

Supplement 1. STEM Ambassador 2018 scientist pre-training survey

INTRODUCTION

As part of your participation in the STEM Ambassadors program, Inverness Research, the external evaluators for the project, are asking that you complete this pre-survey in addition to the pre-survey you complete for the research team. This pre-survey will collect data about your experiences, background, and past work in offering science engagement experiences to the public (if any), as well as your perceptions of the incentives and barriers that exist for you in offering science engagement experiences. This data helps us learn about the program so the project leaders can make improvements to it, and helps us report findings to the funder. There are no right or wrong answers. You can choose to skip questions if you do not want to answer them. Your responses to this survey will remain confidential, as we report our findings to project leaders and the funder in the aggregate and remove any identifying information. At the end of the project, we will ask you to complete a post-survey as well. We anticipate that this survey will take about 15 minutes to complete. Thank you, in advance, for your time.

BACKGROUND

1. Name:

2. What is your gender?

Female

Male

3. What is your area of STEM expertise?

4. How many years have you been working in this STEM field?

5. How did you hear about the STEM Ambassadors Program?

6. From where did you receive the invitation to participate?

Cohort 3 STEM Ambassadors Pre-Survey for Participating Scientists -- February 2018

General Public Outreach Questions

7. Do you have responsibility for science engagement activities as part of your current job?

- Yes
- No

8. Have you had experience communicating your science research to the public?

- Yes
- No

9. If so, approximately how often?

10. How would you rate your overall interest in communicating your science research to the public?

not interested at all not interested somewhat interested interested very interested

<input type="radio"/>				
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Cohort 3 STEM Ambassadors Pre-Survey for Participating Scientists -- February 2018

Engaging with Different Types of Audiences

11. Please rate your comfort level with engaging with the following types of audiences about your research:

	not comfortable at				
	all	not comfortable	mixed	comfortable	very comfortable
Public audiences in out-of-school/informal settings	<input type="radio"/>				
Senior citizens	<input type="radio"/>				
Corporate employees (for example, CEOs, staff employed by businesses, etc.)	<input type="radio"/>				
Service workers (for example, waiters/waitresses, maids, janitors, etc.)	<input type="radio"/>				
Families with young children	<input type="radio"/>				
Police officers, firefighters	<input type="radio"/>				
Prisoners	<input type="radio"/>				
Refugees	<input type="radio"/>				
Church groups	<input type="radio"/>				
High school students	<input type="radio"/>				
Middle school students	<input type="radio"/>				
Elementary school students	<input type="radio"/>				
Pre-K students	<input type="radio"/>				
Community groups (for example, Friends of the Library, Junior League, Rotary, etc.)	<input type="radio"/>				
After school programs (e.g. 4H, Boys & Girls Clubs, Girl Scouts, BoyScouts, etc.)	<input type="radio"/>				

Cohort 3 STEM Ambassadors Pre-Survey for Participating Scientists -- February 2018

Engaging with Different Types of Audiences (continued)

12. Please rate the extent to which you feel people from each of these groups could become more science-engaged if the opportunity presented itself:

	not at all	not likely	somewhat likely	likely	highly likely
Public audiences in out-of-school/informal settings	<input type="radio"/>				
Senior citizens	<input type="radio"/>				
Corporate employees (for example, CEOs, staff employed by businesses, etc.)	<input type="radio"/>				
Service workers (for example, waiters/waitresses, maids, janitors, etc.)	<input type="radio"/>				
Families with young children	<input type="radio"/>				
Police officers, firefighters	<input type="radio"/>				
Prisoners	<input type="radio"/>				
Refugees	<input type="radio"/>				
Church groups	<input type="radio"/>				
High school students	<input type="radio"/>				
Middle school students	<input type="radio"/>				
Elementary school students	<input type="radio"/>				
Pre-K students	<input type="radio"/>				
Community groups (for example, Friends of the Library, Junior League, Rotary, etc.)	<input type="radio"/>				
After school programs (e.g. 4H, Boys & Girls Clubs, Girl Scouts, BoyScouts, etc.)	<input type="radio"/>				

Cohort 3 STEM Ambassadors Pre-Survey for Participating Scientists -- February 2018

Engaging with Different Types of Audiences (continued)

13. In your opinion, how important are these goals of doing science engagement activities with public audiences? Please rank order these seven options in terms of importance. Outreach should...

  give people a taste of sophisticated research.
  help people solve problems in their lives.
  help people become a little more like scientists themselves.
  foster public interest in scientific research.
  dispel myths.
  give people factual understandings of current science issues.
  foster curiosity about the world.
  facilitate the two-way exchange of information between the scientific community and the public

14. If you have additional goals that you think are important, please list them here

15. Which of these support mechanisms motivate you to share your science with community groups? (check all that apply)

- stipend for your time
- support from your department chair
- support from the dean
- costs of materials and/or travel
- funds for a lab assistant
- media recognition (e.g.—write-up in the local newspaper)
- sense of contribution to society
- recognition from a professional society (e.g., Ecology Society of America)
- certificate
- Other (please specify)

16. What is currently limiting your activities to engage the general public in learning more about science and research? (check all that apply)

- I am too junior in my career
- I have serious time constraints
- I lack opportunities or a venue to do so
- Community engagement is not encouraged, promoted or valued by my superiors
- Community engagement is not encouraged, promoted or valued by my peers
- I am only in the US for a limited period of time
- There is no senior level support
- I lack the skills to be effective
- I have difficulty conveying my research to the general public
- English is not my first language
- People do not have interest in attending community engagement events
- The general public does not have enough background to understand my science
- My science is difficult to link to people's everyday lives
- People cannot relate to the science I do
- My science is too detailed/complicated for people to be able to understand
- I would have to do it in my own time
- I feel that someone with more experience in education/communication should do it
- Nothing is limiting my activities to engage the public in science and research
- Other (please specify)

Supplement 1. STEM Ambassador 2018 scientist post-training survey

INTRODUCTION

As part of your participation in the STEM Ambassadors (STEMAP) program, Inverness Research, the external evaluators for the project, are asking that you complete this post-survey. This post-survey will collect data about your experiences in the STEM Ambassadors program, as well as your perceptions of the incentives and barriers that exist for you to participate in public engagement. Some questions on this survey were also on the pre-survey. There are no right or wrong answers. You can chose to skip questions if you do not want to answer them. Your responses to this survey will remain anonymous, as we report our findings to project leaders and the funder in the aggregate and remove identifying information. We anticipate that this survey will take about 15 minutes to complete. Thank you, in advance, for your time.

BACKGROUND

1. Name:

General Public Outreach Questions

2. How would you rate your overall interest in communicating your science research to the public?

not interested at all

not interested

somewhat interested

interested

very interested

3. How important is it for you to engage with the public about your research?

not at all important

not important

somewhat important

important

very important

Please explain your rating:

Science Communicator Effectiveness and Identity

4. How well prepared are you to engage with the general public about your research?

very under prepared	under prepared	somewhat prepared	well prepared	very well prepared	not sure enough to answer
<input type="radio"/>					

5. How would you rate yourself for each of the following skills in communicating science?

	very low	low	mixed	high	very high
ability to understand new settings and audiences for sharing my research	<input type="radio"/>				
ability to adapt engagement activities to different settings and audiences	<input type="radio"/>				
ability to clearly communicate key ideas or concepts	<input type="radio"/>				
ability to interact with your audience	<input type="radio"/>				

Science Communicator Effectiveness and Identity (continued)

6. Please rate your comfort level with engaging with the following types of audiences about your research:

	not comfortable at all	not comfortable	mixed	comfortable	very comfortable
Public audiences in out-of-school/informal settings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Senior citizens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Corporate employees (for example, CEOs, staff employed by businesses, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Service workers (for example, waiters/waitresses, maids, janitors, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Families with young children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Police officers, firefighters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prisoners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Refugees	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Church groups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
High school students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Middle school students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elementary school students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pre-K students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community groups (for example, Friends of the Library, Junior League, Rotary, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
After school programs (e.g. 4H, Boys & Girls Clubs, Girl Scouts, BoyScouts, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Science Communicator Effectiveness and Identity (continued)

7. Please rate the extent to which you feel people from each of these groups could become more science-engaged if the opportunity presented itself:

	not at all	not likely	somewhat likely	likely	highly likely
Public audiences in out-of-school/informal settings	<input type="radio"/>				
Senior citizens	<input type="radio"/>				
Corporate employees (for example, CEOs, staff employed by businesses, etc.)	<input type="radio"/>				
Service workers (for example, waiters/waitresses, maids, janitors, etc.)	<input type="radio"/>				
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Police officers, firefighters	<input type="radio"/>				
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Middle school students	<input type="radio"/>				
Elementary school students	<input type="radio"/>				
Pre-K students	<input type="radio"/>				
Community groups (for example, Friends of the Library, Junior League, Rotary, etc.)	<input type="radio"/>				
After school programs (e.g. 4H, Boys & Girls Clubs, Girl Scouts, BoyScouts, etc.)	<input type="radio"/>				

Science Communicator Effectiveness and Identity (continued)

8. In your opinion, how important are these goals of doing science outreach with public audience? Please rank order these seven options in terms of importance. Outreach should...

<input type="text"/>	give people a taste of sophisticated research.
<input type="text"/>	help people solve problems in their lives.
<input type="text"/>	help people become a little more like scientists themselves.
<input type="text"/>	foster public interest in scientific research.
<input type="text"/>	dispel myths.
<input type="text"/>	give people factual understandings of current science issues.
<input type="text"/>	foster curiosity about the world.
<input type="text"/>	facilitate the two-way exchange of information between the scientific community and the public

9. If you have additional goals that you think are important, please list them here

Incentives and Constraints for Engaging in Public Outreach

10. What is currently limiting your activities to engage the general public in learning more about science and research? (check all that apply)

- I am too junior in my career
- I have serious time constraints
- I lack opportunities or a venue to do so
- Community engagement is not encouraged, promoted or valued by my superiors
- Community engagement is not encouraged, promoted or valued by my peers
- I lack the skills to be effective
- I have difficulty conveying my research to the general public
- English is not my first language
- People do not have interest in attending community engagement events
- The general public does not have enough background to understand my science
- My science is difficult to link to people's everyday lives
- People cannot relate to the science I do
- My science is too detailed/complicated for people to be able to understand
- Public engagement is of lower priority than my other activities
- I feel that someone with more experience in education/communication should do it
- Nothing is limiting my activities to engage the public in science and research
- Other (please specify)

Summary Questions about the STEM Ambassadors Program

11. Overall, how would you rate your experience in the STEM Ambassadors program?

not at all valuable

not valuable

mixed

valuable

very valuable

12. Please rate the extent to which you agree or disagree with each of the following statements about the overall time commitment the STEM Ambassadors program required:

strongly disagree

disagree

neutral

agree

strongly agree

The time I spent on the STEM Ambassadors program was about what I expected it would be.

The time I spent on the STEM Ambassadors program greatly exceeded what I expected it would be.

The time I spent on the STEM Ambassadors program was less than I had expected it would be.

13. Please help us better understand the ways you were matched to and chose your sites where you did your STEM Ambassadors public outreach. Please choose ONE of your public engagements and check all that apply

- The STEM Ambassadors project leaders found and arranged the site where I did my outreach
- The site was one of the program's already established program sites (e.g., prison program)
- The site was chosen based on my personal life, interests, hobbies and/or background
- The site was related to my research interests
- The site was found based on an existing personal connection I had with a community member
- The site was found based on a personal connection I made with a community member through the project

Other (please explain):

Summary Questions about the STEM Ambassadors Program

14. Please rate the extent to which you agree or disagree with each of the following statements about the STEM Ambassador program:

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
The STEM Ambassador program increased my interest in offering science outreach activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The STEM Ambassador program increased my interest in offering science outreach activities in new/different types of venues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have gained new skills for offering successful science outreach activities because of my participation in the STEM Ambassador program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to do more science outreach activities as a result of participating in the STEM Ambassadors program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I want to reach out to new audiences as a result of participating in the STEM Ambassadors program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. Which of the following resources provided by the STEMAP program were most useful to you? Check all that apply

- workshops
- support in building community relationships
- support in editing engagement materials
- brainstorming engagement ideas
- networking with other STEM Ambassadors
- Other (please specify):

Summary Questions about the STEM Ambassadors Program (continued)

16. What advice would you give to another scientist who was thinking of participating in this program?

17. Please include any additional thoughts and comments you have about the STEM Ambassadors program here: