

APPENDIX B

Crosswalk of GK-12 Data Elements Indicating New Elements

**Data Elements of Graduate Teaching Fellows in K–12 Education (GK–12)
Distance Monitoring System**

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics ⁱ	Project Implementation Characteristics ⁱⁱ	Project Outputs ⁱⁱⁱ
			Section I. Data Entered by Principal Investigator			
			Award Information NSF Award ID Grantee Institution Award Title Award Start Date Award End Date		X	
			Award Effort Information Award Title Effort Title Associated Colleges and Universities Schools Award Evaluator Award Discipline(s) Astronomy Behavioral Sciences Biological Sciences Chemistry Computer/Information Sciences Economic Science Engineering Environmental Science Geosciences Mathematics Physics/Physical Sciences Social Sciences Other Other Award Discipline (only if you chose “Other” above) Award Design Model Self-Contained Expository Award Status Planning Recruiting Training Completed In Classroom Award URL Partner Organization(s) Other Partner Organization’s Name (only if you chose “Other” above)		X	
			Additional Funding Source Information Source Name		X	

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			<p>Additional Funding Source Type</p> <ul style="list-style-type: none"> State Government Federal Government Local Government Home Institution Business Foundation Other <p>Other Source Type (only if you chose "Other" above)</p> <p>Amount of Additional Funding</p>			
			<p>Associated Colleges and Universities Information</p> <ul style="list-style-type: none"> Institution Name City State ZIP Code FICE Code 		X	
			<p>School Information</p> <ul style="list-style-type: none"> School Name School Level <ul style="list-style-type: none"> Elementary School Grades Middle School Grades High School Grades Prekindergarten or Kindergarten Through Middle School Middle School Through High School State District Name School Setting/Location <ul style="list-style-type: none"> Urban Suburban Rural Start Date for School Involvement in Fellowship End Date for School Involvement in Fellowship Percentage of Eligible Students for Lunch Programs <ul style="list-style-type: none"> Not Applicable 1 – 10% 11 – 20% 21 – 30% 31 – 40% 41 – 50% 51 – 60% 61 – 70% 71 - 80% 81 – 90% 		X	

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			91 – 100%			
	▼		Class Information Class Name Grade K – Kindergarten 1 – 1 st Grade 2 – 2 nd Grade 3 – 3 rd Grade 4 – 4 th Grade 5 – 5 th Grade 6 – 6 th Grade 7 – 7 th Grade 8 – 8 th Grade 9 – 9 th Grade 10 – 10 th Grade 11 – 11 th Grade 12 – 12 th Grade Subject Mathematics – General Mathematics – Elementary School Mathematics – Middle School Mathematics – High School (Secondary) Science - Biology Science - Chemistry Science - Earth Science Science - Elementary Science Science - General Science Science - Integrated Science Science - Physical Science Science - Physics Art Computer Science English Foreign Language History/Social Studies Music Other Other Subject (only if you chose “Other” above) Number of Students		X	
			Participant Data (Award Evaluator Information) Title First Name Middle Name Last Name Suffix	X		
			Participant Data (Principal Investigator (PI)/Co-PI Information) Title First Name Middle Name	X		

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			Last Name Suffix Data Entry Privileges Primary status Phone number Phone extension E-mail address			
			Participant Data (Co-PI Information) Co-PI/PI Title Co-PI/PI Academic Discipline Astronomy Behavioral Sciences Biological Sciences Chemistry Computer/Information Sciences Economic Science Engineering Environmental Science Geosciences Mathematics Physics/Physical Sciences Social Sciences Other Co-PI/PI Other Discipline (only if you chose "Other" above) Institution	X		
			Participant Data (Graduate Fellow Information)	X		
			Title			
			First Name			
			Middle Name			
			Last Name			
			Suffix			
			Social Security Number			
			Phone Number			
			Email Address			
			Fellowship Start Date Month Year			
			Fellowship End Date Month Year			
			Is this graduate fellow supported by NSF-GK-12 Funds? Yes No		X	
	▶		Total Stipend Received By Graduate Fellow for participating in GK-12 fellowship Full 100% of \$30,000 Partial 100% by other Other		X	

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			<p>Participant Data (Undergraduate Fellow Information)</p> <p>Title</p> <p>First Name</p> <p>Middle Name</p> <p>Last Name</p> <p>Suffix</p> <p>Race (select one or more)</p> <ul style="list-style-type: none"> American Indian or Alaska Native Asian Black or African American Native Hawaiian or other Pacific Islander Not Reported White <p>Ethnicity</p> <ul style="list-style-type: none"> Not Hispanic or Latino Hispanic or Latino Not Reported <p>Gender</p> <ul style="list-style-type: none"> Male Female Not Reported <p>Disability</p> <ul style="list-style-type: none"> Hearing Impairment Mobility or Orthopedic Impairment None Not Reported Other Visual Impairment <p>Other Disability (only if you chose "Other" above)</p>	X		

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
	▶		<p>Undergraduate Fellow Information</p> <p>Home Institution of Fellow Social Security Number Supported by NSF GK-12 funds Date of Birth Fellowship Start Date Fellowship End Date Fellow Discipline Astronomy Behavioral Sciences Biological Sciences Chemistry Computer/Information Sciences Economic Science Engineering Environmental Science Geosciences Mathematics Physics/Physical Sciences Social Sciences Other Fellow Academic Level During Fellowship Year Undergrad Junior Undergrad Senior Baccalaureate Degree</p> <p>School Class</p>	X		
			<p>Participant Data (Cooperating Teacher Information)</p> <p>Title First Name Middle Name Last Name Suffix Phone Number Phone Extension E-mail Address</p>	X		
			<p>Participant Data (Other Participant Information)</p> <p>Title First Name Middle Name Last Name Suffix Participant Description (check here for data entry staff) Phone Number Phone Extension E-mail Address</p>	X		

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			<p>Achievements and Products Related to GK-12 Activities</p> <p>▶ Journal Articles In Refereed Publications Author(s) Article Title Publication Name Volume Number Year Pages</p> <p>▶ Journal Articles In Non-Refereed Publications Author(s) Article Title Publication Name Volume Number Year Pages</p> <p>▶ Books Author(s) Book Title Publisher Year ISBN#</p> <p>▶ Book Chapters Author(s) Chapter Title Book Title Editor(s) Publisher Year ISBN#</p> <p>▶ Curriculum/Module Development Author/Contributor Title Grade Band Academic Disciplines Astronomy Biological Sciences Behavioral Sciences Computer Sciences Chemistry Economic Sciences</p>			<p>X</p> <p>X</p> <p>X</p> <p>X</p> <p>X</p>

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
▶		▶	<p>Engineering Environmental Sciences Geosciences Mathematics Physics Social Science Other Other (please specify) Brief Description</p> <p>▶ Conference Publications Author(s) Paper Title Conference Year Pages</p> <p>▶ Conference Presentations Author(s) Name of the Conference Presentation Title Date Location Organization</p> <p>Other (Textbox) PROGRAM OUTREACH INFORMATION Outreach <u>activities</u> include your GK faculty and/or GK Trainees being featured on TV, radio, in magazine articles or otherwise in the media; talks, presentations, workshops given by GK-12 faculty, trainees and/or associates to school groups, civic groups, non-scientific based professional groups, members of the government or the general public. Please separately list in the text box below the type of outreach activity, the organization/magazine/radio station/etc. for which the outreach was done, the location, who in your GK-12 did the outreach and date.</p> <p>Section II. Data Entered by Graduate Fellow Fellow's Name Date of Birth (month, day, year) Social Security Number <i>Data will be pre-filled with data entered by PI</i> Fellow's Current Contact Information: Fellow's Current Address Fellow's Current City Fellow's Current State Fellow's Current ZIP</p>			<p>X</p> <p>X</p> <p>X</p>

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
<p>▼</p> <p>▼</p> <p>▼</p>		<p>▼</p> <p>▼</p>	<p>Fellow's Phone</p> <p>Fellow's E-mail Address</p> <p>School Name [Pre-populated dropdown list]</p> <p>Class [Pre-populated dropdown list]</p> <p>Fellow's Permanent Contact Information</p> <p>Fellow's Contact Name</p> <p>Fellow's Permanent Address</p> <p>Fellow's Permanent City</p> <p>Fellow's Permanent State</p> <p>Fellow's Permanent ZIP</p> <p>Fellow's Phone</p> <p>Fellow's Personal E-mail Address</p> <p>Fellow's Demographic Information</p> <p>Ethnicity—please select one</p> <p>Hispanic or Latino</p> <p>Not Hispanic or Latino</p> <p>Not Reported</p> <p>Race—please select all that apply</p> <p>American Indian or Alaska Native</p> <p>Asian</p> <p>Black or African American</p> <p>Native Hawaiian or Other Pacific Islander</p> <p>White</p> <p>Not Reported</p> <p>Gender—please select one</p> <p>Male</p> <p>Female</p> <p>Not Reported</p> <p>Disability Status—please select all that apply</p> <p>Hearing Impairment</p> <p>Visual Impairment</p> <p>Mobility or Orthopedic Impairment</p> <p>None</p> <p>Other (please specify)</p> <p>Not Reported</p> <p>Undergraduate degree institution by state</p> <p>Undergraduate degree type</p> <p>BS</p> <p>BA</p> <p>Other (please specify)</p> <p>Undergraduate degree major</p>	<p>X</p> <p>X</p> <p>X</p> <p>X</p> <p>X</p>		

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			<p>Undergraduate degree date of completion</p> <p>Previous Graduate Degree(s) Completed</p> <p>Previous graduate degree institution by state</p> <p>Previous graduate degree type</p> <p>▶ MA</p> <p>MS</p> <p>Other (please specify)</p> <p>Previous graduate degree major</p> <p>Previous graduate degree date of completion</p> <p>▶</p> <p>Current Graduate Work</p> <p>Current Graduate Institution By State</p> <p>Date when you started your graduate program:</p> <p>Fellow's academic level during fellowship year</p> <p>Master's 1st year</p> <p>Master's 2nd year</p> <p>Master's 3rd year</p> <p>Doctorate 1st year</p> <p>Doctorate 2nd year</p> <p>Doctorate 3rd year</p> <p>Doctorate 4th year</p> <p>Doctorate 5th year</p> <p>Other (specify)</p> <p>Discipline – please select one</p> <p>Astronomy</p> <p>Biological Science</p> <p>Behavioral Science</p> <p>Computer Science</p> <p>Chemistry</p> <p>Economic Science</p> <p>Engineering</p> <p>Environmental Science</p> <p>Geosciences</p> <p>Mathematical Science</p> <p>Physics</p> <p>Social Science</p> <p>Other (please specify)</p> <p>Sub-Discipline</p> <p>▶ Research Advisor Information</p>	<p>X</p> <p>X</p> <p>X</p>		

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			<p>Research Advisor Full Name</p> <p>Research Advisor's Academic Discipline Astronomy Biological Science Behavioral Science Computer Science Chemistry Economic Science Engineering Environmental Science Geosciences Mathematical Science Physics Social Science Other (please specify)</p> <p>Research Advisor's Contact Information: Phone E-mail address</p> <p>Achievements During The Gk-12 Project Participation</p> <p>Honors and Recognition Name Year Society/Granting Organization</p> <p>▶ Fellowship, Scholarship, and Grant Other Than GK-12 Title of the Proposal Year Awarded Awarding Agency</p> <p>Other Scholarly Achievements <i>[Text box will be provided to collect detailed information]</i></p> <p>▶ On average, how many hours per week do you spend on GK-12 activities? On average, how many hours per week do you spend on the following GK-12 activities?</p> <ul style="list-style-type: none"> • Working Directly with K12 Students in Partner Schools • Working/Collaborating with Partner Cooperating teachers • Working/Collaborating with Other GK-12 Fellows • Planning or Preparing Lessons • Participating in Training Activities or Seminars Associated with GK-12 Project • Meeting or Speaking With GK-12 PIs, Co-PIs, or Other Project Leaders • Other (please specify) <p>▶ On average, how many hours do you spend on your own</p>			
						X
					X	
					X	

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			<p>research? Has participation in GK-12 activities affected your graduate research productivity? (Check all that apply)</p> <p>Because of GK-12 I...</p> <ul style="list-style-type: none"> • ...am better organized • ...find my work time is too fragmented • ...am better able to write about my research results • ...am more able to focus on my research • ...have less time to focus on my research • ...am better prepared to present research findings at scientific meetings • ...other (please specify) <p>What percentage of seminars and workshops, provided by your GK-12 project, prepared you for your work as a fellow?</p> <p>In what ways have you incorporated your research and/or area of scientific expertise into K12 classroom activities?</p> <p>Fellow's Fellowship Results</p> <p>List up to three (3) accomplishments from your participation in GK-12.</p> <p>Check the areas in which your knowledge/skills have improved as a result of your GK-12 participation</p> <ul style="list-style-type: none"> • Professional and Academic Writing Skills • Pedagogy/Teaching Skills • Professional Speaking or Presentation Skills • Team Building/Collaboration Skills • Communicating Science or Math Concepts to Diverse Audiences • Communicating My Research and/or Area of Expertise • Other (please specify) <p>Have K12 students you worked with improved in the following areas as a result of GK-12 participation? <i>[Check areas of improvement]</i></p> <ul style="list-style-type: none"> • Content Knowledge of Science or Math • Enthusiasm about Science or Math • Understanding of How To Think Like a Scientist • Interest in Pursuing Science or Math in the Future • Interest in Pursuing Higher Education • Other (please specify) <p>Has your GK-12 participation affected your professional pursuits and career goals as a scientist? (Check all that apply)</p> <p>Because of GK-12 I...</p> <ul style="list-style-type: none"> • ...have been better able to figure out what I want to pursue as a career • ...am better prepared for a career in academia • ...am better prepared to pursue a career that involves 			<p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p>

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			<p>research and teaching</p> <ul style="list-style-type: none"> • ...am not adequately prepared to do research • ...am not adequately prepared for the additional skills required of scientists besides research • ...will now consider a wider array of career paths than before GK-12 • ...am overwhelmed by the number of scientific career choices • ...am committed to contributing to K-12 STEM education at some point in my career • ...other (please specify) <p>Did you visit a foreign country as part of your GK-12 fellowship? If yes:</p> <p>▶ Please select the country or countries you visited (from list)</p> <p>Describe your participation in this international GK-12 component. Please list up to three (3) concerns or areas for improvement about the GK-12 program or your experience in the program.</p>			<p style="text-align: center;">X</p> <p style="text-align: center;">X</p>
			<p>Section II. Data Entered by Cooperating Teacher</p> <p>Cooperating Teacher's Name <i>Data will be pre-filled with data entered by PI</i></p> <p>Cooperating Teacher's Current Contact Information</p> <p>▶ Cooperating Teacher's Current Address: Cooperating Teacher's Current City: Cooperating Teacher's Current State— please select one Cooperating Teacher's Current ZIP/Postal Code: Cooperating Teacher's Phone Cooperating Teacher's E-mail Address</p> <p><i>Data will be pre-filled with data entered by PI</i> School Name</p> <p>Class</p>	<p style="text-align: center;">X</p> <p style="text-align: center;">X</p> <p style="text-align: center;">X</p>		
			<p><i>Data will be pre-filled with data entered by PI</i></p> <p>Cooperating Teacher's Demographic Information</p> <p>Ethnicity—please select one Hispanic or Latino</p>	<p style="text-align: center;">X</p>		

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			<p>Not Hispanic or Latino Not Reported</p> <p>Race—please select all that apply American Indian or Alaska Native Asian Black or African American Native Hawaiian or Other Pacific Islander White Not Reported</p> <p>Gender—please select one Male Female Not Reported</p> <p>Disability Status—please select all that apply Hearing Impairment Visual Impairment Mobility or Orthopedic Impairment None Other (please specify) Not Reported</p> <p>Undergraduate Degree(s) Completed</p> <p>Undergraduate degree institution by state Undergraduate degree type – please select one BS BA Other (please specify)</p> <p>Undergraduate degree major Undergraduate degree date of completion:</p> <p>Graduate Degree(s) Completed</p> <p>Graduate degree institution by state – please select one Graduate degree type – please select one MS MA Ed.D Ph.D Other (please specify)</p> <p>Graduate degree major Graduate degree date of completion:</p> <p>▶ Teaching Experience And Credentials</p> <p>Number of teaching years (at all schools)</p>	<p>X</p> <p>X</p> <p>X</p>		

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
			<p>Grade(s) certified to teach Early childhood Elementary Middle/junior high High school</p> <p>Subject(s) certified to teach Mathematics) Computer/Technology Science—Biology Science—Chemistry Science—Earth Science Science—Elementary Science Science—General Science Science—Integrated Science Science—Physical Science Science—Physics Other (please specify)</p>			
		▶	<p>On average, how many hours per week do you spend on GK-12 activities? On average, how many hours per week do you spend on the following GK-12 activities? – Write the number of hours for each activity</p>		X	
		▶	<ul style="list-style-type: none"> • Working/Collaborating with Other Teachers • Working/Collaborating with GK-12 Fellows • Planning or Preparing Lessons with GK-12 Fellows • Participating in Training Activities or Seminars Associated with GK-12 Project • Meeting or Speaking with GK-12 PIs, Co-PIs, or Other Project Leaders • Other (please specify) 		X	
		▶	<p>Did you attend GK-12 seminars, workshops, regular meetings or conferences? If yes, briefly describe up to three (3) seminars, workshops, regular meetings or conferences related to your GK-12 project that you have attended. Check the activities in which the GK-12 fellow participated.</p>		X	
		▶	<ul style="list-style-type: none"> • Serving as a Role Model for Students • Communicating in the Classroom Setting • Adapting Their Scientific Expertise to the Appropriate Grade Level • Working Collaboratively with Teachers • Working with Students During Class • Enhancing Your Lessons or Curriculum • Incorporating the Standards into Activities <p>Cooperating Teacher’s Experience</p>		X	

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
		▶	<p>Has your professional practice in the following areas improved as a result of your participation in GK-12? <i>Check all that apply.</i></p> <ul style="list-style-type: none"> • Content Knowledge of Science or Math • Access to Innovative Lesson Plans • Capacity for Incorporating Inquiry-Based Lessons in the Future • Desire to Continue Your Own Education • Involvement in Professional Networks/Partnerships with University Scientists • Enthusiasm for Science/Math Teaching <p>Has your involvement in the GK-12 program resulted in any of the following? <i>Indicate each that apply.</i></p> <ul style="list-style-type: none"> • Opportunities to Attend Conferences • Opportunities to Make Presentations at Conferences • Awards Received <p>As a result of your participation in GK-12 have you observed improvement in your students in the following areas:</p> <ul style="list-style-type: none"> • Content Knowledge of Science or Math • Enthusiasm about Science or Math • Understanding How To Think Like a Scientist • Interest in Pursuing Science or Math in the Future • Interest in Pursuing Higher Education • Other (please specify) <p>Please specify up to three activities or highlights that best describe how you benefited from the participation/experience in the GK-12 project.</p> <p>Please indicate up to three concerns from your experience in the GK-12 project.</p> <p>Please briefly describe the ways that you plan to incorporate activities and ideas gained from GK-12 into your classroom?</p> <p>Please briefly describe the ways that you plan to share activities and ideas gained from GK-12 with other educators?</p> <p>Cooperating Teacher's Achievement During GK-12 Project Participation Enter the requested information about your achievements during your involvement in the GK-12 project in the space below.</p> <p>Honors and Recognition</p> <ul style="list-style-type: none"> • Name • Year • Society/Granting Organization <p>Fellowship, Scholarship, and Grant Other Than GK-12</p>			X
		▶				X
		▶				X
		▶				X
		▶				X
		▶				X
		▶				X
		▶				X

Previously Entered by DI	Revised Elements	New Elements	Question	Staff and Project Participant Characteristics	Project Implementation Characteristics	Project Outputs
		▶	<ul style="list-style-type: none"> • Title of the Proposal • Year Awarded • Awarding Agency Other Scholarly Achievements			X

ⁱ Elements of these characteristics include: Name, address, date of birth, gender, ethnicity, race, disability status, class, major, grade point average, yearly fellowship or stipend amount, or project role.

ⁱⁱ Elements of these characteristics include: Sources and amount of funds, fellowships, scholarships, traineeships, partnerships, training, research methods.

ⁱⁱⁱ Elements of these characteristics include: research findings, publications, presentations, degrees granted, educational materials.