

GK-12 FACULTY ADVISOR SURVEY

A1. In what academic department or unit are you currently a faculty member?

A2. What level students do you currently advise? (Check all that apply)

- ₁ PhD
- ₁ Masters
- ₁ Undergraduate
- ₁ Other _____

A3. In your opinion, how important is it for graduate students (PhD and Masters) in your department to be able to do the following by the time they graduate? (Check one)

	<i>How important is it for PhD students to do the following...</i>			<i>How important is it for Masters students to do the following...</i>		
	Not important	Somewhat important	Important	Not important	Somewhat important	Important
Conduct research	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Communicate science to non-scientists	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Teach undergraduate students	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Present their own work to scientific peers	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Have an understanding of national scientific policy	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Write a research grant proposal	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Conduct outreach to K-12 schools or other educational organizations	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃

A4. To what extent do you feel it is important for graduate students (PhD and Masters) in your department to be knowledgeable about the following issues? (Check one response in each row)

	<i>How important is it for PhD students to be knowledgeable in the following...</i>			<i>How important is it for Masters students to be knowledgeable in the following...</i>		
	Not important	Somewhat important	Important	Not important	Somewhat important	Important
Technological advances in your field of study	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Funding opportunities in your field of study	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Current research in your discipline	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Innovative undergraduate curricula in various STEM fields	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
How to teach STEM content to undergraduate students	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
How STEM content is being taught in K-12 schools	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
How to teach STEM content to K-12 students	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Important issues/challenges that K-12 teachers face today	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Employment outlook for Masters or PhD graduates in various STEM fields	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃
Ethical issues and/or implications of STEM research for society	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃

A5. To what extent do you encourage your graduate students to engage in outreach activities to K-12 schools?

- ₁ Not at all
- ₂ Occasionally
- ₃ Somewhat regularly
- ₄ Regularly

A6. Which of the following statements do you agree with most?

Conducting some educational outreach outside the university is...

- ₁ Beneficial for all graduate students
- ₂ Beneficial for some graduate students
- ₃ Not beneficial for graduate students

Please explain:

B1. Are you familiar with the Graduate Teaching Fellows in K-12 Education (GK-12) award at your institution listed below?

[Programmers - list PI name and award title]

₁ Yes

₂ No

If yes, continue to B2. If no, skip to end.

B2. Have you ever participated in this GK-12 project?

₁ Yes

₂ No

If yes, continue to B3. If no, skip to question B4.

B3. In what ways have you participated in this GK-12 project? (Check all that apply)

₁ Visited a K-12 classroom or school

₁ Gave a lecture or demonstration to K-12 students

₁ Invited K-12 teachers into your lab

₁ Invited K-12 students into your lab

₁ Engaged K-12 students in research

₁ Provided resources (e.g., laboratory equipment, materials, supplies) to K-12 schools

₁ Provided training to Fellows

₁ Provided training or professional development to teachers

₁ Helped write the proposal

₁ Served as co-PI or PI

₁ Other _____

B4. Have any of your graduate student advisees (Masters or PhD) participated in this project as GK-12 Fellows (i.e., graduate students funded to spend a designated number of hours per week on GK-12 activities)? (Check all that apply)

₁ Yes, Masters' student(s)

₁ Yes, PhD student(s)

₁ No

If yes, continue to question B5. If no, skip to question B10.

B5. To what extent do you feel the time and effort graduate students spend fulfilling GK-12 obligations is valuable? (Check one)

- ₁ [1] Not at all
- ₂ [2] A little
- ₃ [3] Moderately
- ₄ [4] A great deal
- ₅ I don't know

If at all, please explain:

B6. To what extent do you feel the time and effort graduate students spend fulfilling GK-12 obligations is a distraction from their regular graduate training? (Check one)

- ₁ [1] Not at all
- ₂ [2] A little
- ₃ [3] Moderately
- ₄ [4] A great deal
- ₅ I don't know

If at all, please explain:

B7. To what extent do you think the GK-12 Fellowship experience enhances graduate students' abilities in the following areas? (Check one response in each row)

	Not at all	A little	Moderately	A great deal
Lead a team	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Work on a team with people from their own discipline	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Work on a team with people from other disciplines	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Networking to build collaborations with others	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Connect subject matter to real world issues	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Plan overall curriculum or course of study for a course and/or training (e.g., college course, K-12 grade)	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Develop specific lessons, modules, or activities	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Facilitate student questions and discussion	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Teach others new STEM knowledge	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Inspire student enthusiasm for STEM	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Write papers and reports about their work	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Present their work at a professional conference	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Explain their work to an audience from disciplines other than their own	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Explain their work to a non-technical audience	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Explain general STEM concepts to a non-technical audience	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Develop and/or commercialize a service or product	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Develop a research and/or technology agenda	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

B8. In your option, does the GK-12 Fellowship affect the amount of time it takes participating graduate students to complete their degrees? (Check one)

Participating in GK-12...

- ₁ Lengthens the amount of time it takes to complete a degree
- ₂ Has no effect on amount of time it takes to complete a degree
- ₃ Shortens the amount of time it takes to complete a degree

B9. To what extent do you agree with the following statements regarding the influence of the GK-12 Fellowship on participating graduate students? (Check one response in each row)

<i>Participating in GK-12...</i>	Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
Facilitates students' completion of coursework	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Facilitates students' completion of their research	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Distracts students from their research	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Prolongs the amount of time it takes to complete coursework	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Teaches students to be more organized	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Causes students to change research topics	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Motivates students to complete their degree	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Helps students narrow the scope of their research projects	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Slows students' progress on their research	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Teaches students how to manage their time	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Develops students' research skills	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Gives students a competitive edge when entering the workforce	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

B10. To what extent has your exposure to the GK-12 program influenced how you teach undergraduate or graduate students?

- ₁ Not at all
- ₂ A little bit
- ₃ Moderately
- ₄ A great deal

If at all, please explain:

B11. To what extent has your exposure to the GK-12 program influenced your attitude towards STEM education?

- ₁ Not at all
- ₂ A little bit
- ₃ Moderately
- ₄ A great deal

C1. In the past two years, have you been involved with any K-12 outreach programs and/or activities?

₁ Yes

₂ No

C2. In what types of K-12 outreach activities have you been involved? (Check all that apply)

₁ Collaborate with university faculty to develop or revise courses for STEM educators

₁ Collaborate with K-12 classroom teachers to bring STEM content and inquiry techniques into schools

₁ Provide STEM education outside of the classroom to K-12 students (e.g., tutoring, mentoring, etc.)

₁ Volunteer at STEM-related museums or science centers

₁ Assist at student science, technology, engineering, or mathematics fairs

₁ Participate in the development or review of content standards, curriculum, and/or assessment items for K-12 STEM student learning

₁ Advocate for specific issues in science or math education by writing state or federal legislatures, attending community meetings, etc.

₁ None of the above

₁ Other _____ ?

C3. In your department, how important is faculty's involvement in each of the following activities? (Check one response in each row)

	Not important	A little important	Moderately important	Very important
Research	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Teaching	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Mentoring students	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Community outreach	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Departmental service	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

C4. Please indicate the degree to which faculty in your department are rewarded for the educational service or outreach activities they engage in that go beyond their regular teaching responsibilities.

	Not at all	Not too much	Moderately	Very much
Educational service activities to the university	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄
Educational outreach activities to the community	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄

C5. In the past two years, have you co-taught or worked on a research project with a faculty member from another department?

₁ Yes

₂ No

C6. If yes, in what department(s) do(es) this faculty member(s) work?

END OF SURVEY

Pursuant to 5 CFR 1320.5(b), an agency may not conduct or sponsor, and a person is not required to respond to an information collection unless it displays a valid OMB control number. The OMB control number for this collection is 3145-0187. Public reporting burden for this collection of information is estimated to average 25 minutes per response, including the time for reviewing instructions. Send comments regarding this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to: Suzanne H. Plimpton, Reports Clearance Officer, Facilities and Operations Branch, Division of Administrative Services, National Science Foundation, Arlington, VA 22230.