café movement, and feedback about the conference itself.

The GRG team used a semi-structured focus group protocol, developed in consultation with NsN, to moderate the groups. The NsN team helped organize attendees into one of the four focus groups, based on their role and tenure with Science Cafes: new organizers, seasoned organizers, potential organizers, national partners. All focus groups were audio-taped.

Results from the focus groups were initially reported to WGBH in a verbal telephone debrief shortly after the conference. A written summary of evaluation findings was then submitted in November 2008. The section that follows presents the complete results from the focus groups.

### FEEDBACK ABOUT THE CONFERENCE

Participants highly valued their conference experience. In particular, they appreciated the opportunity to be together at the conference, to go to a Café, and to participate in a focus group to discuss their Café experiences.



*“I think the face to face interaction is priceless at this point especially that the movement is so young.”*

*“I am very grateful because I have been working so much in isolation and have never attended another café other than my own; [It is] great to have the opportunity to feel that we have peers.”*

All participants reported that their expectations for the conference had been met. They also complimented WGBH on putting together a well-organized meeting, and they particularly appreciated the Friday night Science Café. Attendees used the words “excited,” “renewed,” “organized,” “positive in its informality” to describe the event and its influence on them.

*“My expectations were definitely met. I had been trying to start a cafe for a year but I had all these barriers and fears. The biggest fear was trying to identify scientists in the community who would be dynamic. Literally trying to come up with names at the top of my head, trying to find a venue where it would be well-received. I’m excited about the discussion to explore other ways and to take science into the community.”*

*“I feel renewed, I forget that I’m in touch with this world wide network, it’s nice to have been reminded.”*

*“This exceeded my expectations. What I expected was a fun passionate overwhelming group. It was organized in such a way that it allowed people to speak for who they are. Promoted dialogue difference, letting community build itself around its common point – that cafés are really unique to their own context...”*

Networking was named by Café organizers and partners alike as one of the greatest benefits of the conference. For example, one attendee said, “I appreciated having the chance to meet people with whom there is great potential to work.” Others noted that a primary motivation for attending the Conference was to connect with others in the community, to learn ways to expand what they are doing from the experiences of others, and – for those who have not yet organized Cafés – to explore whether Cafés are an option for them. Specific examples of the information attendees hoped to learn from the Conference included:

- Ways to incorporate interactive elements into existing Cafés,
- Ways to get into new communities globally,
- How Science Cafés fit in with the public engagement in science model, and
- Ways to foster the Science Café idea in organizations where the membership and leadership structure turn over every few years.

Though the majority of the feedback provided about the conference was positive, attendees also made suggestions for ways that the conference could be improved. These included the addition of smaller and more focused discussion groups (for example, a group focused on museum settings), providing time to have informal/impromptu sessions where participants could hear more about what

others are doing, and less repetition/redundancy in topics and conference sessions. Examples of these comments included:

*“Would have loved to know who’s here and what they are working on.”*

*“Was expecting more hands-on, interactive sessions, like we would have people jump up and try moderating and get feedback, more of those experimental things instead of more of a symposia.”*

*“I think smaller more focused discussion groups would have been good.”*

## **SUCCESSSES AND CHALLENGES IN ORGANIZING SCIENCE CAFÉS**

Each focus group with Café organizers asked participants to share their successes and challenges. This was an opportunity for seasoned organizers to share their experiences with one another. It also provided a chance for newer and potential organizers to hear from those who have more experience, and then think strategically about the successes and challenges they foresee with their own Café.

Seasoned organizers identified three key successes related to their Cafés:

- The identification of good topics and speakers,
- Having a diverse group of participants who attend Cafés, and
- Forming successful partnerships to promote and support their Café, including their relationship with WGBH.
- In addition, attendance was described as both an indicator of success and a challenge.

### **Topics and Speakers**

Seasoned Café organizers believed that they had identified several successful topics for their Cafés, and some noted their success with particular types of speakers. For example, dark matter was a Café topic on which multiple organizers reported having a successful Café. One organizer shared the following success story:

*“I judge I whether or not individuals are engaged- our biggest successes have been certain topics or speakers. We had one called “Robots are us” and he had a robot that danced and a robot dog. We had kids, young people, and old people. The topic was “What would take to get androids like in the movies?” He laid it out very clearly and people had a good time talking about it...I would love to find more topics like that.”*

Others have introduced topics that go beyond “hard science.” These topics were considered particularly effective at adding a human dimension to engage the audience. Organizers did add, however, that these kinds of Cafés can be disappointing for some who feel they did not get a “real” science experience.

## Diversity of Perspectives

For most organizers, a Café experience feels successful if they have a diverse group of participants with a variety of perspectives in attendance. The perceived power of diversity is exemplified by the following Café summary:

*Darwin day – it was kind of a broad evolution topic; had about 90 people with many different perspectives come out to that Café and there were so many misconceptions that were cleared up. There were Intelligent Design folks who were cooperative and who were interested in hearing facts and were moved by the presentation from the scientist and so I felt that was such an impactful and mind-changing, inspiring, discussion for everybody that it was a success.*

## Partnerships

Organizers also cited their partnerships with other groups as an indicator of their Café's success. Café organizers are supported, for example, by both the institutions and institutional networks with which they are affiliated (e.g., museums, academic communities). Organizers have leveraged these relationships to help identify speakers, disseminate information, and to provide general support for their Café.

The support received from WGBH has been particularly helpful to Café organizers. Organizers were especially positive about the WGBH contact person's accessibility, personal attention, and enthusiasm for Cafés. They also believed that the WGBH name has added legitimacy to the Science Café movement and to their individual efforts.

*“Even though I got a \$500 grant it was more beneficial to me to know that Ben would take my phone call and help me, especially in the early stages. That has been the most value to me – that there is a personal person on a national level that is looking out for me.”*

*“WGBH Boston- in addition to resources and information- has helped add to the legitimacy to my organization. If I can put the partnership on a press release, that is a pretty strong credential.”*

## Café Attendance

Café attendance was cited as both a success and a challenge for Cafés. Throughout the meeting, organizers cited Café attendance as a measure of their success. When asked directly about whether and how attendance was meaningful to them, organizers noted that it was a more important metric for accountability (e.g., to a CEO or an institution) than a determining factor in whether an attendee had a good experience at the Café.

Though high attendance may be a meaningful metric for administrators, some organizers cited it as their primary challenge. Several noted that it is challenging to manage the growth of their Café. Specific challenges included the impact of large audiences on the quality of conversation at the Café, deciding whether to limit attendance, continuing to hold their Cafés in the same venue or expanding to include new venues, and making decisions about whether to focus on regular attendees or reach out to new audiences.

The focus group also provided an opportunity for organizers to share the challenges they face in hosting a Café. Seasoned organizers shared their direct experiences, while those who plan to start a Café in the future shared their expected challenges. In many cases, the experienced and expected challenges were identical. These included:

- Promoting Cafés to attract an audience,
- Funding and people power, and
- Whether and how to change the format of their Café.

### **Café Promotion/Attracting Audiences**

Seasoned and new organizers both shared the challenges related to promoting cafés and bringing in new audiences. The shared concern among all organizers was best phrased by one respondent who said, *“If you build it, will they come?”*

Though this was the overall sentiment, organizers shared different challenges based on their tenure with the Café movement. Seasoned organizers, for example, discussed challenges related to bringing new audiences to their Café; allowing access to Science Cafés via nontraditional forms, such as web casting and podcasting, were being considered by this group as a way to reach new audiences. New organizers focused on ways to begin building a Café community, such as finding a niche for their Café, and successful promotion strategies.

### **Funding and People Power**

Not surprisingly, obtaining funding for Science Cafés was named as a common challenge for organizers. The funding required to host a Café was a topic of conversation throughout the event, and contrasting views were shared about the “expenses” involved. Though funding is a concern for all, several seasoned organizers noted that the amount of money required to operate a Café is minimal. The greater expense related to running a Café seems to be the people power involved, and there was some debate about the importance of acknowledging the value of this resource. Funding, time, and the unanticipated costs associated with operating a Café were each listed as challenges.

### **Format**

Organizers also shared their challenges in deciding upon the ideal format for their Cafés. This topic was often mentioned in relation to the Friday night Science

Café, which was moderated by an organizer who has a different style from that used by many conference attendees. For example, a potential organizer said:

*“It seems quite a daunting task...to get the skills together to successfully moderate a meeting like this...Some people may be naturally very good at it, other people may not have the skills to control things, make sure it flows. That’s a skill that, unless you have the opportunity to go to lots of other cafés and see how they do it, it might actually be quite difficult to start off.”*

The need to find good speakers and moderators was a challenge cited by several new organizers. Seasoned organizers, in contrast, shared challenges related to changing the overall format of their Café. For example, one mentioned a fear of negative attendee reactions as they move away from their tried-and-true PowerPoint presentations to a more open format.

## **FEEDBACK ABOUT “NATIONAL PARTNERS” AND THE “SCIENCE CAFÉ MOVEMENT”**

Each focus group also discussed the idea of having National Partners to support Science Cafés and whether there is such a thing as the Science Café movement. Attendees provided mixed reactions to each concept.

### **National Partners**

Responses to this line of questioning indicated that the use of the title “national partners” may be a misnomer. Most of the attendees in the National Partner focus group, with the exception was the Sigma Xi representatives, did not view the institution with which they were affiliated as a national partner.<sup>3</sup> Similarly, Café organizers were not aware of the organizations that are considered National Partners or the resources that partners have to offer.

Those in the National Partner focus group went on to debate whether there should be an organizational structure to support Science Cafés. The consensus seemed to be that some infrastructure help would be nice, but there was also a wariness of anything prescriptive that might put limits on what they can do.

*“You may lose some of the spontaneity and some of the goal or the original impetus for the movement. Once you start to get too organized, then you start to get too structured, and then you start to get into a thing where your café isn’t what you intended it to be, because you put in by-laws and policy and procedure manuals.”*

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<sup>3</sup> These included Sigma Xi, COPUS, CAISE, and Society of Physics Students, and Café Scientifique.

Organizers echoed this sentiment. They favored the idea of local control compared to having too much structure imposed by a national partner. In explaining their attitudes, they noted that Cafés happen for different reasons, and have different organizational missions:

*“I think every region is different, so you couldn’t have the same structure.”*

*“It’s good to share resources, but sometimes, some of these things [cafés] are happening for different reasons, and as long as that’s understood, I think that’s fine.”*

*“I think the beauty of this whole thing is that everyone is doing it a bit differently. As long as the differences continue, it will continue to grow. As soon as there is a manual, as soon as it is cookie cutter, I’m gone. The fact that they are all a bit different, with different goals - that is the strength. We’re in trouble if there is a national foundation.”*

*“I think an umbrella would be good- a consortium of people that do it.”*

### **The Science Café Movement**

Participants spoke animatedly about whether there is or is not a Science Café movement. Most agreed that the grassroots nature of Science Cafés is appealing. Although they believe that more information and resources should be available for those who wish to start a Science Café, they fear that formalizing it would change the nature of Cafés in a negative way. Feedback on this topic included:

*“I fear that the informality would be lost – something that happens when big organizations formalize organic movements. The strength is in its informality.”*

*“They’ll become codified and homogeneous; lose the grassroots and uniqueness of their cafés.”*

*“A ‘movement’ will lose the grassroots nature and informality.”*

*“Different styles are important.”*

In thinking about where the Science Café movement might go in the next five years, conference attendees hoped to see increased public awareness and recognition of Science Cafés.

*“It would be great if science cafés weren’t an anomaly, but as common as book groups.”*

*“I’m a bit skeptical of these lofty goals for within 5 years. It would be a good goal for within 5 years for the café movement to gain any sort of mainstream attention for people to think of, ‘Hey, maybe I’ll go to that science café thing I heard about.’”*

*“There’s not going to be millions of Americans doing this, but it would be great to say “I’m going to a science café” and someone say “oh cool-what’s the topic” and maybe go with you.”*

Participants also hoped that, through cafés, there would be increased buy-in regarding the importance of science in the public discourse, such that science would become more accessible and more relevant. Some attendees also stressed getting the word out to a younger generation, and getting them engaged in the science café movement.

*“Bring science back to the forefront of a lot of people’s minds”*

*“Science is relevant and you use it all the time in your daily life... revitalizing an interest in science for the general person”*

*“Influencing the national dialogue to include more science-based kind of issues.”*

*“I want to see that everyone is an advocate for science and feels that it is the future of the United States and that it is where we are going to get our economic value from and it is where our quality of life is going to be maintained and where we want our kids to have careers.”*

*“I would like for the movement to be an advocate for science and reason in this era of attacks on evolution and science. As I see it we are defenders of science in an era that has not been that friendly to science.”*

## **FEEDBACK ABOUT ENGAGING THE PUBLIC IN SCIENCE**

Participants in the National Partners focus group reflected on a discussion from earlier in the day about the divide between “public understanding” and “science engagement.” This distinction was characterized as the difference between expert scientists discussing a topic with the interested public and non-experts talking about science. Some noted a fundamental difference between *understanding* and *engagement* and noted that Science Cafés play a role in helping to bridge this divide.

*“Engagement of the public with science and history is actually dialogue where you make people equitable. It’s not that the scientific community looks at the public and says we need to fill their ignorant heads with science. It’s more that we need to engage scientists and the public so we can all learn.”*

*“The beauty [about science cafés] is that it takes the conversation about science into places where people are already chatting. Science cafés help bring conversations about that into conversational setting. It reduces the “sage on the stage.” The goal of having these conversations is to make it a part of normal discourse. NOVA ScienceNOW, because it can get*



*into people's living rooms, has a tremendous potential to bring that about."*

Regardless of the perspective, those in the National Partner focus group agreed that a goal of the café is *"to humanize and showcase the science."* That said, representatives from Sigma Xi noted that there appears to be a disconnect between what scientists say they want to accomplish through Science Cafés and their perception of what Science Cafés do. For instance, they are in favor of programs around public understanding of science and yet they rated Science Café programs low on their list of such programs. This representative noted that much work needs to be done to educate scientists about the purpose of Science Cafés.

## **LOOKING FORWARD: NEXT STEPS FOR SCIENCE CAFÉS**

Though attendees were cautious about the idea of national partners and a Science Café movement, they did share their interest in having WGBH (and others) continue to support their work.

First and foremost, participants were in favor of an annual meeting. Virtually all would like to see some sort of annual event. This sentiment was exemplified by an organizer who said, *"To me, this conference has been incredibly helpful, because it's one thing to look at a website or get an email or try to go on a listserv, but to get together, to talk in person, hear people's stories..."*

Though there was unanimous support for the idea of meeting in person on a regular basis, some worried that an annual conference would make things too formal. Suggestions were to have a web event, regional conferences, and/or a follow-up meeting six months after the June 2008 event. Attendees were not interested in having the conference at WGBH every year; instead, they suggested the possibility of having different, unique cafés host each event.

In addition to an annual conference, attendees were interested in having ongoing opportunities for conversation with other Café organizers. Suggestions for topics and resources included:

*"Those of you that have been doing it for a long time, it would give those of us who are just starting out somebody to lean on."*

*"Only 10 or 15% of people are likely to be active on such a list, but they're usually people who have something worthwhile to say."*

*"If somebody's already invented the wheel, why do I have to reinvent it? If we can share resources - that would cut down on a lot of our stress level about the infrastructure."*

In addition to providing networking opportunities, attendees suggested that a listserv or discussion board would be the best way to learn about new resources that are available from national partners. Attendees were specifically interested in Sigma Xi's toolkit and speaker list.



There were three key ways that focus group respondents envisioned national partners in the science café movement: 1) as publicists and legitimizing agents of the effort, 2) as sources of leverage for funding, and 3) as spear headers of evaluation and record keeping of the movement as a whole.

Another theme expressed by a small number of attendees was the supportive role national partners could play in a variety of ways, including nurturing new cafés, supporting cafés in developing countries, serving as a portal for individual café websites, and helping foster knowledge exchange. That said, some organizers cautioned partners to make open and strategic decisions as they move forward. Two such comments included:

*“I think I would really like to know from the national/international partners what they are looking for....the first international group that tried to take this role was the magazine The Scientist. They were really aggressive and there was a lot of pushback and it folded. I think that spirit still exists- we’re independent, we want to be friends. The real question is, ‘What are GBH’s motives?’ I’ve already heard GBH needs a giant NSF grant and they need an outreach component and we’re it. I want to hear if that is the truth. There are a lot of interested organizations- I want to know what they want from me.”*

*“Just at this very conference...there’s just so many of these large, national organizations already. And if they don’t acknowledge that they all exist, then it just becomes another email list that you make sure you click not to answer the emails....Develop methodology for making sure that they’re not all trying to do the same thing at the same time. It can become overbearing if there are too many of these organizations; and they’re good organizations.”*

## SUMMARY AND RECOMMENDATIONS

The results from the Season Three summative evaluation of NOVA scienceNOW demonstrate the continued success of the series and website at providing meaningful experiences to their respective audience. Both the viewing and Web audiences continue to identify NOVA scienceNOW as a program designed to present cutting edge science information in a way that is accessible to all audiences, and they rate both resources quite positively.

In addition to producing media, the WGBH team also provides support to Science Café organizers from around the country as part of the NOVA scienceNOW initiative. Feedback gathered from this audience confirm the importance of the role that WGBH plays. A summary of results for each of these NsN offerings is presented below, along with GRG's recommendations.

### THE SERIES

Though the evaluation confirmed some common themes from across the television series and website, it also highlighted the specific successes of each. For example, the fact that all 18 Season Three television segments were selected by at least a small number of viewers as their “favorite” from the new season indicates that the series was successful at meeting the varied interests of its audience. Similarly, viewers responded favorably to the new format of the profiles included in Season Three - these segments were rated almost as positively as the series itself.

Opinions of certain program segments were even more positive when results were presented by age group and gender. For instance, younger viewers (those 18 years or younger) gave the highest ratings for the extent to which the summer season expanded their perspective on what it means to be a scientist. Additionally, older viewers and women tended to enjoy the profile segments more than younger viewers and men.

Each season, the evaluation has demonstrated that NsN has a positive influence on viewers' science knowledge and their engagement with science. The results from Season Three continued this trend. The quizzes indicate that viewers can recall several of the details presented throughout the various segments, with recall of the most recent episodes being higher than episodes viewed earlier in the season. Questions related to science engagement confirmed viewers' plans to continue seeking out more related information and sharing the information with others.

***As in the past, GRG's primary recommendation is for the production team to continue using their successful formula for creating NsN programs.*** The results from this report may also provide hints for ways that NsN can continue to strengthen its reach to particular groups. For example, survey results indicated that women and younger audiences had differential reactions to particular NsN content. Both of these audiences are traditionally under-engaged in science, and thus each is of great interest to the science education community.

***In its fourth season, GRG recommends that the NsN team explore ways to continue and possibly strengthen the program components that resonate with these groups of viewers.*** Conducting focus groups with these groups, for example, might help identify the content and/or story format that is of most interest to these groups. The NsN team could then use this information to develop future segments and/or other NsN resources that would help sustain and grow interest in the program among these key audiences.

## THE WEB SITE

The NOVA scienceNOW website continues to have a loyal following. Both new and returning visitors provided positive feedback about the site, and returning visitors indicated that the NOVA and NsN sites are their primary sources for online science content.

This season's evaluation also provided new information about NsN visitors' typical online behavior. NsN visitors use the Internet on a regular basis for information-gathering purposes, with most reporting that they regularly use the Internet to stay up to date on science and news.

A consistency between the series and web evaluations was the identification of differential interests, based on audience age group. For example, younger audiences were more likely to use the Internet regularly for a wider variety of tasks. Similarly, while all website visitors would like more and full-length video options to be included on the site, younger visitors were interested in the addition of features that include personal interaction (e.g., rating NsN segments, customizing the home page).

***GRG recommends that the NsN Web team use the data collected by this evaluation to create new features that will appeal to younger audiences.*** The NsN website already has several features that appeal to the traditional PBS audience. Using the results from this evaluation to add features that will appeal to younger audiences will strengthen the overall reach of the site, without alienating traditional visitors.

***If feasible, GRG also recommends that the NsN team include more video clips on the site and full-length episode options.*** Website visitors have made this request each season. Based on the results from this evaluation, the addition of these resources would appeal to younger and more traditional audiences alike.

## THE SCIENCE CAFÉS

Results from the Science Café focus group indicate that NsN plays a key role in the Science Café community. WGBH received accolades for its role in supporting both the conference for Café organizers and for the Science Café movement overall. The Conference and focus group also provided the opportunity to document the success of individual Cafés across the country, and identify the community's needs for additional support.

As a group, stakeholders agreed that the Cafés are a mechanism for promoting greater public understanding and appreciation of science. Café stakeholders hope to see the concept of the Science Café become a household name within the coming years, while allowing each Café to retain its local individuality and freedom.

Though stakeholders were cautious about the idea of national partners and a Science Café movement, they also shared the need to continue receiving support for their work. WGBH is poised to continue leading this effort. ***GRG recommends that WGBH continue to support Science Cafés through their hands-off, grass roots approach.*** The NsN team was very conscious of acknowledging and honoring the grass roots nature of the Café community as they planned the 2008 conference. Given that attendees were so pleased with the event, it seems likely that WGBH could use similar approach to offering support in other ways. In particular, Cafés would benefit from strategic and open communication about the National Partners and the ways in which Partners can support Café efforts.

***GRG also recommends that the NsN team support ongoing communication among Café organizers.*** This report includes a number of suggestions for ways that organizers would like to interact and share the successes and challenges for their individual Café efforts. WGBH has already begun responding to these interests by adding features to its sciencecafes.org website. Continuing to respond to organizers' requests, when feasible, will help reinforce the role that WGBH and NsN play in the Café community.

# APPENDIX

**NOVA scienceNOW  
Feedback Survey  
Summer Season 2008**

**1. If you were to describe the NOVA scienceNOW series to someone who had never seen it, which two phrases would you use to describe the purpose the show:**

- 1=To introduce viewers to cutting edge science topics
- 2=To demonstrate the importance of staying up-to-date about science research
- 3=To encourage viewers to engage with science
- 4=To combat negative stereotypes about scientists
- 5=To demonstrate the various implications of science
- 6=To make science approachable for all viewers

First phrase: \_\_\_\_\_

Second phrase: \_\_\_\_\_

**2. Which of the following is true about your experience with each NOVA scienceNOW topic?**

	<b>This was the first time I learned about this topic.</b>	<b>I had some knowledge about this topic before watching.</b>	<b>I did not watch this segment.</b>
Dark Matter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research on restoring memories in mice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Digital forensics and photography: on MQP it says this then "expert Hany Farid."	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Genetic testing to identify diseases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detecting art forgeries with digital technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creating artificial trees to gather carbon dioxide from the air	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The next Hubble mission (to repair the camera)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Identifying the earliest primate as a mouse-like animal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Iraqibacter bacteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research on communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

between birds			
Space weather and its effects on the Northern Lights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing bridges that could help foresee potential collapse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using leeches to aid in healthcare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Searching for intelligent life using SETI technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advances in stem cell research with skin cells	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Mammoth mystery fossils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Phoenix Mars Space Mission	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**3. Do you prefer to watch NSN:**

- On television, at the time of the broadcast
- On DVR
- Online

**4a-c. What were your three favorite stories from this summer’s season of NOVA scienceNOW?**

[Have three separate drop down boxes here, each of which lists all topics]

**4d. Why were those stories your favorites?**

**5a-c. What were your three least favorite stories from this summer’s season of NOVA scienceNOW?**

[Have three separate drop down boxes here, each of which lists all topics]

**5d. Why were those stories your least favorites?**

**The 2008 Summer Season of NOVA scienceNOW included six new episodes. You have just rated the topics covered in these episodes on the previous page. These episodes were broadcast in June and July 2008. For the remainder of this survey, we refer to these six episodes collectively as the “Summer Season.”**

**6. Overall, how would you rate this summer’s season of NOVA scienceNOW?**

- Poor**      **Fair**      **Good**      **Very Good**      **Excellent**
- 

**7. In one or two sentences, please describe the most important or exciting thing you learned from this summer’s new NOVA scienceNOW episodes:**

**8. How difficult or easy to understand was the content presented in the NOVA scienceNOW episodes that you watched from the summer season?**

- Very difficult to understand
- Fairly difficult to understand
- Fairly easy to understand
- Very easy to understand

**Each NOVA scienceNOW episode includes a segment that profiles a scientist and his/her work inside and outside of the lab. The summer season’s profiles included:**

- Digital forensic scientist, Hany Farid,
- Pardis Sabeti, a genetic researcher and singer,
- Dr. Alfredo Quiñones-Hinojosa, a brain researcher and neurosurgeon who emigrated to the U.S. from Mexico,
- Neurobotics researcher Yoky Matsuoka,
- Marine-bioluminescence specialist, Edith Widder, and
- Judah Folkman, a revolutionary angiogenesis specialist.

**9. How interesting did you find the profile segments from the Summer Season?**

- Not at All     A Little     Somewhat     Very  
 Extremely

**10. Which profile was your favorite?**

- Hany Farid
- Pardis Sabeti
- Dr. Alfredo Quiñones-Hinojosa
- Yoky Matsuoka
- Edith Widder
- Judah Folkman

**11. Why was that one your favorite?**

**12. How effective were the NOVA scienceNOW Summer Season episodes you watched at:**

	Not at All	A Little	Generally	Very	Extremely
Increasing your interest in science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increasing how motivated you have felt to learn more about current events in science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increasing the extent to which you have sought out science-related	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



learning experiences					
Expanding your perspective of what it means to be a scientist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**13. During the NOVA scienceNOW Summer Season, have you:**

	No, and I don't plan to	Not yet, but I plan to	Yes, I have done this
Discussed NOVA scienceNOW topics with family, friends, or colleagues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recommended the NOVA scienceNOW program to others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Read a book about a topic from NOVA scienceNOW	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tried to stay more up-to-date on cutting edge science topics in general	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Watched science-based television programs more often	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visited other Web sites to learn about a NOVA scienceNOW topic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attended a NOVA scienceNOW Science Café event or another presentation on a science topic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**14. During the Summer Season of NOVA scienceNOW, how many times have you visited the NOVA scienceNOW Web site?**

- Today is my first time
- Two or three times
- Four or five times
- More than five times

**15. Are you:**

- Female
- Male

**16. HOW DO YOU DESCRIBE YOURSELF? (CHECK ALL THAT APPLY.)**

- Caucasian or White
- Latino or Hispanic
- African-American or Black
- Asian or Pacific Islander
- Native American
- Other (describe)

**17. What is your age?**

- 17 or younger
- 18-34 years
- 35-49
- 50-64
- 65 or older



## Episode 1 Quiz

### 1. How do scientists know that dark matter exists?

- a. It creates a gravitational force that is measurable and different from ordinary matter.
- b. Scientists have recently detected dark matter by working in underground labs where dark matter can be isolated.
- c. [Dark matter affects things that we can see, and so we know it is there even though we can't see it.](#)
- d. The particles that make up dark matter have been identified and scientists are working to determine what it is made of.
- e. Don't know/don't want to answer.

### 2. Which of the following is true of dark matter?

- a. [There is five times more dark matter than ordinary matter.](#)
- b. Dark matter is found out in space but not here on Earth.
- c. Dark matter is made of atoms.
- d. Our galaxy would still exist without dark matter.
- e. Don't know/don't want to answer.

### 3. Gravitational lensing is a technique [\(or is it a theory?\)](#) that has been used to:

- a. Identify the temperature at which dark matter can be detected.
- b. Measure the gravitational pull of ordinary matter.
- c. Demonstrate that gravity doesn't pull in straight lines.
- d. [Create a map of dark matter.](#)
- e. Don't know/don't want to answer.

### 4. Which of the following has NOT been shown to help mice regain their memory for how to perform a water maze task?

- a. Caffeine.
- b. Environmental enrichment (from toys, being housed in groups, etc.).
- c. Drugs that help activate memory cells.
- d. [Training in a similar task.](#)
- e. Don't know/don't want to answer.

### 5. What is this a model of? [\[Show model of the histone and DNA coil\]](#)

- a. [A protein in the brain.](#)
- b. A strand of DNA in the brain.
- c. A neuron in the brain.
- d. A memory receptor in the brain.
- e. Don't know/don't want to answer.

**6. What have researchers concluded about this protein model thus far? [show jpg of histone DNA model from the memory segment here]**

- a. The faster the DNA moves around the histone, the better the learning and memory.
- b. The slower the DNA moves around the histone, the better the learning and memory.
- c. The looser the coils of DNA around the histone, the better the learning and memory.
- d. The tighter the coils of DNA around the histone, the better the learning and memory.
- e. Don't know/don't want to answer.

**7. How do digital forensic scientists tell if part of a picture has been cloned?**

- a. By looking at the pixel patterns to see if any areas in the photo are an exact match.
- b. By looking at the patterns of light and shadows in the picture to make sure they match.
- c. By looking for artificial layers in the original photo under an electron microscope to make sure nothing has been added or removed.
- d. By looking at the size of the pixels throughout the photo to make sure the size is an exact match throughout.
- e. Don't know/don't want to answer.

**8. What is the goal of the burgeoning field of digital forensics?**

- a. To prevent the forging of digital images.
- b. To ensure the authenticity of digital images.
- c. To improve our ability to use digital photography to solve crimes.
- d. To create an algorithm that detects all forms of digital forgery.
- e. Don't know/don't want to answer.

**9. Look at this picture of Neil Degrasse Tyson with [insert name here once photo is identified]. Do you think it is real or a fake? How do you know?**

- a. I think it is real because the flash is the same in their eyes.
- b. I think it is real because the lighting in the background is the same in both pictures.
- c. I think it is fake because you can tell that her shoulder isn't really touching his jacket.
- d. I think it is fake because the angle of the light is different for the two of them.
- e. Don't know/don't want to answer.

**10. How do we know that there is wisdom in a crowd?**

- a. If you ask a group of at least 100 people to guess the correct answer to an estimation question (like the number of jellybeans in a jar), at least one person will guess the correct answer.
- b. If you ask people to guess the correct answer to an estimation question (like the number of jellybeans in a jar), people are more likely to guess the correct answer if they come to consensus as a group than if they work on their own.
- c. If you ask people to guess the correct answer to an estimation question (like the number of jellybeans in a jar), the answer that is received most often (i.e., the mode) will be the correct answer.
- d. If you ask people to guess the correct answer to an estimation question (like the number of jellybeans in a jar), the average of the answers you receive will be the correct answer.
- e. Don't know/don't want to answer.

## Episode 2 Quiz

### 1. What do single nucleotide polymorphisms (SNPs) tell geneticists about a person?

- f. Her life expectancy.
- g. How healthy she is.
- h. The different races that make up her family tree.
- i. The likelihood that she will develop a particular disease.
- j. Don't know/don't want to answer.

### 2. Which of the following best describes the controversy surrounding genetic risk testing?

- f. It will lead women to terminate their pregnancies early.
- g. It only identifies general risk of developing particular diseases.
- h. The process is an invasion of a person's privacy.
- i. Twin studies have shown that it is not yet an accurate measure of disease.
- j. Don't know/don't want to answer.

### 3. How does genetic testing for disease work?

- f. It identifies the overall number of SNPs you have.
- g. It identifies whether you are missing SNPs.
- h. It identifies how your SNPs work
- i. It identifies the pattern of SNPs you have.
- j. Don't know/don't want to answer.

### 4. Computer scientists have recently shown that:

- f. Paintings can be reduced to numbers that are unique to an artist.
- g. Van Gogh forgeries often have too few brush strokes compared to the real thing.
- h. Topographical scans indicate patterns that are unique to an artist.
- i. It is possible to match the age of the artist's signature to the age of the painting.
- j. Don't know/don't want to answer.

### 5. Which of the following is NOT used by computer scientists to detect a forged painting?

- f. Contrast patterns.
- g. Brush stroke patterns.
- h. The oxidation of the paint used.
- i. Spontaneity of the brush strokes.
- j. Don't know/don't want to answer.

**6. What is needed to create a statistical model of an artist's painting style?**

- f. Enough paintings to create a baseline.
- g. A range of the different painting styles across an artist's portfolio.
- h. Pieces from an artist's work across time.
- i. Known forgeries that can serve as a comparison.
- j. Don't know/don't want to answer.

**7. Why do some scientists believe that we need to create synthetic trees?**

- a. Because they are more effective at taking in carbon dioxide than real trees.
- b. Because humans generate more carbon dioxide than real trees can take in.
- c. Because they can be used to prove that global warming really exists.
- d. Because real trees don't produce enough oxygen to support population growth.
- e. Don't know/don't want to answer.

**8. Why do scientists have to consider the "energy penalty" as they try to build synthetic trees?**

- a. To make sure the synthetic trees are producing enough energy to be worthwhile.
- b. To make sure the synthetic trees aren't consuming too much oxygen as they take in the carbon dioxide.
- c. To make sure the synthetic trees will generate enough energy to be self-sustaining
- d. To make sure the synthetic trees aren't using more carbon dioxide to function than they are taking in
- e. Don't know/don't want to answer.

**9. This episode featured a group of scientists from Global Research Technology, Inc. What are these scientists hoping to do with the carbon dioxide they collect from their synthetic trees?**

- a. Sequester it underground.
- b. Sequester it in special tanks under the ocean.
- c. Sequester it in minerals.
- d. Sequester it in specially-designed storage facilities.
- e. Don't know/don't want to answer.

**10. Which of the following is NOT an example of natural selection?**

- a. Sickle-shaped cells forming in African populations to protect against malaria.

- b. Peacocks' tails becoming long, heavy, and colorful as a survival mechanism.
- c. Europeans' ability to digest milk and thus take advantage of an additional food source.
- d. The camouflage pattern of the peppered moth that camouflages it from predators.
- e. Don't know/don't want to answer.

**11. Which of the following is true?**

- a. Geneticists are working to identify an algorithm that can identify natural selection, but they haven't cracked the code yet.
- b. Geneticists have recently discovered a way to identify natural selection in human genes.
- c. Geneticists have recently discovered a way to identify natural selection in sheep genes and they are now applying that model to human genes.
- d. Geneticists can look at current patterns in genes to accurately predict the characteristics that will be naturally selected within the two generations.
- e. Don't know/don't want to answer.

**12. How are geneticists applying the theory of natural selection to the study of malaria?**

- a. They are studying the genes of different populations of mice to determine why some are more likely to contract the disease.
- b. They are studying the genes of mosquitoes to determine what predisposes them to carry the disease and pass it along to humans.
- c. They are studying the genes of different malaria strains to chart its evolution.
- d. They are studying the genes of the malaria parasite to understand how it survives vaccines.
- e. Don't know/don't want to answer.



## Episode 3 Quiz

### 1. What is different about the upcoming Hubble mission compared to all previous missions?

- a. It will include two U.S. teams instead of having one U.S. team and an international team.
- b. The astronauts on the mission are going to repair the telescope instead of just replacing parts.
- c. The astronauts on the mission are going to upgrade the technology on the telescope instead of doing regular maintenance.
- d. The astronauts will be able to spend more time working on the telescope than they have before.
- e. Don't know/don't want to answer.

### 2. The best place to practice working in space is under water. Why?

- a. Space suits are too heavy to move around in if you aren't weightless.
- b. To get accustomed to the wear and tear that the space gloves will take on their hands as they work.
- c. To become accustomed to working in the space suit for long periods of time without food or being able to take a break.
- d. The buoyancy of the water helps astronauts learn the body positioning and skills they will need in space.
- e. Don't know/don't want to answer.

### 3. What role will the fastener capture plate play in the upcoming Hubble mission?

- a. It will help the astronauts make sure they don't lose any of the screws as they repair the Advanced Camera for Survey (ACS).
- b. It will make sure the astronauts are docked outside the Hubble and that they still have the mobility they need to repair the ACS.
- c. It will prevent the astronauts from stripping a screw while they are repairing the ACS.
- d. It will make sure the astronauts tools (e.g., the drill, their light source) don't float into and damage the telescope while they are repairing the ACS.
- e. Don't know/don't want to answer.

### 4. Which of the following is NOT a characteristic of primates?

- a. Larger brains.
- b. Forward-facing eyes.
- c. A four-chambered heart.
- d. Grasping hands or feet.
- e. Don't know/don't want to answer.

**5. What method are scientists using to isolate early primate bones in limestone?**

- a. Chiseling away the rock around the bone.
- b. Grinding the rock down using a high speed rotary tool.
- c. [Burning the rock away using an acid bath.](#)
- d. Cutting the rock away using an air chisel.
- e. Don't know/don't want to answer.

**6. Which of the following pieces of evidence did NOT contribute to the conclusion that a mouse-like creature is the earliest primate?**

- a. [The location where the fossils were discovered has yielded fossils from before and after the dinosaurs were distinct.](#)
- b. The creatures have nails rather than claws.
- c. The creatures have a tube leading to their brain that is found in other primates.
- d. An algorithm has demonstrated that this creature is part of the primate family tree.
- e. Don't know/don't want to answer.

**7. Which of the following is NOT a characteristic of baumannii (also known as Iraqibacter)?**

- a. It is a single-cell organism.
- b. [It is only found in Iraq.](#)
- c. It has become drug-resistant.
- d. It constantly reproduces.
- e. Don't know/don't want to answer.

**8. How does the baumannii get its genes?**

- a. By transfer from their "parent" bacteria.
- b. By being attacked by a baumannii bacteria.
- c. By reproducing in environments that contain baumannii bacteria.
- d. [By trading DNA with a baumannii bacteria.](#)
- e. Don't know/don't want to answer.

**9. Why do scientists want to isolate the genes that lead to lethal baumannii?**

- a. [To identify the genes that it is made of.](#)
- b. To learn how it reproduces so quickly.
- c. To document how baumannii communicates.
- d. To figure out how to "turn off" the lethal genes.
- e. Don't know/don't want to answer.

## Episode 4 Quiz

### 1. Why are scientists studying birds like the Australian Zebra Finch?

- a. Because their sound disorders are the same as human speech disorders
- b. Because the notes of their songs are similar to the structure of human words
- c. Because they learn to sing much like humans learn to speak
- d. Because their brains are different than humans but they process sounds similarly
- e. Don't know/don't want to answer.

### 2. Which of the following is the best explanation for why a bird would produce bug-like sounds?

- a. The bird is imitating bugs around it
- b. The bird is defending its territory
- c. The bird is wooing a mate
- d. The bird has a sound disorder
- e. Don't know/don't want to answer.

### 3. Which of the following is a promising theory as to why chimps have sign language but not speech?

- a. Lack of sociability is the prime factor in chimps not acquiring spoken language
- b. The word understanding and processing areas of chimp brains are not connected
- c. While chimps are intelligent, they are not intelligent enough to produce speech
- d. Chimps lack a specialized region of the brain devoted to the production of speech

### 4. What is/makes up solar wind?

- a. The weather cycles causing the Northern Lights
- b. The flow of air from the sun to the Earth's atmosphere
- c. Electrically-charged particles from the sun
- d. Gusty gales from solar flares
- e. Don't know/don't want to answer.

### 5. Why are 5 satellites being used for the Themis mission?

- a. In order to figure out the effect of substorms simultaneously at different locations around Earth
- b. In order to figure out the speed at which substorms travel to Earth
- c. In order to figure out how substorms break through the Earth's atmosphere at different locations around Earth
- d. In order to figure out exactly where substorms originate
- e. Don't know/don't want to answer.

**6. Why is it so difficult to forecast space weather?**

- a. Because weather patterns are unpredictable, even with space monitors
- b. Because of the time delay in transmitting data from space
- c. Because of the orbit patterns of the planets between the Earth and the sun
- d. Because we do not yet understand how space weather operates
- e. Don't know/don't want to answer.

**7. What is special about the prosthetic hands profiled in this episode?**

- a. They are designed to feel more like human hands than existing prosthetics
- b. They are designed to be controlled by nerve impulses
- c. They are designed to be controlled directly by the human brain
- d. They are designed to alleviate phantom limb symptoms
- e. Don't know/don't want to answer.

**8. What tools do scientists use to figure out the specific ways in which the human hand moves (for designing the prosthetic hand)?**

- a. Infrared cameras and reflective objects
- b. X-ray machines
- c. Gloves wired with tiny motion sensors
- d. Sound wave sensors
- e. Don't know/don't want to answer.

**9. Tensing and releasing our muscles while we do tasks generates:**

- a. Heat
- b. Electrical activity
- c. Sound waves
- d. Nerve tension
- e. Don't know/don't want to answer.

**10. What are the major limitations of strain gauges?**

- a. They function well for truss bridges but not arch bridges, so they aren't able to be widely used
- b. They only give one type of information about one spot on a bridge, so they can't warn scientists of imminent bridge collapse
- c. There is a time delay in data transmission, so they may warn scientists of danger when it is too late
- d. They have to be reapplied every year, so they are expensive to maintain
- e. Don't know/don't want to answer.

**11. Using sonar, how do scientists know if a bridge is damaged?**

- a. A cracked or broken bridge plate will produce extra sound tones

- b. A cracked or broken bridge plate will not produce sound tones, showing up as a blank spot on the sonar readout
- c. A cracked or broken bridge plate will produce sound tones inaudible to human ears
- d. A cracked or broken bridge plate will produce higher pitched sound tones than unbroken plates
- e. Don't know/don't want to answer.

**12. Using nanotechnology sensing skins, how might scientists detect spots where bridges are damaged or weakened?**

- a. The electrical current will not flow through the site of damage
- b. The electrical current will become much weaker at the site of damage
- c. The electrical current will become much stronger at the site of damage
- d. The electrical current will flow in a different direction at the site of damage
- e. Don't know/don't want to answer.

## Episode 5 Quiz

**1. Historically, leeches were used for all of the following EXCEPT:**

- a. Weight loss.
- b. Headaches.
- c. Fever.
- d. Infertility.
- e. Don't know/don't want to answer.

**2. Leeches produce a blood thinner as they eat blood. What purpose does this serve?**

- a. It keeps the food source from clotting while they eat.
- b. It keeps the blood from clotting in their stomachs.
- c. It helps them feed at a quicker rate.
- d. It dilutes the salt in the blood which aids in digestion.
- e. Don't know/don't want to answer.

**3. How are leeches being used in modern medicine?**

- a. To add anti-coagulate to an organism that has stopped producing it.
- b. To prevent an open wound from clotting prior to surgery.
- c. To help numb an isolated area without the use of drugs.
- d. To relieve pressure on tissue in an injured part of the body.
- e. Don't know/don't want to answer.

**4. Astronomer Frank Drake created an equation that was used to model the possibility of alien intelligence. What did the equation demonstrate?**

- a. Odds are good that we are not the only intelligent life form in the universe.
- b. Odds are good that, if it exists, extraterrestrial life will be discovered in the next 100 years.
- c. Odds are good that other intelligent life existed at one time, but not in our galaxy.
- d. Odds are good that, if extra-terrestrial life exists, we would have found it by now.
- e. Don't know/don't want to answer.

**5. Why are scientists at the SETI (Search for Extra-Terrestrial Intelligence) Institute using radio waves to look for extra-terrestrial life?**

- a. Because radio waves are the most basic signal that can travel across star systems.
- b. Because radio waves are more difficult to fake than other signals that could be used to detect intelligent life forms.
- c. Because radio waves focused on a narrow signal do not occur naturally and thus would have to be created by intelligent life forms.

- d. Because radio waves are only produced in a narrow band of frequencies and thus offer narrow but specific parameters for communicating.
- e. Don't know/don't want to answer.

**6. Why is the Allen Array more likely to detect extra-terrestrial life compared to previous methods?**

- a. It can look at a greater number of star systems at once compared to previous technology.
- b. It can detect a wider band of radio waves than previous technology.
- c. It can detect radio waves from a greater distance than previous technology.
- d. It can process radio wave data at a faster rate than previous technology.
- e. Don't know/don't want to answer.

**7. What effect do sickle cells have on the body?**

- a. They attack and kill off healthy blood cells.
- b. They don't deliver oxygen to the body as well as they should.
- c. They slow down the rate that blood travels through the body.
- d. They leech important nutrients from the blood.
- e. Don't know/don't want to answer.

**8. Which of the follow is NOT true of induced pluriopotent skin cells (IPs)?**

- a. IPs are virtually indistinguishable from embryonic stem cells.
- b. IPs are made with three or four out of 20,000 genes.
- c. IPs have been used to cure sickle cell anemia in mice.
- d. IPs will soon replace embryonic stem cells.
- e. Don't know/don't want to answer.

**9. What has been a major challenge in using IPs?**

- a. People are opposed to the use of IPs for moral and ethical reasons.
- b. Some of the original research was falsified and thus it is not as effective as originally thought.
- c. The virus used to create IPs can cause cancer.
- d. IPs only work with a limited number of diseases.
- e. Don't know/don't want to answer.

**10. Sea creatures use bioluminescence for all of the following EXCEPT?**

- a. To find food.
- b. To navigate.
- c. To attract mates.
- d. To ward of predators.
- e. Don't know/don't want to answer.

**11. Which of the following is NOT a characteristic of the Eye in the Sea camera?**

- a. It has red lights that most underwater creatures cannot see.
- b. It uses sound to attract underwater creatures.
- c. It entices underwater creatures with a bait box of dead fish.
- d. It mimics the way sea creatures use bioluminescence.



e. Don't know/don't want to answer.

**12. In addition to the Eye in the Sea camera, Edie Widder has another invention called Kilroy. What does Kilroy do?**

- a. It monitors the size of swells to help predict tsunamis.
- b. It monitors weather and its effect on underwater creatures.
- c. It monitors the impact of human life on neighboring coastlines.
- d. It monitors water quality and reports it back to land.
- e. Don't know/don't want to answer.

## Episode 6 Quiz

**1. Why does the University of Arizona team have a replica of Phoenix?**

- a. To launch if the first mission fails.
- b. To receive data from Phoenix.
- c. To educate the public about Phoenix.
- d. To pretest their experiments.
- e. Don't know/don't want to answer.

**2. What was the Phoenix mission most interested in looking for on Mars?**

- a. Hydrogen.
- b. Water.
- c. An ice field.
- d. A desert.
- e. Don't know/don't want to answer.

**3. Which of the following was the most important conclusion of the Phoenix mission?**

- a. Plant life could not be sustained on Mars.
- b. Microbes could be sustained on Mars.
- c. Microbes could not be sustained on Mars.
- d. Plant life could be sustained on Mars.
- e. Don't know/don't want to answer.

**4. Why are concussions so difficult to diagnose?**

- a. MRIs often won't show the brain damage from a concussion, even if patients have symptoms.
- b. The evidence of a concussion often disappears by the time a patient arrives at a hospital for an MRI.
- c. Concussions drastically differ from patient to patient, so there is no uniformity on how they appear on an MRI.
- d. Concussions often are asymptomatic, so patients fail to receive MRIs.
- e. Don't know/don't want to answer.

**5. White matter in the brain has which of the following functions?**

- a. It stores short-term memories.
- b. It coordinates movement.
- c. It carries water throughout the brain.
- d. It regulates the flight or flight response.
- e. Don't know/don't want to answer.

**6. A new tool to assess whether someone has experienced a concussion will measure:**

- a. The brain's ability to pay attention.
- b. The brain's ability to form new short-term memories.

- c. The brain's ability to execute rapid, repeated eye movements.
- d. The brain's ability to produce speech.
- e. Don't know/don't want to answer.

**7. Which of the following is NOT a characteristic of musth?**

- a. It is induced by hormones.
- b. It is displayed by female elephants.
- c. It causes elephants to eat less while they experience it.
- d. It occurs during mating season.
- e. Don't know/don't want to answer.

**8. The mammoths' tusks provided scientists with all of the following information EXCEPT:**

- a. The age of the mammoths when they died, based on the length of the tusks.
- b. The season in which the mammoths died, based on the thickness of rings on the tusks.
- c. The relative amounts of plant life versus water the mammoths were consuming at various points in time, based on the ratio of oxygen to carbon in the tusk samples.
- d. The size of the mammoths when they died, based on the diameter of the tusks.
- e. Don't know/don't want to answer.

**9. Once the scientists discovered that the mammoths most likely died during a musth-induced battle, what remained puzzling to them?**

- a. Why each mammoth had only one good tusk.
- b. Why the tusks had not broken in the 12,000 years since the battle.
- c. Why they died with their skulls locked together.
- d. Why the rings on the tusks were of different thicknesses.
- e. Don't know/don't want to answer.

**10. What was Dr. Folkman's hypothesis about how tumors grow?**

- a. Tumors are nourished by new proteins they recruit.
- b. Tumors are nourished by new blood vessels they recruit.
- c. Tumors are nourished by proteins they secrete.
- d. Tumors are nourished by existing blood vessels.
- e. Don't know/don't want to answer.

**11. Which of the following is NOT an outgrowth of Dr. Folkman's early work?**

- a. A connection between cancer and macular degeneration.
- b. The development of new cornea surgery procedures.
- c. The identification of anti-angiogenesis drugs.
- d. A potential diagnostic test for cancer.
- e. Don't know/don't want to answer.

**12. What was Dr. Folkman's ultimate goal in his work?**

- a. To treat macular degeneration.
- b. To establish the field of angiogenesis research.
- c. To devise an experiment to quiet his critics.
- d. To treat cancer.
- e. Don't know/don't want to answer.

Demographic questions included at the end of each quiz

**When did you watch this episode of NOVA scienceNOW?**

- Less than a week ago
- About a week ago
- Between a week and two weeks ago
- Between two and three weeks ago
- About a month ago
- More than a month ago

**How did you watch this episode of NOVA scienceNOW:**

- On television at the time of broadcast
- On DVR
- Online

**Are you:**

- Female
- Male

**What is your age?**

- 17 or younger
- 18-34 years
- 35-49
- 50-64
- 65 or older

**How do you describe yourself? (Check all that apply.)**

- African American or Black
- Asian or Pacific Islander
- Caucasian or White
- Latino or Hispanic
- Native American
- Other; please describe \_\_\_\_\_

## NOVA scienceNOW Website Survey

We invite you to take a few minutes to complete this survey and tell us what you think about the NOVA scienceNOW website. The information you provide about yourself and your opinions about the website will be very valuable in helping make this and future websites as useful and engaging as possible.

### **Please tell us about your visit to the website today...**

#### **How did you find out about the NOVA scienceNOW website?**

*(Check all that apply.)*

- Link from NOVA website
- Link from another site: Which one? \_\_\_\_\_
- Search
- Typed in URL
- Had site bookmarked
- Podcast
- Other \_\_\_\_\_

#### **How often do you visit the NOVA scienceNOW website?**

- This is my first visit
- Rarely (less than once a month)
- Occasionally (2-3 times a month)
- Frequently (once a week or more)

#### **Have you ever watched NOVA scienceNOW on television?**

- Yes
- No

#### **What were your primary reasons for visiting the NOVA scienceNOW website today?** *(Check all that apply for today and any previous visits.)*

- To learn more about the series
- To watch video stories
- To explore interactive content
- To see extra video clips
- To listen to audio podcasts
- To read program transcripts
- To browse and learn more about science
- To learn about new developments in science (Science News)
- To find information about a specific topic
- To learn more about scientists and how they work
- To review Ask the Expert pages

- To visit the discussion boards
- To share an idea or comment
- To help my kids with their homework
- To use for a part of a classroom lesson
- Other \_\_\_\_\_

**Below is a list of statements. Please rate how well each one describes the NOVA scienceNOW website, using a scale of 1 to 10, where 1 = does not describe the NOVA scienceNOW site at all and 10 = describes the NOVA scienceNOW site perfectly.**

Sets the standard of quality for science websites	1	2	3	4	5	6	7	8	9	10
Gives visitors current science information	1	2	3	4	5	6	7	8	9	10
Presents science in a way that is easy to understand	1	2	3	4	5	6	7	8	9	10
Has a distinct personality	1	2	3	4	5	6	7	8	9	10
Introduces visitors to cutting edge science topics	1	2	3	4	5	6	7	8	9	10
Encourages visitors to engage with science	1	2	3	4	5	6	7	8	9	10
Demonstrates the various implications of science	1	2	3	4	5	6	7	8	9	10
Demonstrates the importance of staying up-to-date about science research	1	2	3	4	5	6	7	8	9	10
Combats negative stereotypes about scientists	1	2	3	4	5	6	7	8	9	10
Provides access to reliable information	1	2	3	4	5	6	7	8	9	10
Allows visitors to learn more about topics that interest them	1	2	3	4	5	6	7	8	9	10
Inspires me in my own life to think differently	1	2	3	4	5	6	7	8	9	10
Has content that affects me emotionally	1	2	3	4	5	6	7	8	9	10
Provides a useful teaching tool	1	2	3	4	5	6	7	8	9	10

**Below are several science and technology websites. Please indicate how frequently you visit each site.**

	Never	Rarely (less than once a month)	Occasionally (1 to 3 times a month)	Frequently (once a week or more)
American Association for the Advancement of Science	0	1	2	3

(AAAS) publication (www.sciencemag.org)				
BBC's Science and Nature site www.bbc.co.uk/sn)	0	1	2	3
Discovery Channel (www.dsc.discovery.com)	0	1	2	3
HowStuffWorks (howstuffworks.com)	0	1	2	3
I, Cringely (pbs.org/cringely)	0	1	2	3
LiveScience (www.livescience.com)	0	1	2	3
NASA (www.science.nasa.gov)	0	1	2	3
National Geographic (www.nationalgeographic.com)	0	1	2	3
NOVA	0	1	2	3
NOVA scienceNOW	0	1	2	3
Popular Science Magazine (www.popsci.com)	0	1	2	3
Science Channel (http://science.discovery.com)	0	1	2	3
Science Daily (www.sciencedaily.com)	0	1	2	3
Scientific American (www.sciam.com)	0	1	2	3
Slashdot (slashdot.org)	0	1	2	3
Smithsonian (smithsonianmag.com)	0	1	2	3
Wired (wired.com)	0	1	2	3
www.extremescience.com	0	1	2	3
Other: _____	0	1	2	3
Other: _____	0	1	2	3

**For each of the sites they said they visit more than NEVER:  
When looking for interesting and engaging science content on the  
Web, which site would be your FIRST choice? (Check one.)**

- American Association for the Advancement of Science (AAAS) publication (www.sciencemag.org)
- BBC's Science and Nature site www.bbc.co.uk/sn)
- Discovery Channel (www.dsc.discovery.com)
- HowStuffWorks (howstuffworks.com)
- I, Cringely (pbs.org/cringely)
- LiveScience (www.livescience.com)
- NASA (www.science.nasa.gov)
- National Geographic (www.nationalgeographic.com)
- NOVA

- NOVA scienceNOW
- Popular Science Magazine ([www.popsci.com](http://www.popsci.com))
- Science Channel (<http://science.discovery.com>)
- Science Daily ([www.sciencedaily.com](http://www.sciencedaily.com))
- Scientific American ([www.sciam.com](http://www.sciam.com))
- Slashdot ([slashdot.org](http://slashdot.org))
- Smithsonian ([smithsonianmag.com](http://smithsonianmag.com))
- Wired ([wired.com](http://wired.com))
- [www.extremescience.com](http://www.extremescience.com)

**When looking for interesting and engaging science content on the Web, which site would be your **SECOND** choice? (*Check one.*)**

- American Association for the Advancement of Science (AAAS) publication ([www.sciencemag.org](http://www.sciencemag.org))
- BBC's Science and Nature site [www.bbc.co.uk/sn](http://www.bbc.co.uk/sn)
- Discovery Channel ([www.dsc.discovery.com](http://www.dsc.discovery.com))
- HowStuffWorks ([howstuffworks.com](http://howstuffworks.com))
- I, Cringely ([pbs.org/cringely](http://pbs.org/cringely))
- LiveScience ([www.livescience.com](http://www.livescience.com))
- NASA ([www.science.nasa.gov](http://www.science.nasa.gov))
- National Geographic ([www.nationalgeographic.com](http://www.nationalgeographic.com))
- NOVA
- NOVA scienceNOW
- Popular Science Magazine ([www.popsci.com](http://www.popsci.com))
- Science Channel (<http://science.discovery.com>)
- Science Daily ([www.sciencedaily.com](http://www.sciencedaily.com))
- Scientific American ([www.sciam.com](http://www.sciam.com))
- Slashdot ([slashdot.org](http://slashdot.org))
- Smithsonian ([smithsonianmag.com](http://smithsonianmag.com))
- Wired ([wired.com](http://wired.com))
- [www.extremescience.com](http://www.extremescience.com)

**When looking for interesting and engaging science content on the Web, which site would be your **THIRD** choice? (*Check one.*)**

- American Association for the Advancement of Science (AAAS) publication ([www.sciencemag.org](http://www.sciencemag.org))
- BBC's Science and Nature site [www.bbc.co.uk/sn](http://www.bbc.co.uk/sn)
- Discovery Channel ([www.dsc.discovery.com](http://www.dsc.discovery.com))
- HowStuffWorks ([howstuffworks.com](http://howstuffworks.com))
- I, Cringely ([pbs.org/cringely](http://pbs.org/cringely))
- LiveScience ([www.livescience.com](http://www.livescience.com))
- NASA ([www.science.nasa.gov](http://www.science.nasa.gov))
- National Geographic ([www.nationalgeographic.com](http://www.nationalgeographic.com))
- NOVA
- NOVA scienceNOW
- Popular Science Magazine ([www.popsci.com](http://www.popsci.com))
- Science Channel (<http://science.discovery.com>)
- Science Daily ([www.sciencedaily.com](http://www.sciencedaily.com))
- Scientific American ([www.sciam.com](http://www.sciam.com))



- Slashdot (slashdot.org)
- Smithsonian (smithsonianmag.com)
- Wired (wired.com)
- www.extremescience.com

**Please describe how the NOVA scienceNOW website differs from others you have visited.**

**How often do you do each of the following online activities?**

	Never	Rarely (less than once a month)	Occasionally (1 to 3 times a month)	Frequently (once a week or more)
Get news	0	1	2	3
Watch long-form video	0	1	2	3
Watch video clips	0	1	2	3
Find out about upcoming events in my area	0	1	2	3
Look up information about a topic of interest	0	1	2	3
Seek information related to a hobby	0	1	2	3
Read or comment on blogs	0	1	2	3
Update my own blog	0	1	2	3
Visit social networking / community sites (MySpace, Facebook, etc.)	0	1	2	3
Share bookmarks or recommendations (Digg, del.icio.us, etc.)	0	1	2	3
Post / Share my own videos or photos	0	1	2	3
Shop / Make a purchase	0	1	2	3
Look for podcasts or other downloadable media to take with me on the go	0	1	2	3
Look for TV schedule information	0	1	2	3

**NOVA scienceNOW usually has content features related to video stories. Please rate how much you like each type of feature on a scale of 1-10, where 1 = do not like at all and 10 = like very much. Select *Not Applicable* (NA) if you are not familiar enough with the feature to rate it.**

Ask the Expert Q&A	1	2	3	4	5	6	7	8	9	10	NA
Audio podcasts	1	2	3	4	5	6	7	8	9	10	NA
Discussion Board	1	2	3	4	5	6	7	8	9	10	NA
Film “extras” (behind the scenes, bonus footage)	1	2	3	4	5	6	7	8	9	10	NA
Interactive media (flash animation of hieroglyphs, solar system, slide shows, etc.)	1	2	3	4	5	6	7	8	9	10	NA
Interviews with scientists	1	2	3	4	5	6	7	8	9	10	NA
Links & Books	1	2	3	4	5	6	7	8	9	10	NA
Teachers guide	1	2	3	4	5	6	7	8	9	10	NA
Video of the program	1	2	3	4	5	6	7	8	9	10	NA

**Below are functions that might be added to the NOVA website. Please rate how interested you would be in each of these new features, using a 1 to 10 scale, where 1 = not at all interested and 10 = extremely interested.**

Ability to customize home page to reflect content of personal interest	1	2	3	4	5	6	7	8	9	10
Blogging	1	2	3	4	5	6	7	8	9	10
Displaying links to related NOVA scienceNOW content	1	2	3	4	5	6	7	8	9	10
E-Mail to a Friend	1	2	3	4	5	6	7	8	9	10
Rate a feature or video	1	2	3	4	5	6	7	8	9	10
Search by Content Area	1	2	3	4	5	6	7	8	9	10
Search by Feature Type	1	2	3	4	5	6	7	8	9	10
Tagging	1	2	3	4	5	6	7	8	9	10
User comments	1	2	3	4	5	6	7	8	9	10
Video content that can be downloaded and remixed	1	2	3	4	5	6	7	8	9	10
Other: _____	1	2	3	4	5	6	7	8	9	10

**Below are types of people who could serve as a blogger on the NOVA website. Please rate how interested you would be in each of these types, using a 1 to 10 scale, where 1 = not at all interested and 10 = extremely interested.**

Scientist	1	2	3	4	5	6	7	8	9	10
Journalist	1	2	3	4	5	6	7	8	9	10
Everyday person	1	2	3	4	5	6	7	8	9	10

**How likely are you to recommend the NOVA scienceNOW website to others?**

Not at all likely

- Not very likely
- Somewhat likely
- Very likely
- Extremely likely

**Please provide any final thoughts you have about the NOVA scienceNOW website.**

### **Please Tell Us About Yourself:**

**Are you:** *(Check all that apply.)*

- Currently employed full time
- Currently employed part time
- Currently unemployed
- Currently studying in a science-related field
- Currently working in a science-related field
- Currently studying in a field not related to science
- Currently working in a field not related to science
- A part time student
- A full time student

**In what field are you currently studying or working?**

\_\_\_\_\_

**What region of the United States do you live in?**

- New England (CT, MA, ME, NH, RI, VT)
- Middle Atlantic (NJ, NY, PA)
- East North Central (IL, IN, MI, OH, WI)
- West North Central (IA, KS, MN, MO, ND, NE, SD)
- South Atlantic (FL, GA, MD, NC, SC, VA, WV, DC, DE)
- East South Central (AL, KY, MS, TN)
- West South Central (AR, LA, OK, TX)
- Mountain (AZ, CO, ID, MT, NM, NV, UT, WY)
- Pacific (CA, OR, WA, HI, AK)
- Do not live in United States
- Other, please specify \_\_\_\_\_

**The NOVA scienceNOW team would like to learn more about their website audience. Please answer the following questions about yourself. Because we know that some people prefer *not* to disclose this kind of information, these questions are optional.**

**What year were you born?** \_\_\_\_\_ [drop down list]

**Are you:**  Female  Male  Choose not to respond

**What is your race/ethnicity?** *(Check all that apply.)*

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- Hispanic or Latino
- White
- Other; please specify

---

Choose not to respond

**What is the highest degree you have received?** *(Check only one.)*

- Some high school
- High school diploma or the equivalent (GED)
- Associate degree(s)
- Bachelor's degree(s)
- Master's degree(s)
- Professional degree(s) (e.g., MD, DDS, DVM, LLB, JD, DD)
- Doctoral degree(s) (e.g., Ph.D. or Ed.D.)
- Other; please specify

---

**Thank You for Completing this Survey**

**G**OODMAN RESEARCH GROUP, INC.  
Program Evaluation • Consultation • Market Research

***NOVA scienceNOW***  
***Season Three:***  
**Science Cafés Addendum**

**PREPARED BY**

Elizabeth R. Bachrach, Ph.D.  
Laura M. Houseman  
Irene F. Goodman, Ed.D.

**SUBMITTED TO**

WGBH

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## INTRODUCTION

In February 2009, Goodman Research Group, Inc. (GRG) submitted a full report of the evaluation of WGBH's NOVA scienceNOW Season Three, excluding the final two evaluation activities focused on science cafés. This addendum includes results for those final components of the evaluation: a survey about the sciencecafes.org website and a survey of members of science café National Partner organizations.

Based on Café Scientifique, which began in the UK in 1998, science cafés gather groups of people in non-academic environments such as a local bar or café to discuss the latest developments in science. Each NOVA scienceNOW Science Café features a local scientist presenting information on his or her latest work. The evaluation goals were related to awareness and perceptions of the science café concept:

- Determine who uses the sciencecafes.org website and whether they are satisfied with the format, content, and information provided
- Determine how effectively the website introduces the science café concept
- Measure the extent to which members of national partner organizations, Sigma Xi, American Chemical Society (ACS), and Coalition for the Public Understanding of Science (COPUS), are aware, and make use of NOVA scienceNOW resources
- Examine factors that lead people to adopt the science café model and organize cafés in their area

Included in the February report were findings from the June 2008 Science Cafés conference held in Boston. Findings suggested that conference attendees:

- believe that NOVA scienceNOW plays a key role in the science café community
- agree that science cafés can promote more public understanding and appreciation of science
- hope that science cafés will become more common and widely known
- agree that the way that WGBH currently provides hands-off support, encouragement, and resources is helpful

## METHODS

GRG developed and programmed two web-based surveys for the evaluation of science cafés. Surveys were designed to obtain feedback on the overall concept and on the sciencecafes.org website in particular.

- 1) **Sciencecafes.org website survey:** Email invitations with a direct link to the online survey were sent by GRG to a listserve of current and potential science café organizers. WGBH provided GRG with the database and contact information for 606 potential survey respondents.



- 2) **National Partners' survey:** Email invitations with a direct link to the online survey were sent by the national organizations, Sigma Xi, American Chemical Society (ACS), and the Coalition for the Public Understanding of Science (COPUS) to their members.

See Appendix A for copies of all survey instruments and Appendix B for annotated surveys showing all respondents' data.

## RESULTS

GRG received completed surveys from 138 respondents to the sciencecafes.org survey and from 66 respondents to the national partners' survey. Respondents to both surveys had similar demographic characteristics. (See Appendix B for the full demographic profile of respondents to both surveys). Most were white men or women (slightly more men completed the national partners' survey and slightly more women completed the sciencecafes.org survey), with advanced degrees, who were working in a science-related field. On average, respondents were in their late forties to early fifties; ages ranged from 22 to 83 years old.

Respondents to the sciencecafes.org survey represented 41 states and four countries (Canada, Ghana, Puerto Rico, and Mexico; one respondent from each); respondents to the national partners' survey represented 27 states and Guam. For both, the states with the most respondents were North Carolina (where Sigma Xi is based), California, Ohio, New York, and Michigan.

Respondents to the national partners' survey were members of at least one of the three primary organizations (Sigma Xi, ACS, or COPUS); this was expected because invitations to complete the survey were emailed directly to members by the national organizations. Seven respondents were members of both Sigma Xi and ACS, and one was a member of both Sigma Xi and COPUS.

Because of the different sample sizes for the two surveys, results from the sciencecafes.org survey are presented with percentages and results from the national partners' survey are reported in frequency, or number of respondents (e.g., 49 out of 66, instead of 75% of the sample). This is intended to depict a more accurate understanding of respondents' feedback.

## CURRENT AND POTENTIAL CAFÉ ORGANIZERS

Before GRG emailed the link to the website survey, WGBH NOVA scienceNOW staff created a listserve and sent an initial newsletter with updates about science cafés. In this correspondence, recipients were informed about the website and some of its offerings, as well as about the email and survey that would follow from GRG. Accordingly, most of the 138 respondents to the sciencecafes.org website survey (33%) learned about the website from communication with WGBH or NOVA scienceNOW staff. Other ways respondents learned about the website included:



- Friends and colleagues (20%)
- From Sigma Xi (17%)
- From an email invitation from GRG (15%)
- From an Internet search (15%)
- From the NOVA scienceNOW website (14%)

Less than one in ten respondents each learned about the website through communication from COPUS or ACS, a link from another website, and from a newspaper or magazine article.

### Familiarity with Sciencecafes.org and Science Cafés

Nearly three quarters of 138 respondents had visited the sciencecafes.org website prior to the day they completed the survey and half of them had visited six times or more. Those who had visited the site in the past (n=97) typically spent up to half an hour on the site. Three quarters of visitors typically spent 10 minutes or fewer. More than half reported they typically visit the website looking for resources to help them organize their science café, and they usually find the information they are looking for right away.

*Visitors to sciencecafes.org typically go to the site looking for specific resources and they are able to quickly find the information they need.*

There are a variety of reasons visitors go to the sciencecafes.org website, as shown in Table 1. Besides looking for resources, respondents go to the website to learn more about the concept, to learn about starting a new science café, and to find information and resources to share with others. Most of those who listed an “other” reason described an interest in seeing how others have organized cafés, including the format they use and the topics they have covered.

Table 1  
Sciencecafes.org Visitors’ Primary Reasons for Visiting

	<b>% of Respondents</b>
Looking for resources to help me organize my science café	75%
To learn <u>more</u> about the science café concept	44%
I’m interested in information about starting a new science café	39%
Looking for resources to share with other potential science café presenters	26%
Looking for resources to share with other potential science café organizers	24%
To learn about the science café concept	20%
To find a local science café to attend	19%
I’m interested in information about presenting at a science café	10%
I’m interested in information about partnering with a science café	7%
Other	13%

Visitors value the website and want to share the information it provides, as is clear from the fact that an overwhelming majority (84%) are *very* or *extremely* likely to recommend the site to others.

Before visiting the website, nearly all respondents were already familiar with the science cafés concept and nearly half had organized one or more science cafés. Only 10% had not heard of the concept. (See Table 2).

*Before they had visited the sciencecafes.org website, nearly half the respondents had already organized a science café.*

Table 2  
Familiarity with Science Cafés before Visiting the Website

	<b>% of Respondents</b>
I had participated in one or more science cafés as an organizer	41%
Knew a little about them, but wanted to learn more about the concept	32%
I had participated in one or more science cafés as an attendee	29%
I had participated in one or more science cafés as a presenter	9%
Heard of them, but did not know what they were	4%
N=138	

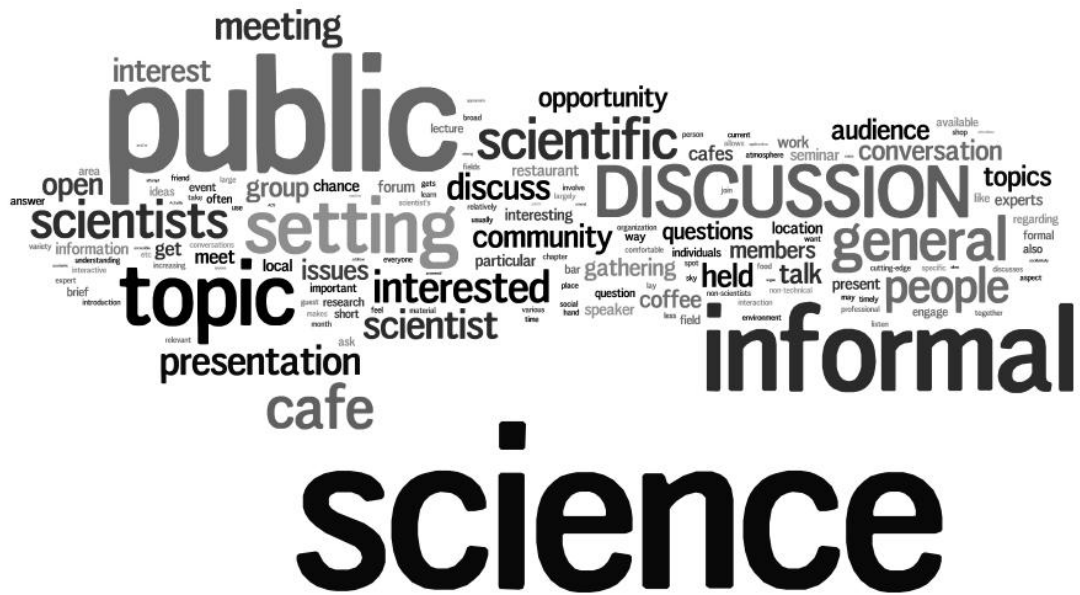
All but two national partner respondents had heard of science cafés and most learned about the concept through their membership or from the sciencecafes.org website. See Table 3.

Table 3  
How Members of National Partner Organizations Learned about Science Cafés

	<b># of respondents</b>
Through my membership in American Chemical Society	28
Through my membership in Sigma Xi	18
From the sciencecafes.org website	16
Saw a presentation about them at a conference	8
From the NOVA scienceNOW website	4
From a newspaper or magazine article	4
Through my membership in COPUS	2
From the NOVA scienceNOW television program	2
Other (Friends, word of mouth)	11
N=62	

Most national partner respondents defined science cafés as an informal gathering of the general public who are interested in discussing science. Figure 1 below shows common words used by respondents in their definitions; larger text size indicates more people used that word in their response. See Appendix C for a complete list of all respondents' definitions of science café.

Figure 1  
How National Partner Respondents Define Science Café



### Experiences Organizing Science Cafés

*National partner members who have not organized a science café either do not have the time, or do not want to organize a café that would compete with existing series in their local community.*

Among the national partner respondents, **24 had** and **40 had not** organized a science café event of their own. Of the 40 who had not, 26 planned to do so in the future. The most common reasons for not yet organizing a café were feeling that they did not have enough time (n=21) or support (n=10), or that there was already a café series in their area (n=7) and “to organize another one would defeat the purpose of the cafés; there would be too many competing cafés.” Very few respondents reported they had not organized a café because they did not know enough about it or because they did not think it would be successful.

Common factors that would help national partners who had not yet organized a café series decide to do so included local assistance and support, both logistical (e.g., promotion, help with running the event) and financial (e.g., funding). Table 4 shows the number of respondents who would respond positively to various resources.

Table 4  
Would Help National Partners Decide to Organize a Café

	<b># of Respondents</b>
Local partners within the community to assist with the organizing	19
Financial support/funding	18
A “How To” guide online	16
Assistance with locating a venue	16
More confidence that I would receive help/assistance if needed	12
Assistance with promoting the events	10
A network of past and/or current organizers to contact about organizing	10
More information about the concept	9
More confidence that the event would be a success	9
Assistance with moderating events	9
A “hotline” to call with any questions	7
A “How To” guide in hard copy	6
More support from my boss	2

N=40

## NOVA SCIENCENOW RESOURCES

NOVA scienceNOW provides many resources for those who are already organizing, or are interested in organizing, a science café in their community. These include start-up funding, online advice and assistance with locating partners, free NOVA scienceNOW DVDs, and a dedicated staff person to answer questions and offer assistance. National partner respondents, both those who had not organized a science café and those who had, have little knowledge of these resources and among the few who are aware of them, most have not made use of them. Those who have already organized cafés have been motivated by personal interests and have felt that they had enough resources, support, and information (i.e., even without NOVA scienceNOW’s offerings). See Table 5.

*Few science café organizers are aware, or have made use, of the resources provided by NOVA scienceNOW. They have felt they had enough local support to organize their café events.*

Table 5  
Awareness of NOVA scienceNOW Resources among National Partners

	<b># of Respondents</b>		
	<b>Have used it</b>	<b>Aware of but have not used it</b>	<b>Was not aware of it</b>
Online advice on starting a science café series (www.sciencecafes.org)	7	6	10
A dedicated staff person you can contact for help with any science café	5	5	14
Start-up funding for new science café series	5	6	13
Help finding local partners for organizing a science café	4	4	15
Free DVDs of NOVA scienceNOW videos	3	6	14
National science café conferences	2	6	15

N=24

Resources that current science café organizers are using, or have used, with success include assistance from members of their local organizations, and friends or colleagues outside their own organizations, including members of other local or national organizations.

Primarily, national organizations have provided information about the science café concept and financial support. Local chapters of the three organizations (Sigma Xi, ACS, and COPUS) have also provided financial support and information about the concept, as well as staff and volunteers to assist with running the event and assistance with logistics such as finding venues and presenters for cafés.

Common local or national organizations that have been involved with the science cafés include local universities and agencies or community based organizations. These organizations have provided assistance with promotion, logistical support (primarily help finding speakers), and some financial support. Some examples of organizations are:

- University of Central Florida, Orlando Science Center
- Hawaii Academy of Science
- Nepal Academy of Science and Technology
- Charlotte Area Science Network
- FHSU Science and Mathematics Education Institute

*Overall, members of the three partner organizations felt they have received the support they need for their science café or series, from their own or other organizations, and from members of their community.*

Among the few (n=9) who have not worked with other local or national organizations, nearly all said they did not seek out any help; no respondents reported asking for support and being turned down.

Generally, those who have run science cafés perceived they have received the support they need from their own and other organizations and from their community. They perceive, in turn, that the cafés have helped to raise community awareness of and interest in their organizations and helped them to establish relationships with and better serve the community. For example, science cafes have increased “*science awareness*” and “*provided interaction among different professions.*” Local media have helped to promote events, and events have been organized for school students.

### **Satisfaction with Sciencecafes.org**

Based on their reasons for visiting sciencecafes.org, respondents were quite satisfied with all aspects of the sciencecafes.org website, as shown in Table 6. Only a few (from 4% to 24%) were not familiar enough with a particular aspect of the site to rate it. There were no differences in satisfaction between those who were visiting for the first time and those who had been to the website one or more times in the past.

Table 6  
Average Ratings of Elements of Sciencecafes.org

	N	Average Rating (Scale: 1 to 7)
“What’s a Café?”	124	6.27
“For Presenters”	103	6.05
“Start a Café”	122	6.03
“For Organizers”	127	6.01
The website overall	129	5.98
Ease of navigation	129	5.97
Overall amount of information provided	128	5.95
Visual appeal of the website	128	5.92
Format in which the information is provided	127	5.87
“Find a Café”	116	5.84
Links to other resources	105	5.78

Generally, the sciencecafes.org website is perceived as an informative and helpful resource that conveys the idea that science cafés are fun, informal, and friendly gatherings, easy to organize, and becoming more well-known as they gain popularity. Table 7 shows common responses about the message conveyed by the website along with representative quotes. See Appendix C for a full list of responses.

Table 7  
Impressions of Science Cafés Based on Sciencecafes.org

Impression of Science Cafés	Representative Quotes
Science cafés are fun, informal, approachable, and friendly (n=42)	<ul style="list-style-type: none"> <li>• <i>Suggests that science cafes are upbeat experiences; good information for organizers and presenters, but science cafes will vary according to how much the organizers put in (the onus is on them, since there is a wealth of information on the site).</i></li> <li>• <i>A comfortable, interactive venue to talk about current issues in science.</i></li> </ul>
Website is informative, educational, and a helpful resource for organizing science cafés (n=24)	<ul style="list-style-type: none"> <li>• <i>It's designed to help those of us who may not know anything about science cafés, but for those who do there is also information.</i></li> <li>• <i>A good resource for anyone interested in organizing or attending a science café.</i></li> </ul>
Science cafés are easy to organize (n=18)	<ul style="list-style-type: none"> <li>• <i>I think the tone of the Web site matches the science cafe concept. It is extremely easy to use.</i></li> <li>• <i>That it's easy to set one up. That there is lots of support for helping set up a café, and that science cafes are a growing phenomenon.</i></li> </ul>
Science cafés are exciting and becoming more popular (n=12)	<ul style="list-style-type: none"> <li>• <i>It makes the concept rather exciting, which it is. It has good information and is well organized.</i></li> <li>• <i>It conveys that science cafes are happening everywhere!</i></li> </ul>

In describing their impressions of the concept, based on their visit to the website, several respondents took the opportunity to comment further on their own thoughts about science cafés, such as their interest in starting a café, their typical use of the website, “I’m always going straight to the café map; I’ve never looked

around anywhere else,” and their thoughts about how “organized” the movement is or should be. One respondent perceived a focus on standardizing of cafés, “Organized ... need to be run in a certain way ... all the same,” while another was concerned that the concept may become too formalized, “Far too much suggesting that the cafe movement is organized; especially, by WGBH.”

These latter two comments support feedback from the June conference focus groups; participants in science cafés are interested in some formality and standardization, but they do not want it to go too far such that all cafés will look the same.

Regarding modification to improve the sciencecafes.org website, most respondents felt the site was fine “the way it is” and that no change was needed. Others suggested making the search features more prominent, and adding opportunities for networking with other café organizers. Table 8 shows common responses and representative quotes. (See Appendix C for a full list of responses.)

Table 8  
Suggestions for Change on the Website

Impression of Science Cafés	Representative Quotes
No changes needed; site is fine the way it is (n=19)	<ul style="list-style-type: none"> <li>• I think the website is excellent and fun to navigate.</li> <li>• It's fine for me the way it is.</li> <li>• It's fine. Just keep updating it regularly and everything is OK</li> </ul>
Make the 'Find a Café' function more prominent and user-friendly (n=14)	<ul style="list-style-type: none"> <li>• The search for a nearby cafe is not easy. A listing by state instead of clicking on a bubble would be better.</li> <li>• Map of existing cafes could use a way to zoom in faster via search all in state or region.</li> </ul>
Increase visual appeal and overall navigation (n=13)	<ul style="list-style-type: none"> <li>• I found the website pretty good, but the font size was uncomfortably small. Also, the site could be more aesthetically pleasing.</li> <li>• Some navigation problems with getting back to pages, for example if I was in “for organizers” and chose a new link it is not clear how to return except by using the BACK key on my computer.</li> </ul>
Add more ways for current and potential organizers to network with one another (n=9)	<ul style="list-style-type: none"> <li>• It might be cool to be able to connect with willing presenters through the website.</li> <li>• Profile individual organizers, presenters and sponsors. Organizers could provide contacts.</li> </ul>

Visitors to sciencecafes.org plan to remain actively involved with science cafés in the future.

## Future Plans

More than half of the respondents to the sciencecafes.org survey plan, in the near future, to tell others about science cafes (62%), continue to run their existing science café series (57%), and attend a science café event (56%). About one quarter each plan to start a new science café series (28%) and recruit organizers to start a new series (25%); 18% plan to present at a science café event.



## SUCCESSFUL CAFÉ EVENT

Most national partner respondents define a “successful” café event by audience involvement and interesting conversation among attendees who are not in the science field. Table 8 shows the number of respondents who selected each of various aspects they would consider successful for a science café.

*Audience involvement and interesting conversation, particularly among attendees who are not scientists, are factors that would make most organizers consider their science café event a success.*

Table 8  
How National Partners Consider a Science Café Event to be Successful

	# of Respondents
Audience involvement	61
Interesting conversation	55
Attendees who are not in a science-related field	51
Attendees changing their preconceptions about science	42
Attendees changing their preconceptions about scientists	34
Opportunity for the presenter to hear feedback from the public	32
Attendees who are not already interested in science	29
Large number of people attending	26
Media coverage	17

N=62

## Challenges Experienced or Anticipated

Among most national partner respondents, challenges they have faced or are anticipating had to do with attendance; there are concerns about keeping attendance high and reaching those who are not already interested in science. As described above, those who have organized cafés feel supported enough by their colleagues and community, and thus do not perceive this to be a challenge in organizing their events. See Table 9.

*Challenges anticipated most are the ability to reach and sustain new audiences who are not already interested in science.*



Table 9  
Challenges to Organizing Science Cafés

	Have experienced this challenge	Would expect to face this challenge	Have not experienced this challenge
Reaching new audiences	18	27	10
Reaching an audience not already interested in science	17	30	11
Low turnout	17	30	9
Getting attendees to participate in conversation	11	22	19
Trouble finding the right venue	10	21	18
High turnout	10	4	32
Presenter not able to present to a public (non-scientist) audience	10	21	22
Not enough information to plan and run the event	8	15	31
Not enough support from the local community	8	25	22
Attendees who are not interested	8	15	26
Difficulty working with a venue	5	19	27
Not enough support from my local chapter (Sigma Xi), section (ACS), or hub (COPUS)	4	9	37
Trouble moderating events/finding a moderator	4	25	26
Not enough support from Sigma Xi	2	8	34
Not enough support from ACS	2	8	37

N=62

### Questions about the concept

Questions raised by members of the national partner organizations regarding science cafés and how they are organized were primarily related to promotion, retention of attendees, and logistics. Table 10 shows common responses and representative quotes. See Appendix C for a complete list of questions raised.

Table 10  
National Partner Respondents' Questions about Science Cafés

	<b>Representative Quotes</b>
How to promote and retain participants	<ul style="list-style-type: none"> <li>• <i>How to ensure a high enough level of participation to keep it sustainable.</i></li> <li>• <i>Probably our biggest issue is how to encourage more people to attend our cafes.</i></li> </ul>
How to organize an effective café	<ul style="list-style-type: none"> <li>• <i>How do we go about organizing a science cafe, and are these events funded by ACS?</i></li> <li>• <i>I've never been to a science cafe, so I don't really understand how they work.</i></li> </ul>
Logistics: getting speakers, finding a venue, time commitment required of organizer	<ul style="list-style-type: none"> <li>• <i>A future problem that I foresee is where would we get speakers?</i></li> <li>• <i>How do you go about finding an appropriate venue for a science café?</i></li> </ul>
How to target appropriately to audience	<ul style="list-style-type: none"> <li>• <i>One never knows exactly who is in the audience or their level of perception/education. Thus, it is hard to decide the level of the remarks of the initial speakers.</i></li> </ul>

## CONCLUSIONS AND RECOMMENDATIONS

Based on the findings above, GRG concludes that the science café concept is gaining popularity and is well-understood by those who have organized or attended café series in their communities. The sciencecafes.org website is a useful resource for visitors, providing information that is easy to find and helpful. Generally, those who have been involved in some way perceive the science café concept to be very community-focused, with mutual benefits for those who organize events and those who attend.

### **Science cafés are successful in their aim to bring together community members to discuss science topics in a casual and informal setting.**

Those who organize cafés feel supported by their organizations and by the community. They believe there is mutual benefit as community members learn to appreciate science, feel comfortable discussing it, and learn about the science organizations and offerings in their area.

*GRG recommends highlighting, on the sciencecafes.org website and at conferences and informal meetings, the benefits to the community and the various relationships that are fostered through science café events and ongoing series.*

### **The NOVA scienceNOW offerings provide a helpful, albeit moderately untapped, resource.**

Even among organizers who were aware of the NOVA scienceNOW science café resources, very few had made use of them. Conversely, those who have visited the sciencecafes.org website have returned to the site frequently for information, are able to find what they need quickly and easily, and are eager to share the information with others.

***GRG recommends** NOVA scienceNOW consider additional ways to promote the science café resources while making it clear that they do not prescribe one particular way to run science cafés.*

**Current and potential science café organizers are eager to share and learn from one another regarding successful strategies, topics, presenters, and venues for events.**

Visitors to the website are interested in sharing both the website information and their own experiences with others, and they would like to learn about how others have organized their café events or series.

***GRG recommends** NOVA scienceNOW use the sciencecafes.org website as a place where current and potential organizers can network, share experiences, and “chat.” Sciencecafes.org can add social networking opportunities on the site, similar to those being considered and added on the NOVA scienceNOW website.*

Overall, science cafés are increasingly becoming more widely known. As more members of scientific organizations and members of the general public are becoming aware of cafés in their local areas, they are interested in learning more about the concept, organizing and attending more events, and sharing the experience with others. WGBH’s NOVA scienceNOW has played a key role in this endeavor and can continue making contributions through its resources and network.

# APPENDIX

## APPENDIX A: SURVEY INSTRUMENTS

### National Partner Survey

Please indicate the national organization(s) you belong to and how you received this survey. (Check all that apply for each row).

	<b>I'm a member</b>	<b>I'm not a member</b>	<b>I received this survey from this organization</b>
Sigma Xi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ACS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COPUS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Have you heard of science cafés?**

- Yes
- No (skip to Thank You page.)

Yes, heard of science cafés:

**How did you learn about science cafés?**

- Through my membership in Sigma Xi; How, specifically? \_\_\_\_\_
- Through my membership in American Chemical Society; How, specifically? \_\_\_\_\_
- Through my membership in COPUS; How, specifically? \_\_\_\_\_
- From the sciencecafes.org website
- From the NOVA scienceNOW television program
- From the NOVA scienceNOW website
- Saw a presentation about them at a conference. What conference? \_\_\_\_\_
- From a newspaper or magazine article. Which one? \_\_\_\_\_
- Other: \_\_\_\_\_

**In your own words, what is a science café?**

**What questions, if any, do you have about what science cafés are and how they are organized?**

**Have you organized a science café event?**

- Yes, only one
- Yes, more than one
- No, but I plan to in the future
- No, and do not plan to

**If no (either of the two)**

**Please help us understand why you have not organized a science café. (Check all that apply)**

- I don't know what a science café is
- I don't know enough about the science café concept
- I don't have enough time to organize a science café
- I don't have enough support to organize a science café
- I don't have the necessary resources
- I don't think I'd be good at it
- I don't think science cafés work
- I don't think a science café matches my goals
- I'm not interested in public outreach
- Other reason(s) you have not organized a science café: \_\_\_\_\_

**Which of the following might help you decide to organize a science café? (Check all that apply)**

- More information about the concept
- More confidence that the event would be a success
- More confidence that I would receive help/assistance if needed
- More support from my boss
- A "How To" guide online
- A "How To" guide in hard copy
- Local partners within the community to assist with the organizing
- Assistance with locating a venue
- Assistance with moderating events
- Assistance with promoting the events
- Financial support/funding
- A "hotline" to call with any questions
- A network of past and/or current organizers to contact
- Other: \_\_\_\_\_

**Are you aware of the following resources that NOVA scienceNOW provides for science cafés?  
(Check one per row)**

	Yes	No
A dedicated staff person you can contact for help with any science café	<input type="checkbox"/>	<input type="checkbox"/>
Online advice on starting a science café series ( <a href="http://www.sciencecafes.org">www.sciencecafes.org</a> )	<input type="checkbox"/>	<input type="checkbox"/>
Help finding local partners for organizing a science café	<input type="checkbox"/>	<input type="checkbox"/>
Free DVDs of NOVA scienceNOW videos	<input type="checkbox"/>	<input type="checkbox"/>
Start-up funding for new science café series	<input type="checkbox"/>	<input type="checkbox"/>
National science café conferences	<input type="checkbox"/>	<input type="checkbox"/>

**If yes, they have organized a science café:**

**Your Experiences With Organizing A Local Science Café**

**What factors motivated you to organize a science café?** (Check all that apply.)

- Personal interest
- I wanted to mobilize people in my organization
- It has been discussed with enthusiasm within my national organization
- It has been discussed with enthusiasm within my local chapter (Sigma Xi), section (ACS), or hub (COPUS)
- I knew there was interest in my local community
- I assumed there would be interest in my local community
- I felt I had the necessary information
- I felt I had the necessary resources
- I felt I had the necessary support
- Other: \_\_\_\_\_

**Are you aware of the following resources that NOVA scienceNOW provides for science cafés?**

(Check one per row)

	<b>Yes, I used this resource</b>	<b>Yes, I was aware of this resource but did not use it</b>	<b>No, I was not aware of this resource</b>
A dedicated staff person you can contact for help with any science café	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online advice on starting a science café series ( <a href="http://www.sciencecafes.org">www.sciencecafes.org</a> )	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help finding local partners for organizing a science café	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Free DVDs of NOVA scienceNOW videos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Start-up funding for new science café series	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National science café conferences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Beyond the above resources that are provided by NOVA scienceNOW, what resources did you use to organize a local science café?** (Check all that apply.)

- Other members of my local chapter (Sigma Xi), section (ACS), or hub (COPUS)
- Friends/Colleagues outside of my own local or national organizations
- Members of other local or national organizations
- Information from the NOVA scienceNOW website
- Other: \_\_\_\_\_

**In what ways did your national organization (Sigma Xi, ACS, or COPUS) support you as you organized a science café?** (Check all that apply.)

- Provided understanding of the science café concept
- Provided information I needed
- Provided staff/volunteers to assist
- Provided financial support/funding
- Helped with finding the venue
- Helped me find a presenter
- Helped with promotion
- Other: \_\_\_\_\_

**In what ways did your local chapter (Sigma Xi), section (ACS), or hub (COPUS) support you as you organized a science café? (Check all that apply.)**

- Provided understanding of the science café concept
- Provided information I needed
- Provided staff/volunteers to assist
- Provided financial support/funding
- Helped with finding the venue
- Helped me find a presenter
- Helped with promotion
- Other: \_\_\_\_\_

**Have other local or national organizations been involved with the science café you organize?**

- Yes
- No

If yes:

Which ones? \_\_\_\_\_

**In what ways did they support your science café? (Check all that apply.)**

- Financial support
- Promotional support
- Logistical support
- Other support; describe \_\_\_\_\_

If no:

**Please check all that apply to indicate the reasons that other organizations have not been involved:**

- I did not seek out financial support from other organizations
- I did not seek out logistical support from other organizations
- I did not seek out promotional support from other organizations
- I did not know of other organizations to ask for support
- I asked for support from other organizations but did not receive it
- I started working with another organization, but it did not work out; Explain \_\_\_\_\_

**Overall, to what extent have you received the support you need for your science café?**

*Use a scale from 1 to 7: 1= Not enough support, 7=Fully supported. If you have not attempted to receive support from any of the following, please check N/A in the last column (Not Applicable.)*

1= Not enough support; 7= Fully supported

From NOVA scienceNOW	1	2	3	4	5	6	7	n/a
From COPUS	1	2	3	4	5	6	7	n/a
From Sigma Xi National	1	2	3	4	5	6	7	n/a
From ACS National	1	2	3	4	5	6	7	n/a
From your local chapter (Sigma Xi), section (ACS), or hub (COPUS)	1	2	3	4	5	6	7	n/a
From another local or national organization	1	2	3	4	5	6	7	n/a
From members of your local community	1	2	3	4	5	6	7	n/a



**How has running a science café influenced your local chapter (Sigma Xi), or section (ACS), or hub (COPUS)?**

- No impact
- Increased our membership
- Increased community awareness of the organization
- Increased community interest in the organization
- Helped us to develop partnerships with other organizations. Which organizations? \_\_\_\_\_
- Helped us establish relationships within the community. Describe \_\_\_\_\_
- Helped us serve the community. Describe \_\_\_\_\_
- Other: \_\_\_\_\_

**For Everyone – those who have AND have not organized a café series**

**What, to you, defines a successful science café event? (Check all that apply)**

- Large number of people attending
- Audience involvement
- Attendees who are not in a science-related field
- Attendees who are not already interested in science
- Attendees changing their preconceptions about science
- Attendees changing their preconceptions about scientists
- Interesting conversation
- Media coverage
- Opportunity for the presenter to hear feedback from the public
- Other: \_\_\_\_\_

**Indicate which, if any, challenges you have faced, or believe you might face, in organizing a science café.**

	Have experienced this challenge	Would expect to face this challenge	Have not experienced this challenge
Not enough information to plan and run the event	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not enough support from Sigma Xi	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not enough support from ACS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not enough support from my local chapter (Sigma Xi), or section (ACS), or hub (COPUS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not enough support from the local community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trouble moderating events/finding a moderator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Trouble finding the right venue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Difficulty working with a venue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reaching new audiences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reaching an audience not already interested in science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low turnout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
High turnout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Attendees who are not interested	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Getting attendees to participate in conversation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presenter not good at presenting to a public (non-scientist) audience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Please Tell Us About Yourself:**

**Are you:** *(Check all that apply.)*

- Currently studying in a science-related field
- Currently working in a science-related field
- A part time student
- A full time student
- None of the above

**What state do you live in?**

Drop down list of states,

- Do not live in United States
- Other, please specify \_\_\_\_\_

**The sciencecafés.org team would like to learn more about their audience and organizers. Please answer the following questions about yourself. Because we know that some people prefer *not* to disclose this kind of information, these questions are optional.**

**What year were you born?** \_\_\_\_\_ [drop down list]

**Are you:**  Female  Male  Choose not to reply

**What is your race/ethnicity?** *(Check all that apply.)*

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- Hispanic or Latino
- White
- Other; please specify \_\_\_\_\_

**What is the highest degree you have received?** *(Check only one.)*

- Some high school
- High school diploma or the equivalent (GED)
- Associate degree(s)
- Bachelor's degree(s)
- Master's degree(s)
- Professional degree(s) (e.g., MD, DDS, DVM, LLB, JD, DD)
- Doctoral degree(s) (e.g., Ph.D. or Ed.D.)
- Other; please specify \_\_\_\_\_

Please provide your e-mail address so we can send you your \$30 gift certificate to Amazon.com. Your email address will only be used for the purpose of sending you the electronic gift certificate. Your email will not be attached to your survey responses and we will not share your address with anyone outside of this survey.

Enter email \_\_\_\_\_ Re-enter email \_\_\_\_\_

- No, thank you.

**Thank you for completing this survey!**

## sciencecafes.org Website Survey

**How did you find out about the sciencecafes.org website?** (Check all that apply)

- Direct email invitation from Goodman Research Group, Inc. (GRG)
- Friend or colleague
- The NOVA scienceNOW website
- From communication with WGBH or NOVA scienceNOW staff.
- From COPUS
- From Sigma Xi
- From the American Chemical Society (ACS)
- From an internet search
- From a newspaper or magazine article
- Link from another Web site
- Other

**Before visiting sciencecafes.org, did you know about science cafés?** (Check all that apply)

- No, never heard of them
- Heard of them, but did not know what they were
- Knew a little about them, but wanted to learn more about the concept
- I had participated in one or more science cafés as an attendee
- I had participated in one or more science cafés as an organizer
- I had participated in one or more science cafés as a presenter

**Was today the first time you have visited this site?**

- Yes
- No

**How many times have you been to the site?**

- Once
- Twice
- Three times
- Four times
- Five times
- Six times or more

**Approximately how much time do you typically spend at sciencecafes.org?**

- Less than 5 minutes
- 5-10 minutes
- 11-20 minutes
- 21-30 minutes
- 31-40 minutes
- 41-60 minutes
- More than 60 minutes



**What would you change about any aspect of the website? (For example: Information you would like to see added or deleted; formatting modifications, or changes in tone)**

---

---

**What new information or impressions, if any, do you have about science cafés that you did not have before visiting the site today?**

---

---

**Would you recommend the sciencecafes.org website to others?**

- Not at all likely
- Not very likely
- Somewhat likely
- Very likely
- Extremely likely

**Please Tell Us About Yourself:**

**In the near future, I expect to:** *(Check all that apply.)*

- Tell others about science cafés
- Attend a science café event
- Present at a science café event
- Start a new science café series
- Continue to run an existing science café series
- Recruit organizers to start new science café series
- None of the above

**What assistance or resources would help you carry out these plans?**

---

---

**Are you:** *(Check all that apply.)*

- Currently studying in a science-related field
- Currently working in a science-related field
- A part time student
- A full time student
- None of the above

**What state do you live in?**

*Pull down list of states*

- Do not live in United States
- Other country; please specify \_\_\_\_\_

**Please answer the following questions about yourself. Because we know that some people prefer *not* to disclose this kind of information, these questions are optional.**

**In what year were you born? \_\_\_\_\_**

**Are you:**

- Female
- Male
- Choose not to respond

**What is your race/ethnicity? (Check all that apply.)**

- American Indian or Alaska Native
- Asian
- Black or African American
- Native Hawaiian or Other Pacific Islander
- Hispanic or Latino
- White
- Other; please specify \_\_\_\_\_

**What is the highest degree you have received? (Check only one.)**

- Some high school
- High school diploma or the equivalent (GED)
- Associate degree(s)
- Bachelor's degree(s)
- Master's degree(s)
- Professional degree(s) (e.g., MD, DDS, DVM, LLB, JD, DD)
- Doctoral degree(s) (e.g., Ph.D. or Ed.D.)
- Other; please specify \_\_\_\_\_

**Please provide your email address so we can send your \$15 gift certificate to Amazon.com.**

**Your email address will only be used for the purpose of sending you the electronic gift certificate. Your email will not be attached to your survey responses and we will not share your address with anyone outside of this survey.**

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**Thank You for Completing this Survey!**

## APPENDIX B: ANNOTATED SURVEYS

### National Partners Survey Responses N=66

\*\*\*\*\*

Please indicate the national organization(s) you belong to and how you received this survey.

	I'm a member	I'm not a member	I received an email from this organization.
Sigma Xi	27	15	14
ACS	33	11	16
COPUS	10	19	10
Other	12	9	--

N=66

**Have you heard of science cafés?**

Yes	60
No	2

N=62

**If Yes: (N=64)**

**How did you learn about science cafés? (Check all that apply.)**

Through my membership in Sigma Xi	18
Through my membership in American Chemical Society	28
Through my membership in COPUS	2
From the sciencecafes.org website	16
From the NOVA scienceNOW television program	2
From the NOVA scienceNOW website	4
Saw a presentation about them at a conference	8
From a newspaper or magazine article	4
Other:	11

N=62

Other Responses:

- Friend, word of mouth
- Encountered them in Europe
- friend
- friend took me to one
- My work on the Illinois Science Council that promotes events like Science Cafes

**In your own words, what is a science café?** See Appendix C

**What questions, if any, do you have about what science cafés are and how they are organized?**

**Have you organized a science café event?** (Check only one.)

Yes, only one	4
Yes, more than one	20
No, but I plan to in the future	26
No, and do not plan to	14

N=64

**Please help us understand why you have not organized a science café.** (Check all that apply)

I don't know what a science café is	--
I don't know enough about the science café concept	5
I don't have enough time to organize a science café	21
I don't have enough support to organize a science café	10
I don't have the necessary resources	7
I don't think I'd be good at it	2
I don't think science cafés work	2
I don't think a science café matches my goals	1
I'm not interested in public outreach	--
Other reason(s) you have not organized a science café:	17

N=38

Other reasons listed:

- Easier to do one as a speaker
- haven't had the opportunity yet
- How to start?
- I am just starting my year as chair and I have not discussed it with my executive council. I would definitely want to see some support for this idea before I begin.
- I am organizing one- despite the above!
- I am retired.
- I organize similar discussions on a weekly basis in an ADULT SUNDAY SCHOOL CLASS AT COLLEGIATE UNITED METHODIST CHURCH
- I'd rather support our Sigma Xi chapter.
- It doesn't start until March
- Others in the local ACS section have taken lead
- Our local section does a lot of other outreach programs and there is a very active science cafe organized by a different group.
- Our program person does this.
- There are some great ones already in my area
- This is my first time as a local ACS section chair
- UM: Univ. Mich: Sigma Xi Chapter has funded Science Cafes organized by the UM Natural History Museum. We have helped with topics
- Want to collaborate with other chapters
- We have a committee already in place that organizes the Sci Cafe



**Which of the following might help you decide to organize a science café? (Check all that apply)**

More information about the concept	9
More confidence that the event would be a success	9
More confidence that I would receive help/assistance if needed	12
More support from my boss	2
A “How To” guide online	16
A “How To” guide in hard copy	6
Local partners within the community to assist with the organizing	19
Assistance with locating a venue	16
Assistance with moderating events	9
Assistance with promoting the events	10
Financial support/funding	18
A “hotline” to call with any questions	7
A network of past and/or current organizers to contact about organizing	10
Other:	8
N=36	

**Other responses:**

- Availability of speakers
- I can currently support other's efforts.
- know and think of a good presenter for a good topic
- Members of the committee leave
- More time
- More time!
- See above. In effect we already help with Science Cafes through a Museum. To organize more would defeat the purpose of the cafes :there would be too many competing cafes.
- When I move to a town that doesn't already have them

**Are you aware of the following resources that NOVA scienceNOW provides for science cafés?**

	Yes	No
A dedicated staff person you can contact for help with any science café	2	37
Online advice on starting a science café series ( <a href="http://www.sciencecafes.org">www.sciencecafes.org</a> )	7	33
Help finding local partners for organizing a science café	4	36
Free DVDs of NOVA scienceNOW videos	3	37
Start-up funding for new science café series	6	32
National science café conferences	2	38
N=40		

## Your Experiences With Organizing A Local Science Café

**What factors motivated you to organize a science café? (Check all that apply.)**

Personal interest	19
I wanted to mobilize people in my organization	17
It has been discussed with enthusiasm within my national organization	8
It has been discussed with enthusiasm within my local chapter (Sigma Xi), section (ACS), or hub (COPUS)	6
I knew there was interest in my local community	9
I assumed there would be interest in my local community	11
I felt I had the necessary information	12
I felt I had the necessary resources	15
I felt I had the necessary support	13
Other:	3

N=24

### Other Responses

- I had support within my organization :staff and budget:
- My husband had something like this where he grew up and we wanted it for our high-school age children.
- Partnership with Hawaii Academy of Science

**Are you aware of the following resources that NOVA scienceNOW provides for science cafés?**

	<b>Yes, I used this resource</b>	<b>Yes, I was aware of this resource but did not use it</b>	<b>No, I was not aware of this resource</b>
A dedicated staff person you can contact for help with any science café	5	5	14
Online advice on starting a science café series ( <a href="http://www.sciencecafes.org">www.sciencecafes.org</a> )	7	6	10
Help finding local partners for organizing a science café	4	4	15
Free DVDs of NOVA scienceNOW videos	3	6	14
Start-up funding for new science café series	5	6	13
National science café conferences	2	6	15

N=24

**Beyond the above resources that are provided by NOVA scienceNOW, what resources did you use to organize a local science café? (Check all that apply.)**

Other members of my local chapter (Sigma Xi), section (ACS), or hub (COPUS)	16
Friends/Colleagues outside of my own local or national organizations	15
Members of other local or national organizations	13
Information from the NOVA scienceNOW website	3
Other:	4

N=24

**Other Responses:**

- ACS Science Cafe grants
- local experts
- Local universities
- my university

**In what ways did your national organization (Sigma Xi, ACS, or COPUS) support you as you organized a science café? (Check all that apply.)**

Provided understanding of the science café concept	15
Provided information I needed	10
Provided staff/volunteers to assist	2
Provided financial support/funding	11
Helped with finding the venue	--
Helped me find a presenter	--
Helped with promotion	--

N=19

**In what ways did your local chapter (Sigma Xi), section (ACS), or hub (COPUS) support you as you organized a science café? (Check all that apply.)**

Provided understanding of the science café concept	11
Provided information I needed	7
Provided staff/volunteers to assist	12
Provided financial support/funding	12
Helped with finding the venue	7
Helped me find a presenter	7
Helped with promotion	5

N=20

**Have other local or national organizations been involved with the science café you organize?**

Yes	15
No	9

N=24

**If yes, Which ones?**

- American Chemical Society
- Charlotte Area Science Network :CASN:
- Cosmandu astronomy Club, Galileo Astronomical Club of Pokhara :GASPO: private English schools ,Nepal Academy of Science and technology: NAST:, Valmiki Vidyapith Nagarkot planetarium and different media. .
- Depending on the topic, we ask for local sponsorship from the various colleges at our university. Presently, the Graduate College is underwriting our cafes.
- FHSU Science and Mathematics Education Institute
- Florida Academy of Sciences
- Hawaii Academy of Science
- Local chapters of Phi Kappa Phi, the American Democracy Project, colleges and departments at the university
- Logistical and Promotional Support: Entomological Society of British Columbia Stanley Park Ecology Society, Vancouver Parks Board Financial: Vancity Credit Union Community Program Vancouver Trolley Company, Entomological Society of Canada UBC Forestry, Kit
- NESCent
- Reynolda Gardens SciWorks
- Town and university leadership
- UCSF Graduate School of Biomedical Sciences NASA-Ames Research Center Dominican University Department of Natural Sciences Veteran's Administration Medical Center, San Francisco
- University of Central Florida, Orlando Science Center

**In what ways did they support your science café? (Check all that apply.)**

Financial support	8
Promotional support	11
Logistical support	9
Other support; describe:	6

N=15

**Other Support:**

- finding speakers
- providing speakers
- providing speakers and venues
- They organized the Science Cafe
- they provided speakers
- web page construction

**If no: Please check all that apply to indicate the reasons that other organizations have not been involved.**

I did not seek out financial support from other organizations	9
I did not seek out logistical support from other organizations	9
I did not seek out promotional support from other organizations	9
I did not know of other organizations to ask for support	5
I asked for support from other organizations but did not receive it	--
I started working with another organization, but it did not work out; Explain:	--

N=9

**Overall, to what extent have you received the support you need for your science café?**

*Use a scale from 1 to 7: 1= Not enough support, 7=Fully supported. If you have not attempted to receive support from any of the following, please check N/A in the last column (Not Applicable.)*

	1	2	3	4	5	6	7	N/A
From NOVA scienceNOW	2	-	-	-	3	2	2	12
From COPUS	3	3	-	-	1	-	1	13
From Sigma Xi National	2	-	1	1	4	1	1	12
From ACS National	3	-	-	-	1	3	5	10
From your local chapter (Sigma Xi), section (ACS), or hub (COPUS)	3	-	1	1	2	5	9	1
From another local or national organization	1	1	-	3	-	-	8	7
From members of your local community	-	1	1	8	2	2	3	5

N=24

**How has running a science café influenced your local chapter (Sigma Xi), or section (ACS), or hub (COPUS)? (Check all that apply.)**

No impact	4
Increased our membership	4
Increased community awareness of the organization	15
Increased community interest in the organization	8
Helped us to develop partnerships with other organizations; Which organizations	5
Helped us establish relationships within the community; Describe	7
Helped us serve the community; Describe	9

N=24

**What, to you, defines a successful science café event? (Check all that apply)**

Large number of people attending	26
Audience involvement	61
Attendees who are not in a science-related field	51
Attendees who are not already interested in science	29
Attendees changing their preconceptions about science	42
Attendees changing their preconceptions about scientists	34
Interesting conversation	55
Media coverage	17
Opportunity for the presenter to hear feedback from the public	32
Other:	4

N=62

**Other Responses**

- Attendees are comfortable and able to hear presenter.
- conversation among attendees
- Learning about science
- Positive feedback from students

**Indicate which, if any, challenges you have faced or believe you might face in organizing a science café.**

	Have experienced this challenge	Would expect to face this challenge	Have not experienced this challenge
Not enough information to plan and run the event	8	15	31
Not enough support from Sigma Xi	2	8	34
Not enough support from ACS	2	8	37
Not enough support from my local chapter (Sigma Xi), section (ACS), or hub (COPUS)	4	9	37
Not enough support from the local community	8	25	22
Trouble moderating events/finding a moderator	4	25	26
Trouble finding the right venue	10	21	18
Difficulty working with a venue	5	19	27
Reaching new audiences	18	27	10
Reaching an audience not already interested in science	17	30	11
Low turnout	17	30	9
High turnout	10	4	32
Attendees who are not interested	8	15	26
Getting attendees to participate in conversation	11	22	19
Presenter not able to present to a public (non-scientist) audience	10	21	22

N=62

**Other Challenges described:**

- Ambivalent support from our sponsors in the science department and the home and school club
- Coming up with important engaging topics.
- finding time to organize it
- In a University setting, there is so much going on, a host of visiting lecturers, active graduate presentations :international perspectives especially: etc that there is little opportunity to insert another set of activities. The concepts of Scientific C
- Inertia
- Practical problems such as handicap access and available :free?: parking

**Please Tell Us About Yourself:**

**Are you:** (Check all that apply.)

---

Currently studying in a science-related field	10
Currently working in a science-related field	47
A part time student	--
A full time student	1
None of the above	9

---

N=64

**What state do you live in?**

---

Alabama	--	Kentucky	1	North Dakota	--
Alaska	--	Louisiana	1	Ohio	6
Arizona	--	Maine	--	Oklahoma	--
Arkansas	--	Maryland	1	Oregon	--
California	5	Massachusetts	1	Pennsylvania	1
Colorado	--	Michigan	3	Rhode Island	--
Connecticut	--	Minnesota	--	South Carolina	2
Delaware	--	Mississippi	--	South Dakota	--
District of Columbia	1	Missouri	--	Tennessee	1
Florida	3	Montana	--	Texas	3
Georgia	1	Nebraska	3	Utah	2
Hawaii	2	Nevada	1	Vermont	--
Idaho	1	New Hampshire	--	Virginia	2
Illinois	2	New Jersey	2	Washington	2
Indiana	--	New Mexico	--	West Virginia	--
Iowa	2	New York	2	Wisconsin	--
Kansas	2	North Carolina	9	Wyoming	--

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N=62

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Do not live in United States	3
Other Country (Nepal)	1

---

**Region**

---

New England (CT, MA, ME, NH, RI, VT)	1
Middle Atlantic (NJ, NY, PA)	5
East North Central (IL, IN, MI, OH, WI)	11
West North Central (IA, KS, MN, MO, ND, NE, SD)	7
South Atlantic (FL, GA, MD, NC, SC, VA, WV, DC, DE)	19
East South Central (AL, KY, MS, TN)	2
West South Central (AR, LA, OK, TX)	4
Mountain (AZ, CO, ID, MT, NM, NV, UT, WY)	4
Pacific (CA, OR, WA, HI, AK)	9

---

N=62

**Age**

Mean: 51 years old

Range: 23-83 years old

N=62

**Are you:**

---

Female	27
Male	34
Choose not to respond	1

---

N=62

**What is your race/ethnicity? (Check all that apply.)**

---

American Indian or Alaska Native	1
Asian	2
Black or African American	1
Native Hawaiian or Other Pacific Islander	--
Hispanic or Latino	--
White	55
Other; please specify "Mixed race: Asian and White"	1

---

N=59

**What is the highest degree you have received? (Check only one.)**

---

Some high school	--
High school diploma or the equivalent (GED)	1
Associate degree(s)	--
Bachelor's degree(s)	5
Master's degree(s)	7
Professional degree(s) (e.g., MD, DDS, DVM, LLB, JD, DD)	3
Doctoral degree(s) (e.g., Ph.D. or Ed.D.)	47

---

N=63



sciencecafes.org Website Survey responses  
N=138

\*\*\*\*\*

**How did you find out about the sciencecafes.org website? (Check all that apply)**

Direct email invitation from Goodman Research Group, Inc. (GRG)	15%
Friend or colleague	20%
The NOVA scienceNOW website	14%
From communication with WGBH or NOVA scienceNOW staff.	33%
From COPUS	8%
From Sigma Xi	17%
From the American Chemical Society (ACS)	6%
From an internet search	15%
From a newspaper or magazine article	3%
Link from another Web site	4%
Other	16%

N=134

**Before visiting sciencecafes.org, did you know about science cafés? (Check all that apply)**

No, never heard of them	10%
Heard of them, but did not know what they were	4%
Knew a little about them, but wanted to learn more about the concept	32%
I had participated in one or more science cafés as an attendee	29%
I had participated in one or more science cafés as an organizer	41%
I had participated in one or more science cafés as a presenter	9%

N=136

**Was today the first time you have visited this site?**

Yes	28%
No	72%

N=138

**How many times have you been to the site?**

Once	4%
Twice	7%
Three times	24%
Four times	10%
Five times	5%
Six times or more	50%

N=97

**Approximately how much time do you typically spend at sciencecafes.org?**

Less than 5 minutes	25%
5-10 minutes	48%
11-20 minutes	22%
21-30 minutes	5%
31-40 minutes	--
41-60 minutes	--
More than 60 minutes	--

N=98

**What were your primary reasons for visiting the sciencecafes.org site the past few times you visited? (Check *all that apply*)**

To learn about the science café concept	20%
To learn <u>more</u> about the science café concept	44%
To find a local science café to attend	19%
I'm interested in information about starting a new science café	39%
I'm interested in information about partnering with a science café	7%
I'm interested in information about presenting at a science café	10%
Looking for resources to help me organize my science café	75%
Looking for resources to share with other potential science café organizers	24%
Looking for resources to share with other potential science café presenters	26%
Other	13%

N=99

Other responses

- find out what other exist in our area
- funding
- Help explain to others what SC is
- I'm interested in seeing what other science cafes are doing and what formats they use.
- ideas about what other cafes are doing
- looking for ways to promote our science cafe programs
- research science cafes at science institutes
- see what other science cafes are located and what they are presenting
- Seeing what topics other cafes are doing and linking to other cafes on our website.
- Seeing what you are up to.
- To determine whether it is easy to find our Cafe (one of the first in the nation). It's Cafe Scientifique Silicon Valley. I couldn't locate it via your map.
- to get my cafe listed
- To make sure our science cafe is listed correctly

**In your visits to sciencecafes.org, have you found information you were looking for? (Check all that apply)**

Typically I'm not looking for anything in particular (just exploring)	15%
Often I have not found the information I was looking for	3%
Often I have not found the information I was looking for, but have not looked thoroughly yet	0
I have found some of the information I was looking for	38%
I have found the information I was looking for, after some digging	24%
I have found the information I was looking for right away	34%

N=99

**Based on all of your reasons for visiting sciencecafes.org, how satisfied were you with the following components and aspects of the site?**

*Use a scale from 1 to 7 where 1=Not at all satisfied and 7=Extremely satisfied.*

*If you did not look at or review a particular component, indicate NA (Not applicable)*

4% to 24% said NA to some element.

*1=Not at all satisfied; 7=Extremely satisfied*

	N	Mean	1	2	3	4	5	6	7
"What's a Café?"	124	6.27	0	0	2	2	10	40	47
"Find a Café"	116	5.84	2	2	5	3	18	30	40
"Start a Café"	122	6.03	0	1	2	7	13	40	38
"For Organizers"	127	6.01	0	0	3	4	16	43	34
"For Presenters"	103	6.05	0	0	1	5	17	44	34
Links to other resources	105	5.78	1	0	2	9	24	35	30
Visual appeal of the website	128	5.92	0	1	2	9	20	30	39
Ease of navigation	129	5.97	0	0	2	8	21	32	38
Overall amount of information provided	128	5.95	0	0	2	7	19	41	32
Format in which the information is provided	127	5.87	1	0	2	6	24	35	33
The website overall	129	5.98	0	0	2	2	25	39	33

**What would you change about any aspect of the website? (For example: Information you would like to see added or deleted; formatting modifications, or changes in tone)**

See Appendix C

**What impressions about science cafés does sciencecafes.org convey to you?**

See Appendix C

**Would you recommend the sciencecafes.org website to others?**

Not at all likely	--
Not very likely	3%
Somewhat likely	13%
Very likely	46%
Extremely likely	38%

N=136

### **Please Tell Us About Yourself:**

#### **In the near future, I expect to: (Check all that apply.)**

Tell others about science cafés	62%
Attend a science café event	56%
Present at a science café event	18%
Start a new science café series	28%
Continue to run an existing science café series	57%
Recruit organizers to start new science café series	25%
None of the above	1%

N=138

#### **Are you: (Check all that apply.)**

Currently studying in a science-related field	6%
Currently working in a science-related field	74%
A part time student	1%
A full time student	4%
None of the above	23%

N=137

#### **What state do you live in?**

Alabama	--	Kentucky	--	North Dakota	--
Alaska	1%	Louisiana	2%	Ohio	3%
Arizona	1%	Maine	1%	Oklahoma	1%
Arkansas	2%	Maryland	1%	Oregon	3%
California	13%	Massachusetts	3%	Pennsylvania	1%
Colorado	1%	Michigan	6%	Rhode Island	1%
Connecticut	2%	Minnesota	1%	South Carolina	1%
Delaware	--	Mississippi	--	South Dakota	1%
District of Columbia	1%	Missouri	3%	Tennessee	1%
Florida	4%	Montana	--	Texas	2%
Georgia	4%	Nebraska	1%	Utah	--
Hawaii	1%	Nevada	--	Vermont	1%
Idaho	1%	New Hampshire	1%	Virginia	1%
Illinois	4%	New Jersey	1%	Washington	1%
Indiana	1%	New Mexico	3%	West Virginia	1%
Iowa	2%	New York	7%	Wisconsin	1%
Kansas	--	North Carolina	9%	Wyoming	--

N=137

Do not live in United States=4%

Other country; please specify=4% Other countries:

- Canada n=2
- Ghana n=1
- Mexico n=1
- Puerto Rico n=1

**Region**

New England (CT, MA, ME, NH, RI, VT)	8%
Middle Atlantic (NJ, NY, PA)	10%
East North Central (IL, IN, MI, OH, WI)	16%
West North Central (IA, KS, MN, MO, ND, NE, SD)	8%
South Atlantic (FL, GA, MD, NC, SC, VA, WV, DC, DE)	22%
East South Central (AL, KY, MS, TN)	1%
West South Central (AR, LA, OK, TX)	8%
Mountain (AZ, CO, ID, MT, NM, NV, UT, WY)	8%
Pacific (CA, OR, WA, HI, AK)	19%

N=132

**In what year were you born?**

Mean age: 46 years old

Range: 22-82 years old

N=115

**Are you:**

Female	52%
Male	46%
Choose not to respond	2%

N=132

**What is your race/ethnicity? (Check all that apply.)**

American Indian or Alaska Native	1%
Asian	4%
Black or African American	4%
Native Hawaiian or Other Pacific Islander	--
Hispanic or Latino	2%
White	79%
Other	4%
Choose not to respond	4%

N=126

**What is the highest degree you have received? (Check only one.)**

Some high school	--
High school diploma or the equivalent (GED)	1%
Associate degree(s)	--
Bachelor's degree(s)	31%
Master's degree(s)	32%
Professional degree(s) (e.g., MD, DDS, DVM, LLB, JD, DD)	2%
Doctoral degree(s) (e.g., Ph.D. or Ed.D.)	34%
Other	<1%

N=135

## APPENDIX C: OPEN-ENDED RESPONSES

### National Partners Survey Responses

#### **In your own words, what is a science café?**

---

A science café is more of a discussion-based seminar which allows for great conversation centered around the topic at hand. I feel that science cafes consist of more question and answer and less "lecturing".

---

An informal gathering of the public who meet to be educated by the experts on a particular topic. Following the "educational" material, which may be a presentation, seminar or short lecture, the group discusses the presentation, gets questions answered, and if the subject material is controversial, discusses its implications to their community.

---

An opportunity for scientists and engineers to present cutting-edge research or new ideas in an informal setting to an audience of primarily non-technical individuals. Cafes foster direct interchange between the audience and the speaker - all in a setting where people are also eating or drinking beer. It serves to break down communication barriers between the "ivory tower" and the public and get science out to those who might want to use it.

---

"Opportunity for "Joe public" to talk to scientists about latest science happenings "

---

A casual forum for the presentation of scientific research and questions, with food, networking, etc.

---

A chance for non-scientists and scientists to talk about a mutually interested topic in a communal setting

---

A discussion group which meets in an informal setting, such as a restaurant or bar, to discuss a particular scientific topic. There may be a brief introduction to the topic by a designated speaker but most of the time is open for audience discussion.

---

A forum for discussing important and interesting scientific ideas with the general public in an informal and non-threatening environment

---

A forum to engage the public in science in an informal setting

---

A group of people, some deliberately present, others there accidentally, but interested. A discussion of a topic of interest with a speaker (or several) and a discussion open to everyone. In Houston, this has been held at a small restaurant and food is available.

---

A group of scientists who are experts on a topic do a roundtable discussion

---

A group where different topics on science is discussed with a sip of coffee or tea. It is the group of distinguished personalities of science and the interested audiences.

---

A location with an area that encourages conversation with the availability of snack foods and beverages. It is a place for people interested in science conversations. Cafes are maintained by scientists, promoted by scientists, and information is distributed at the cafe.

---

A meeting open to all that is somewhat focused on a single science topic (e.g., sustainable energy). It is held in attractive, convenient location.

---

A meeting with general science demonstrations and information about a specific chemical theme

---

A once a month chance to meet people in other fields of science in an informal setting, to enjoy an excellent presentation on current science topics, and to ask questions of the experts on the topic highlighted that month.

---

A presentation by a scientist for the lay public held in a bar, restaurant or coffeehouse.

---

A program that makes good science available to the general public by hosting informal presentations and conversations available to the public in a setting that not intimidating.

---

a public gathering in an informal setting where non-scientists hear a brief introduction of a scientist's work, and then engage in discussion.

---

A public gathering where a group of scientists entertain a question and answer sessions form the public regarding scientific issues that impact society.

---

A science cafe is a chance for members of the public to listen and join in a conversation about any science topic. It is in laymen terms, and anyone can contribute experiences, comments, or questions. It is led by a scientist who is interested in sparking an interest in people who weren't originally part of the science-interested public. There is an emphasis on discussion, not lecture. It is also in a non-lecture location, so that individuals feel comfortable contributing to the conversation.

---

A science café is a place to discuss scientific topics of interest or importance to the general public with both scientists and members of the general population

---

A science cafe is a scientific talk held in a coffee shop or cafe or another location with a relatively relaxed

---

---

atmosphere. Rather than being a formal presentation, it is a more informal talk in a more informal setting. Ideally, it lends itself to more interaction from the people at the science cafe than what would happen at a more formal meeting.

---

A science cafe is an event (preferable a series) in which scientists discuss important topics related to science and often policy and the community in a setting that is comfortable to the community at large. The science Cafe is open to any person and is free.

---

A science cafe is an informal meeting where interested people can get together and join in a discussion about a topic with a scientific component to it.

---

A science cafe is an informal setting to listen, learn, discuss and focus on one scientific topic. A science cafe is a way to take SCIENCE out of an academic setting to involve students and the general public in the community.

---

A science professional leads a discussion on an interesting cutting-edge topic that has wide applications in everyday lives. It is like a seminar but with less formal lecture but more open discussion. More like a forum and the setting is in a public setting like a restaurant. Everybody gets to speak if they want to.

---

A Scientific Cafe is a way to stimulate discussion among all members of the public on a local interest topic. It can be introduced by people with appropriate background but the main point is to generate discussion (as compared to guest lectures).

---

A science cafe is a public meeting where a scientist gives a brief presentation on a topic in which he/she has some expertise. The meeting is then opened to the audience for an extensive question and answer and/or discussion session.

---

A talk by a scientist that is intended for a general audience. It is usually held at a bookstore, coffee shop, pub, etc.

---

A Town Meeting for science. Open to the general public

---

a way to make science interesting and accessible to everyone

---

Actually, I define it as two people interacting about science and my field is the sky. I found a friend (a long time friend) and she wanted to know if it would be OK. if she ask me questions about the sky. Naked Eye Observations.

---

An attempt to involve and interest the general public in science-related issues and information

---

An event for scientists to present their work or field to the general public in an informal setting.

---

An informal and interactive presentation, in a friendly spot and with refreshments, on a science topic of broad interest to the community.

---

An informal event in which the public can interact in a social environment with professional scientists in various fields.

---

An informal gathering of interested people wherein a scientist talks about or makes a presentation regarding their work or some particular aspect of science and the attendees have a chance to ask questions and engage in general discussion relative to the topic at hand.

---

an informal gathering to reach out to members of the public and inform them of some area of science

---

an informal meeting where science ideas are exchanged, also where the PUBLIC can get unbiased information on a variety of topics of interest

---

An informal presentation/discussion regarding a scientific topic typically held at coffee shops and bookstores.

---

An informal, public discussion of timely, relevant scientific topics, facilitated by an expert, targeted toward a mainstream non-technical audience. Science Cafés are often held in non-traditional venues.

---

An opportunity for individuals to meet in a more informal setting to talk about a specific predetermined topic. Often there is a short intro given by either an expert in the field or through a short video to get the conversation started.

---

An opportunity for informal/informed conversation between scientists and the interested public.

---

An opportunity for members of the general public to meet informally with a leading scientist to discuss important scientific issues and concepts.

---

An opportunity for people interested in a particular SCIENCE topic to get together and discuss that topic.

---

An opportunity for science-curious adults to learn, discuss, argue and contemplate in a congenial social setting populated by other interesting people.

---

Bringing science to the public to increase the public understanding of science in an informal atmosphere  
fireside chats about topical issues in science, politics and life

---

For our chapter, science cafes are a means of communicating current issues in science to the general public. Our format is informal and allows for interaction between scientist and the public. In addition we use largely local scientist increasing public awareness of the science research and resources in our local community.

---

I'm not sure

---

informal science education & increasing the public understanding of science

---

---

It is an ACS meeting open to the public to allow for discussion of issues dealing with science.

---

It is an open dialog between experts in science and the public about a topic of interest to both communities. They take various forms but the conversation has to be timely and relevant and at a level that the public can discuss.

---

It's a monthly meeting at a coffee house which features a scientist giving a power-point or other interactive presentation about an aspect of the scientist's work or an area of science. It is a relatively informal setting and conducive to discussion with the audience.

---

It's an informal gathering of the general public who are interested in a broad range of SCIENCE topics. They usually meet for 1 to 1.5 hours in a bar or cafe, and are hosted by Sigma Xi (or other organization) and have a guest speaker.

---

Members of the organization find a commercial venue to discuss science, or in our case, largely chemistry, with interested parties to spread the word.

---

Our RTP chapter participates in science cafes that provide opportunities for scientists to share exciting knowledge and developments in a variety of scientific areas with local scientist as well as the non-scientific community at large.

---

Present a scientific talk to community or hold informal discussion about science issues with general public at an informal setting

---

science discussions at coffee houses or restaurants, no cost, no membership.

---

science for the lay person

---

science goes to public

---

seminar on science held at informal spot (town-hall-ish)

---



**What would you change about any aspect of the website? (For example: Information you would like to see added or deleted; formatting modifications, or changes in tone)**

N=67; 70 responses

Response
It might be interesting to have a list of past Science Cafes and presenters to spark ideas about how best to structure one.
It would be good if contact information could be added for the current science cafe organizers.
It might be cool to be able to connect with willing presenters through the website.
Profile individual organizers, presenters and sponsors. Organizers could provide contacts.
For those trying to set up their first cafe or looking to present at their first cafe, the information is helpful. But, the sections could be clarified a bit more simply by adding some descriptive examples (perhaps from some organizers who already have written the descriptions of their programs).
connections to others in the region sponsoring science cafes
"The links to Sigma Xi on the "for organizers" section is not very useful unless you are a Sigma Xi chapter officer. There is a Science Cafe kit available to SX chapter officers, but it does not provide much more useful information than is available on the sciencecafes.org website. Perhaps this area requires some enhancement."
"I'd like to see the "For Organizers" section have a little more information/ideas for ways to contact potential presenters especially when your area does not have an active Sigma Xi chapter to contact or partner with on events. Our cafe is relatively established and it is always a challenge to find "new" presenters. "
"The "find a cafe page" has gotten pretty crowded - maybe another format so that it is easier to see individual cafes I am sure with time more organizers will add more information. Maybe the network page can have a place just for success stories that can give other organizers new ideas. It would be great for potential organizers to see all of the benefits of putting on cafes"
"I think the website is quite helpful. I would add a few "science" photos and perhaps highlight an interesting scientific theory or finding. This would bring me back to the site on a regular basis instead of just coming when I want to check something. You could have a link to NSF news for example."
Some sample video of other cafes, suggestions for troubleshooting disruptive participants, a ready resource to ask community college or university public liaison offices in order to find presenters.
some videos
I would break up the sheer amount of text provided. It feels like reading a book, rather than a site where information can be gathered quickly. I'd love to see more images to increase a sense of liveliness around the concept. Also, the site colors are dark making it hard to read at times.
photos and/or podcasts and/or videos of science cafes. Response to email queries.
I would change the graphics a little. Fresher. I would also add a photos section for various science cafe's from around the country. Also could have different articles written about Science Cafes featured. Or one could have a few articles written by organizers of Science Cafe's telling their story or something!?! Best, Daniel Osmer - Ambassador for Youth Science
small font size on text
The navigational system seems to be a bit too cutesy. A nice stab at giving a sense of effervescence (at least I think that is the purpose of the bubbly aesthetic), but a simple menu bar, perhaps as text along the bottom, would be a useful anchor. I would like to see more testimonials from science cafe organizers, speakers, and participants, perhaps with links to short videos.
I feel the overall information contained in the website is very good. I work on websites so in my opinion I would like to see photos from internet cafes to see the range of venues used and how they were set up. I also would like to see the text a little larger with more contrast from the background. Another thing I would like to see is an area where business can fill out a form if they would like to host an event. This would help with time trying to find willing business to host events.
I found the website pretty good, but the font size was uncomfortably small. Since you have set it up so that the information can be expanded, the denseness of the text didn't seem necessary. Also, the site could be more aesthetically pleasing.
Content is good, but it's a little unclear to the casual visitor if this site exists to help organizers or audiences.

---

Photos would be nice. The graphics, text, etc., all seem conceptually monosyllabic.

---

"1. With the links to other resources, it could be more obvious to the visitor that there are many resources within the 'network' 2. Visually, I think the site could use some work, perhaps by having more links up front in a menu. 3. I feel home page could be laid out in a more alluring manner, perhaps by using graphics for the buttons. The links below that seem to work well."

---

If two Science Cafes are located close to each other, a mouse over of the map to locate a science cafe may only indicate that there is one in a given city instead of both being noted.

---

please add calendar of events where organizers can post info about upcoming Cafés

---

The search for a nearby cafe is not easy. A listing by state instead of clicking on a bubble would be better.

---

The search for cafes in the U.S. the map with stacked icon links doesn't work for the San Francisco Bay Area. We have one of the largest cafes around and I couldn't locate the link.

---

Map of existing cafes could use a way to zoom in faster via search all in state or region...?

---

Perhaps a way to search by type of cafe-- university sponsored vs. student sponsored vs grant-funded, etc.

---

Find a cafe by the map system makes one a bit sick to one's stomach--swirling balloons and cities. It would be helpful to do so by state or zip code. Also, I think it would be good to link to resources at the Dana Centre in the UK (Dana Centre, Science Museum, London). Another good thing about the website is that if I have questions I can figure out folks to call. Thanks!!!

---

A list of available presenters in different geographical locations.

---

A more detailed map so that the state could be enlarged.

---

The "Find a cafe" page was a little difficult with the map if you were looking in an area that had a lot of hits that visually overlapped. It might be better to search by city or county or zip code...?

---

The "Find a Cafe" feature that allows you to click on locations on a map does not accurately distinguish between locations that are in close proximity.

---

Find a Cafe should be more specific. I suggest it should be: "Find cafe in US/Canada/UK." If a lot of countries participate, you could maintain it as it is, while showing the maps of other continents. It is misleading for someone outside these regions to visit the site only to realize that those regions are not covered. On "Why present at a science café," the statement "In a recent survey almost every scientist that has presented at a café was interested in repeating the experience. More than a third believed that their experience changed how they think about talking to a general audience about their work," looks to me too vague. How recent is "recent"? What are the real numbers? I need to know.

---

On the "Find a Cafe" page, it might be helpful to have some sort of search feature where you can look for an event by name (of event, maybe even by name of the organizer) in addition to clicking on a map. As an organizer, I might be looking for another event I've heard of but not know what city it's in and there's no easy way to find it.

---

Make it easier to find info.

---

I cannot find the page that is links to other resources at all.

---

Some navigation problems with getting back to pages, for example if was in ""for organizers"" and chose a new link it is not clear how to return except by using the BACK key on my computer. This is not true with all links - some have the topic bubble enlarged to tell you from which section you came, but others make all the bubbles go back to the same size and I got confused more than once on where I had just come from. I liked the drop down open/close for more information - whole page looks less cluttered that way.

---

Packages that can be downloaded for organizers with pdfs, templates, etc.

---

It is good and seems to have improved over the past two years that we've sponsored a Cafe.

---

It's a great website! One of the most useful resources for me was the handbook for organizers. I don't recall where I found it, but I remember digging around a bit before it popped up. That could be more obvious.

---

Otherwise, its great!

---

The Web site is great and provides you with the tools and inspiration to organize the cafes. I also like the Network and plan to join once I get our cafes organized.

---

You could, but I like the site. Especially being able to find other U.S. cafes.

---

Looks good as it is

---

n.a.

---

NA

---

no

---

No suggestions at this time

---

---

No. I think the website is excellent and fun to navigate. Make sure the Charlotte Area Science Network Science Cafe at Discovery Place is shown on the map.

---

nothing

---

Overall I think the site has been very useful. Hopefully we can add our Science Cafe to the mix very soon!

---

I love that you've added a link to discuss cafe scientifique's and what works and not. I think of the cafes as social networking and we as organizers need the medium to do that!

---

I think it is a good looking site, fast enough, easy to access once you are registered

---

Can't think of anything right now.

---

Effective as is

---

It's all good!

---

It's fine for me the way it is.

---

It's fine. Just keep updating it regularly and everything is OK

---

The overall categories are good, but the advice is somewhat restrictive. It seems as though the categories, information, and advice are at the concept stage, rather than the implementation stage. I have checked the site periodically to see if there were updates but have not seen much change. I would guess that you are conducting this research to help make that transition. It would seem that it would be a good idea to talk with active organizers and participants to get an overall idea of how the cafes are working in different settings. For example, in our case, we were able to start a simple cafe series in the education space in the greenhouse or our public garden. It's a very relaxing environment, the scientists (all faculty at our university) were very interesting, and the public responded enthusiastically. We gave thought to interesting refreshments, as well. On the evening we discussed native trees, we served persimmon and pawpaw pudding. The scientists used a few powerpoint slides to illustrate their work; they did not use videos. These are not the typical ideas I've seen on the site but they accomplished the goal--of getting people excited about science and talking with one another. We are partnering with other organizations now, and I'll be interested to see if using the more typical style shown on this site will make a difference. The point of these comments: I think it's important for each group to find its own best way to organize and present, based on knowledge of the participants and resources, and it would be very interesting to learn about more of these ideas. I'm not interested in a social networking site.

---

The process of adding local Science Cafes to the list seemed long and tedious and therefore have not yet added them. We've held 3 so far on a sporadic basis and I plan to add us once the details are stabilized.

---

"There are many references to science cafes being grassroots organizations and not top-down--and the fact that all science cafes are different. Yet, the description of what a science cafe is and how to organize one is somewhat narrow. For example, there is a strong discouragement of the use of PowerPoint. Why? Presenters at our events frequently use PowerPoint--and they use it very well with creative inspiring visuals and video. Also, in the description of the science cafe, it says presenters should give ""brief"" presentations. Again, why? A full presentation doesn't preclude a lengthy dialogue with the audience or extensive one-on-one interaction with the scientist following the presentation. I feel the description of what a science cafe is and how to organize one is based too strongly on the Cafe Scientifique model and perhaps should be updated to be more inclusive of other ways of doing things."

---

Assume that adults are the primary visitors & users - don't make it as juvenile friendly, but instead family-supportive; keep it sophisticated.

---

Just having trouble managing all the social networking sites, passwords, URLs, and other details one must know to engage online. In particular, with public media organizations, each producer or agency is hosting their social networking activities on a different platform so users have to remember to go to Twitter, NING, Delicious, and others. I do not prefer to access FaceBook, My Space, You Tube, and all the rest as I am working, not surfing!

---

I've never been on the website

---

Sorry I didn't visit the web site. I'm just responding to an email contact invitation

---

The information for organizers was overkill. My experience is that you can get one going in a university town with much less effort and advertising in the right places at the right time.

---

We haven't actually done a cafe yet. Once we do one, I'll probably have more comments.

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I am the organizer of Cafe Scientifique in Iowa City. I was confused about the sciencecafe because the name was changed from Cafe Scientifique (the original name) to sciencecafe. I thought Sciencecafe was related to NOVA specials until I went to the website and found that we were also part of the sciencecafe.

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## What impressions about science cafés does sciencecafes.org convey to you?

N=110; responses= 124

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### Response

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They're fun ways to talk about science with people who don't usually talk about science but like to socialize

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This is a great way of communicating science to the public, fun for both presenters and audience. There are no rules to follow aside from a few general principles, so organizations can easily make a series following their own visions.

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Very flexible, very casual

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That they are casual opportunities to learn more about a science topic from an expert in a relaxed atmosphere.

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Serious fun!

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Suggests that science cafes are upbeat experiences; good information for organizers and presenters, but science cafes will vary according to how much the organizers put in (the onus is on them, since there is a wealth of information on the site). a professional and enjoyable endeavor -- kudos to NOVA and Sigma XI (wish you did not have to be a member to access their materials, too, though that is understandable).

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A comfortable, interactive venue to talk about current issues in science.

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Accessibility of science to the public

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Cafes are fun and easy to organize.

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Engaging format that makes science cafes look fun.

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Flexibility, informality are key

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Friendly, plain English conversations about science in a bar setting.

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Fun and approachable

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Fun and enriching.

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Fun, doable... needs more evaluation and impact resources... I've recommended this website frequently

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Fun, easy, self-contained.

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Fun, lively, exciting

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Fun, not formal.

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I think the site does a good job about stressing the fact that this is not a lecture style program. It's more interactive. This is very different from many typical science presentations and I would imagine it might throw some folks a little at first.

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Informal meeting places between science and public

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It is fun and repeatable wherever you are. I don't think the map shows how prevalent they are though.

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It shows it is very trustful. Once a person reads about the idea behind science cafe, they understand what it is for and the impact it has. Since, we started science cafe here in College Station/Bryan, we always refer to this website and the presenter clearly understand and support the idea and the social impact.

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It's positive and upbeat. not too technical or boring

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Positive, fun, interesting

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Quirky, fun, modern.

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That it is fun, somewhat organic.

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That they are fun and informative and a great social way to interact around science. I've already sent many people there!

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It looks modern

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Easy, fun, personable

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That they are easy to set up and fun to do.

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That's it's a fun, easy way to engage people.

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Interesting format for conveying the importance of science. Fun and easy to organize. They are going on all over!

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I think the great thing about the web site is that it shows how widespread the science cafe phenomena is. The interactive map is wonderful. Overall, I think it makes science cafes seem fun and interesting--and easy to organize.

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That it is an exciting way to experience science in an informal atmosphere.

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The headings (for presenters, for organizers, etc...) make sense. I find it easy to get the information I need. I have cut and pasted information directly from the website when composing emails to colleagues interested in learning more about the events.

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The site conveys the idea that science cafes are fairly easy to start up and provide a good way to improve science communication and education for lay people.

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Easy to organize, very broad concept that can be formatted in a million different ways.

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Gives you the impression that anyone can do it. It's pretty bare bones. Our organization has gone hog wild with social technology and it is getting integrated into our museum big time.

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I get the impression that this is an effective outreach format that can be duplicated without too much difficulty.

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I had not visited the site (or a related site giving information on Science Cafes) in probably a year or more. The current iteration does seem easy to use, and hints at the offbeat nature of the Science Cafes.

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I rather like the radial organization of the various links--gives a feeling of something different, and yet very logically arranged. Nice site!

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I think the tone of the Web site matches the science cafe concept. It is extremely easy to use.

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It is an attractive, creatively design and easy to use website. There is too much overlap with all the COPUS and Year of Science and ScienceCafe networking sites in my opinion. The ScienceCafe networking site should just be a subset of YoS and Copus since they all grab each other's info. anyway. the way it is set up now dilutes the experience.

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It's doable, it's not hard, and it's a great way to bring relevant science to the community.

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That it's easy to set one up. That there is lots of support for helping set up a café, and that science cafes are a growing phenomenon.

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that they are not hard to set up with a little work, and that they are a growing trend and network, and that there are plenty of resources out there.

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That they are pretty easy to run, if you're willing to do a bit of legwork.

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science outreach to the general public, ease of conversation and emphasis on social gatherings, plenty of support for presenters and organizers

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Professional information, casual atmosphere, inviting to the general public -- these are our goals, as well as inspiring a sense of community and connection with our local colleges and scientific organizations.

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... that there are a lot of them and that they are nationwide - also that cafe series can be easy to organize and that there are resources out there to help new organizers.

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great outreach for scientists easy enough to do but with everything is a learning curve

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hard to say - photos would help!

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That there's a lot of help if someone wants it.

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Very organized and good information.

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The sciencecafes website is basically well presented in terms of information and topics covered. I do feel that it offers a clear picture of what a science cafe is and can be.

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The site provides a wealth of information about the development of the concept, and how science cafes vary in relation to their particular situation. I had to excerpt from many sources within sciencecafes.org to put together a handbook for use by the partners that established our own science cafe'. Overall, it serves the purpose very well for those who want to establish one in their city. I recommend it to all who become interested in this movement.

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There are a lot of ways to run a cafe and a lot of resources to help.

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Scientific literacy for the public.

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That it is a great tool to find out about useful resources, networking, and interacting with other science cafe organizers. I am pleased to be part of it.

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A good resource for anyone interested in organizing or attending a science cafe.

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High quality web site, well thought out concept

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I feel the concept is excellent and a great addition to the common public programs.

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Informative

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Interesting

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Interesting, successful approach to broaden impact of science center

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Inviting, informational, useful

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It give a good intro to the topic for people who don't know anything about them. It's usually where I send presenters to get the first idea about what they're agreeing to do.

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It is a very good site for all stakeholders involved and/or interested in science cafes. Keep it up.

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It's designed to help those of use who may not know anything about science cafes, but for those who do there is also information.

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Lots of information

National organization with need to present changing information

It's exciting and educational.

That the purpose of science cafes are really to create a community of informed science enthusiasts from all walks of life. I applaud initiatives like this that are working to help bridge the gap and advocate that everyone, not just academics, can not only understand but contribute to science and science literacy

Enthusiasm about science education

Excitement regarding the topic

It conveys that science cafes are happening everywhere!

It makes the concept rather exciting, which it is. It has good information and is well organized.

Very good ones.

Very professional

That the thirst for science can indeed be quenched by community organizers!

The website is not as exciting as the concept of bringing people together to excite an interest in science.

Still not as organized as I would have liked when I started doing the cafes.

technical

That the network is robust and individuals can tap into this rich and important network

A bit too impersonal, at this stage...

a gathering place for smart people to meet and learn and discuss ideas

Confusion about whom to present info to ('the demographic'), and how to present it.

Evansville needs a place for thinking people to gather. This has that potential

Far too much suggesting that the cafe movement is organized; especially, by WGBH.

I really like the concept and I am looking forward to start one.

I'm always going straight to the cafe map. I've never looked around anywhere else.

Individual programming is the way forward; need to have administrative goals & structure behind the first page

It seems entirely independent of Nova a WGBH

It's a natural extension of the Cafe Scientifique in the UK. Always a good idea and nice to see the kinds of partners working to build U.S. cafes.

Organized ... need to be run in a certain way ... all the same.

Pretty good overall.

Science cafes are a good way to bring science topics to the general population.

Nothing

Nothing comes to mind. I tend to use the British site.

That they are popular and common, and that organizers can learn from one another-- I never considered networking before.

They are an up and coming part of the popular science business.

they are growing in popularity -

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