January 2, 2009

Dear partnership professional,

I am pleased to share with you the premiere issue of **K-12 Partnership Report (KPR)**, a subscription-based electronic newsletter published 10 times per year. I've also included subscription information; I hope you'll join us as a subscriber.

These are challenging times in K-12 education, and community-school partnerships can make all the difference in the world to those trying to improve outcomes in the face of reduced budgets. **KPR** was created to support all those who build such partnerships, and we'd appreciate your help in advancing the partnership field.

There are two ways you can help:

Contribute to the body of knowledge
We want to let partnership leaders know what's happening in the field, but we need others to keep us informed of their work so we can do that. To that end, please send us your news and announcements so we know what's happening in your area; we're particularly interested in any projects that might be suitable for coverage as a case study. And if you have the time, talent, and inclination to write for **KPR**, let us know; we're looking for good writers.

Spread the word:
There are a lot of people who haven't pursued partnership development because they don't know how to make it work; there are others who are "reinventing the wheel" because they're not familiar with what has worked (and what hasn't) for others. You can help to change that by letting others know about **KPR**, or even ordering discounted bulk subscriptions for others in your district or organization.

Thanks again for your interest in the **K-12 Partnership Report**. If you'd like to subscribe to the newsletter, the form on the next page will show you how; if you'd like to help by sharing news or case studies, or by letting others know about this new resource, we'd welcome your support. If you'd like to contact us, you can reach me at brett@dehavillandassociates.com or by phone at 704-940-3201.

Best,

Brett Pawlowski
President, DeHavilland Associates
Publisher, **K12 Partnership Report**

Learn how others are building effective K12 partnerships!

Get case studies, proven practices and more in the new *K12 Partnership Report*

Whether you've got years of experience in K12 partnership development or you're new to the field, you need current and practical information from the field to guide your efforts. Unfortunately that information has been hard to come by—until now.

K12 Partnership Report was created specifically for partnership practitioners—the people who build strong, sustainable, and effective partnership-driven programs. These are people who don't have time to reinvent the wheel: they need to know what's worked in other markets and what hasn't, and this is exactly what *K12 Partnership Report* was designed to provide.

Each issue of *K12 Partnership Report* provides subscribers with information they won't find anywhere else, helping them build more effective and efficient partnership-driven programs. Features include:

- **Case Studies** - At least two in every issue of the newsletter, highlighting successful models in other markets and showing how and why they work.

- **Proven Practices** - Articles highlighting field-tested practices, helping you run an effective program.
- **Research** - Reviews of research on various subjects to give you reliable information for decision-making.
- **Interviews** - Talks with practitioners and market experts, giving you insight on the market and on the partnership process.
- **And More** - Including industry updates, reviews of new resources, event listings, and announcements.

The information in *K12 Partnership Report* can help you build effective and efficient partnership programs—subscribe today and see what a difference it makes!

2009 Editorial Calendar

Here's what's coming up in 2009:

- **January**: Working with businesses to build STEM partnerships
- **February**: Mentorships and volunteer programs
- **March**: Building a strong fundraising operation
- **April**: What partners need from you
- **May**: Strategic planning for your partnership efforts
- **July**: Creating effective evaluation/measurement models
- **August**: Increasing your public profile
- **September**: Managing your partnership operation
- **October**: Launching your own school foundation
- **November**: Building effective workforce development programs

Note: KPR is published 10 times per year, monthly except for June and December

Subscribe today using the form below – or order online by visiting

www.DeHavillandAssociates.com/KPR.html

☐ *Yes!* I'd like to subscribe to the *K12 Partnership Report*. I understand that I will receive 10 issues each year filled with practical information I can use in building strong and sustainable partnerships, and that the newsletter will be delivered to me electronically (emailed as a PDF file).

Term: ☐ One year subscription - $149   ☐ Two year subscription - $249

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Return this form to DeHavilland Associates, 9700 Research Drive, Suite 123; Charlotte, NC 28262
or fax it to 704-940-3202. Questions: call 704-940-3201 or email Karen@DeHavillandAssociates.com.

K-12 Partnership *Report*

An Interview with Rebecca Lucore of Bayer

How Bayer – and the Fortune 1000 executives they surveyed – view STEM education

Rebecca Lucore serves as Executive Director of the Bayer USA Foundation and as Director of Bayer's *Making Science Make Sense* (MSMS) program. She spoke with us shortly after the publication of the company's 13th annual *Bayer Facts of Science Education* survey, which polled Fortune 1000 executives on their views of STEM education and the STEM workforce.

KPR: *Why make an investment in K12 education? What do you hope to accomplish?*

Lucore: Bayer is a science and research-based company, and the sciences are our livelihood. There is a diminishing STEM workforce in the US, and we have fewer students pursuing STEM careers. So for a company like ours, one that relies on a capable workforce in this area, this represents some serious issues. So we have a vested interest in this subject.

And we're not just looking at this as a Bayer workforce challenge. In general, science and technology have kept our country prosperous and globally competitive for most of the 20th century, and we need to be able to continue to innovate to maintain that standing. Without a STEM-ready workforce, we won't be able to do that.

KPR: *When talking about workforce development in the STEM fields, many people limit their focus to careers requiring significant postsecondary education, like scientists and engineers. But your work takes a broader approach.*

Lucore: When we talk about MSMS, we're careful

to note that we're really not trying to create 100,000 new chemical engineers, because that's not what we need. We really need a scientifically literate citizenry. We need people who can read an article in the newspaper and understand it. We need people who can vote intelligently on science-related issues. We need people who can correctly measure dosages of medicine for their children and prepare nutritious meals.

And in terms of workforce development, the need for STEM education is broader than just highly skilled workers. We survey different stakeholder groups each year, and one of our surveys was of human resources professionals – asking them about the people they hire, and what they look for. Of course it's important for scientists and engineers to have a strong STEM background, but the skills you get from science and math instruction – creativity, critical thinking, working in teams, adapting to change, skills like that – those are important for everyone, no matter what field or position you go into. They're important if you're going to work in accounting, they're important if you're in HR. So for us, it's clear that everyone needs a baseline of scientific literacy.

KPR: *A lot of companies, in their K12 education work, tend to focus at the classroom level. While Bayer certainly does some of that, you also have other initiatives, such as your best practices reports, your recent conference, and your annual surveys, that are focused on gathering and disseminating information on the nature of the problems we face and on ways in which we can address them. Do you feel there's a lack of awareness of the problem? Why have you gone into these awareness-building initiatives?*

Lucore: I'm not sure that there's a lack of awareness of these issues anymore – but that really wasn't the case more than 13 years ago when we started working in this area. So we decided, when we first took this issue on, that it wasn't enough to go into schools, start partnerships, engage students, and leave it there. We felt that a big part of our efforts had to involve a public education campaign. Public awareness continues to be one of the three

Welcome to *K12 Partnership Report*!

When I first got involved in community/school partnerships several years ago, I found that there was very little available for practitioners who wanted to discover what others were doing in this field. This newsletter is an attempt to change that, and I'm very pleased to present you with the first issue.

I firmly believe that building active, collaborative relationships between schools and their stakeholders is the single most effective way to create positive change in education. As Dr. David Mathews of the Kettering Foundation has said many times, "The public schools are the public's schools," and by throwing open the doors to the community - allowing stakeholders to become full partners in setting and reaching educational objectives - we create an opportunity to turn our schools back into true community institutions, with all the support that it entails.

We're a long way from that vision at the moment, and we're severely hampered by the lack of infrastructure in the partnership field. Every professional field has some level of infrastructure: professional networking and learning opportunities, certifications, industry research, accepted practices, directories, publications, competitions, and more. At the moment, partnership professionals have almost none of those things, and for this field to gain prominence and credibility, we'll have to work together to create them. I see this newsletter as a first step in that direction.

Our mission

We want the *K12 Partnership Report* to accomplish a number of things:

- We want to give partnership leaders practical information they can apply to their own efforts. If you can see what others have done, you have an opportunity to leap ahead: you can avoid mistakes that others have made and you can build on their successes. There's no sense blazing your own trail when you're next to a highway.
- We want to share with you the best thinking in the field. We want you to hear what business and school leaders say about their interests and experiences with partnerships; how industry experts see the role of partnerships in education; and the role that people see for partnerships in the future.
- We want to raise the visibility of the partnership field, helping education and business leaders see the impact that partnerships can have, and the central role they can play in education reform and improvement efforts.
- We want to serve as a community hub, a place where partnership leaders can find books, conferences, consultants, and more.

What do you think?

If you've ever gone back to watch the pilot episode of a favorite TV show, you know that it often takes some tinkering to go from promising concept to successful feature. That's exactly how we're looking at the first few issues of *K12 Partnership Report*: we're relying on readers to tell us what's right, what's wrong, and what's missing, so please share your thoughts with us. You can reach me by email at brett@dehavillandassociates.com or by phone at 704.940.3201.

In addition to your feedback, we want your stories: if you've been involved in a strong partnership, designed and managed by school and community partners and featuring measurable outcomes, we want to know about it - you could be featured in the newsletter! Let us know - and thanks for joining us as a reader!

K-12 Partnership *Report*

Brett Pawlowski
Editor and Publisher

Distribution policy:

The Case for Middle-Skill Preparedness

Why career/college programs need to focus on more than four-year degrees

Educators wishing to solicit business and chamber support have no doubt heard about the need for workers with four-year degrees. Both the education press and the mainstream media continue to highlight the need for scientists, engineers, and other highly skilled professionals.

But what you may not know is that the need for middle-skill workers is far more pressing. If you want to build a workforce preparedness initiative that will be compelling for your business partners and that exposes students to the full range of high-paying careers open to them after graduation, you should take the time to understand this area of the workforce landscape.

What are middle-skill jobs?

Middle-skill jobs are those that require more than a high school diploma but less than a four year degree. These positions may require an associates degree, vocational training, technical certification, or significant on-the-job training.

The middle-skill category contains an extremely wide array of positions, including:

- Health technicians, nurses, and therapists
- Construction workers
- Electricians, plumbers, and HVAC specialists
- Maintenance and installation workers
- Clerical staff
- Salespeople
- Transportation specialists
- Machine operators and production line workers
- Mechanics and technicians (automotive and other)

It should be noted that middle-skill positions are among the safest from off-shoring trends evident in other fields: if your car breaks down, for example, you cannot send it to a different country to have it repaired.

Given this wide range of positions, it is difficult to make generalizations regarding wage levels and wage growth; however, many middle-skill positions pay well, with some workers making more than $100,000 per year, and many seeing wage growth well above the national average.

The demand for middle-skills workers

While it is true that middle-skills jobs have declined as a portion of total employment over the past couple of decades, this was due more to the growth of high-skill and low-skill employment than to an actual decline in the category. And the fact remains that middle-skill positions still account for nearly half of all jobs today, at 48% (down from 55% two decades ago).

It is clear from surveys that middle-skill employees are in demand. The *2005 Skills Gap Report* from Deloitte and the National Association of Manufacturers polled manufacturing employers on their workforce needs and found that 81% face a moderate to severe shortage of qualified employees. When asked in which categories this shortage was seen:

- 39% of surveyed manufacturing employers indicated a moderate to severe shortage of qualified unskilled production employees;
- 65% reported a moderate to severe shortage of scientists and engineers (high-skill positions); and
- 90% of respondents indicated a moderate to severe shortage of qualified skilled production employees.

While current demand is relevant in evaluating opportunities for students to enter middle-skill positions, future demand is an even more important factor, given that it may be several years before students participating in partnership-driven programs actually enter the workforce. And through that lens, middle-skill opportunities look particularly strong.

Looking at projected job openings between 2004 and 2014, researchers project that 22% of those opportunities will be for low-skill positions, 33% for high-skill jobs, and 45% for middle-skill positions. Looking at this in a different way, the Council on Competitiveness showcases the annual growth rate of opportunities in middle-skill and high-skill jobs through the chart below (featured in its *Thrive* report).

Projected growth rate of middle-skilled and high-skilled jobs

Source: *Thrive*, Council on Competitiveness; based on data from the U.S. Bureau of Labor Statistics, Employment Projections. Used with permission.
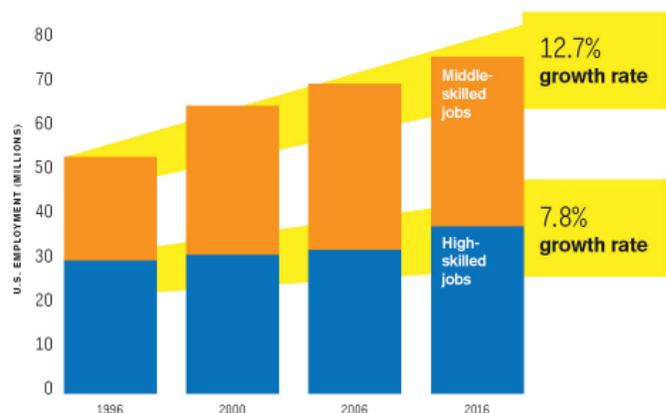
There are a number of reasons why middle-skill opportunities are expanding more rapidly than those in other areas; much of it can be attributed to the aging of the population in one way or another. The United States is in the beginning stages of a dramatic increase in the 65+ population, which is expected to grow from 40.2 million in 2010 (13.0% of the population) to 71.5 million in 2030 (19.6%), and we will need to take care of those citizens as they age while replacing them in the workforce.

Healthcare, for example, is poised for particularly rapid growth. The Bureau of Labor Statistics expects the net growth in a range of middle-skill healthcare jobs will vary from 20-40 percent, adding more than 1.5 million jobs between 2004 and 2014. And in many of these jobs, real pay has increased at a rapid pace over the past several years, with nurses seeing an 18% increase and radiological technicians benefiting from a 23% increase (versus a national average of 5% over the same time period).

As many in the workforce begin to retire, executives are concerned about replacing them: A 2008 survey of executives by Robert Half International found that for 47% of them, replacing retiring baby boomers was their top workforce concern.

As one example, the U.S. Department of Energy notes that the electrical utility industry employes 58,000 electrical line workers, half of whom are expected to retire in the next five to ten years. They forecast a shortage of as many as 10,000 lineworkers, or 20% of the current workforce, in the number of qualified candidates to fill those positions, resulting in real limits on the country's ability to maintain and increase electricity supply. And this is but one field: there are similarly dramatic projected shortfalls in a number of other areas. Another estimate, noted in the *Thrive* report, indicates that for every ten maintenance workers who retire, there will on be three to seven qualified workers available to replace them.

For those who work with businesses and chambers, a clear understanding of the characteristics of the middle-skill market will provide a strong foundation for exploring partnerships - and motivation for informing students about high-paying jobs in high-growth fields.

Resource Links

Thrive - Council on Competitiveness
www.compete.org/publications/detail/472/thrive/

America's Forgotten Middle-Skills Jobs - Skills2Compete
www.skills2compete.org/site/c.fhLlKYPLLuF/b.3354587/k.EF62/Resources.htm

2005 Skills Gap Report - Deloitte, National Association of Manufacturers, and The Manufacturing Institute
www.nam.org/2005skillsgap

The Skills Imperative: How Career and Technical Education Can Solve the U.S. Talent Shortage - U.S. Chamber
www.nam.org/2005skillsgap

BHEF Unveils Online Resource Center

StrategicEdSolutions.org offers case studies and partnership practices

The Business-Higher Education Forum (BHEF) has launched a website offering information on building effective business/education partnerships with an emphasis on college preparedness and access. Found online at **www.strategicedsolutions.org** and available to the public, this clearinghouse offers strategies, tools, and examples of successful partnership-driven programs to help business and education leaders maximize the impact of their education reform and improvement efforts.

Launched as part of BHEF's College Readiness Initiative, the site's central feature is a database of partnership initiatives that can help underwriters and program developers alike understand what has and has not worked elsewhere. Highlighted partnerships include evaluation data, and selections are made in part based on relevance and ease of replication.

To find a program meeting a certain set of criteria, users can search and sort by type of program, target audience, grade level, and more. Each partnership outline includes the program's target population, goals, program highlights, partners (broken down into higher education, business, non-profit, and government) and the program's evidence of impact on its target population. Case study outlines also include contact information for the program's leader should users wish to learn more about an individual initiative.

The database of partnerships currently outlines 35 programs; the Business-Higher Education Forum invites leaders of successful initiatives to submit their own programs for inclusion on the site. According to Kirstin McCarthy, Associate Director of Programs with BHEF, additional features will be added to the site in the coming months to further assist individuals searching for successful partnership models and resources. If you are interested in submitting your own program for consideration or want to learn more about this new site, please visit www.StrategicEdSolutions.org or email programs@bhef.com.

The Gowan Achievement Project

When people talk about workforce issues and K12 education, they're usually talking about preparing kids for employment opportunities after high school. But there are other ways in which the two intersect: for example, the reputation of local schools can be a significant factor for employees with children who are being asked to transfer into a new market.

This had become an issue for the Gowan Company, which provides crop protection products and services to farmers and others. While it has offices around the world, the company's headquarters are in Yuma, Arizona, where it employs more than 500 people. Gowan relies heavily on a scientific workforce, and often hires people from other parts of the country for positions at its headquarters. However, because of a perception that local schools could not adequately meet the needs of advanced students, the company has faced challenges in attracting workers with children to the area.

Jon Jessen, founder and president of this family-owned company, decided to approach the Crane School District directly so they could address this issue together. Jessen was no stranger to the local district: he had previously served on the Crane Governing Board (the local school board); Caroline, his wife, had taught at a local elementary school; and all four of his children had attended Crane Schools. Gowan and the Jessen family also have a long history of investing time and resources into Yuma's youth through college scholarships and other investments.

Jessen discussed his concerns with Cindy Baker, who is one of Gowan's presidents as well as a member of the Crane Governing Board. She initiated a conversation with Cindy Didway, Crane's superintendent, and they quickly put together a strategy and planning team that included:

- Cindy Didway, superintendent
- Lynn Thompson, assistant superintendent
- Janet Shields, curriculum director
- Mike Wicks, director of management services
- Chris Weigel, director of communications and instructional technology
- Jon Jessen, founder & owner of Gowan
- Cindy Baker-president of Exigent, LLC (a Gowan company) and Crane board member.

The project

The team started by taking a look at the facts, and realized that there may be some truth to the idea that the school district was not meeting the needs of advanced students. Like other districts around the country, Crane was responsible for bringing all children to grade level, and this priority, combined with limited resources, meant that students already performing at or above grade level may not have access to all the opportunities the district would like.

Working from that reality, Gowan and Crane decided to create an initiative open exclusively to students already performing at or above grade level; furthermore, given Gowan's need for a future workforce with science and math skills, and the interests of its transferring employees, the partners decided to emphasize math and science through its initiative.

The Gowan Achievement Project

Where:
Crane School District, Yuma, Arizona

Partner(s):
Gowan Company, which offers crop protection products and services, with offices around the world and 500 employees in the Yuma area

Challenge:
Gowan Company had a difficult time recruiting employees to the area - a perception existed that schools were focused on bringing underperforming students to grade level, not meeting the needs of students at or above grade level. Gowan also wanted to ensure the preparedness of the local workforce in the future.

Solution:
The Gowan Achievement Project piloted with 90 children in grades 4, 5, and 6 who were performing at or above grade level. Children were placed in classes with master teachers, given laptops with wifi access, experienced a math- and science-intensive curriculum, and participated in special activities such as field trips that emphasize STEM careers and industries.

Partner Roles:
Gowan underwrote the pilot program, including the cost of all technology and $10,000 grants for master teachers; it also helped design the program, participated in the hiring of the master teachers, has representatives on an advisory board, and participates in the program through classroom visits and field trips. Crane manages operation of the program.

Outcomes:
A test/control model was established to evaluate impact. GAP students outperformed their peers in math by 2:1 in Average Percent Gain Per Student, and by 8:1 in science. AIMS scores for 4th grade science show 93% proficiency for GAP students versus a statewide average of 53%.

Starting from this point, the partners created The Gowan Achievement Project according to the following parameters:

- **Grade levels** - GAP focused the project in the upper elementary grades (4, 5, 6); Crane is a K-8 district, and focusing on grades 4-6 allowed them to work with children who had been identified in grade 3 as performing at or above grade level through independent measures.
- **Pilot site** - The team decided to pilot the program at Rancho Viejo Elementary School, which has the highest free/reduced lunch rate (a commonly used indicator of poverty) in the district. If the pilot succeeded there, they felt confident that GAP would be successful elsewhere.
- **Instruction** - To ensure that participating students were challenged through a range of experiences, the partners decided to bring in master teachers to lead the pilot classes. The positions were posted within the district, and prospective teachers interviewed with the planning team and were asked to teach a quick lesson. The district picked up the cost of the positions, but Gowan supplied a $10,000 stipend for each of them.
- **Technology** - The partners felt it was important to promote technological literacy, and designed GAP accordingly. Each participating student received a laptop computer; wireless access was set up in each classroom; and students had access to a variety of peripherals (digital cameras, projectors, etc.) for use in classroom projects.
- **Science/math** - Given Gowan's interests, and those of its transferring employees, the project was designed with a strong foundation in science and math. Crane selected an electronic curriculum called A+ K12 Learning Courseware, which met their requirements for networking purposes, pre-testing, curriculum variety, and ease of use. Teachers received training in the use of the curriculum.
- **Rich learning experiences** - Students participated in field trips reinforcing science and math concepts and focused on career and college preparedness. These included trips to the Arizona Science Center, Lake Powell, local state universities, and Gowan Company headquarters. Additionally, students produced multimedia presentations and research papers on these visits and on topics related to the environment, geology, ecology, and Native American history and culture.
- **Oversight** - Individuals on the strategic planning team formed an advisory committee to review the progress of the program during quarterly meetings and to determine next steps for the program.

- **Evaluation** - To determine the impact of GAP, students participated in pre- and post-assessments in all areas of the curriculum; the district also set up a control group at another school and tracked their progress on key metrics. GAP student performance was also compared to statewide averages.

As initiator of the project and sole corporate partner, The Gowan Company took an active role in designing, funding, and overseeing the project. They also were heavily involved in discussions about the level and role that technology would play in the project; participated in interviews of prospective master teachers as part of their advisory committee role; and hosted students at their corporate headquarters on a field trip. And based on the success of the project to date, they have also been instrumental in planning for the future - including covering the costs of a rollout to other sites within the district.

GAP Budget - Pilot Project

Salaries and Benefits

Teacher stipends (3 @$10,000)	$30,000
Professional development	6,000
Benefits	6,368

Class Travel

Local field trips (10/class @$250)	$7,500
Out of town field trips (2/class @$2000)	12,000
Summer/extended day transportation	$7,200

Supplies and Curriculum

Consumable Supplies ($2,000/class)	$6,000
Reading - Great Books/Novels	5,000
Math - Accelerated Math Program	2,000
Social Studies	10,000
Science - Equipment and Software	10,000
Assessment Program	38,000

Consulting Services

Consultant/Resident expert fees	$20,000

Equipment

Laptop Computers (1/student @$1,500)	$140,000
Network Printers (1/class @$1,500)	4,500
Server and Wireless Access Points	15,000
3 Portable Recharging Computer Carts	4,500
Video Projection Equip. (1/class @$2,000)	6,000
Video Editing Software (1/class @$150)	450
Digital Video Camera (1/class @$850)	2,550

Total Cost, GAP Pilot Project	**$333,068**

Results to date

As noted previously, GAP project leaders performed pre/post evaluations with participating students, and set up a control group at a different school comprised of students academically and socioeconomically similar to those in the pilot. Outcomes from the one-year pilot include:

- GAP students outperformed their counterparts in every areas in which the electronic curriculum was utilized.
- In the area of 4th-6th grade math, GAP students outpaced the control group by two to one in the Average Percent Gain Per Student.
- In 4th-6th grade combined science scores, GAP students stretched that growth to eight times the Average Percent Gain Per Student against the control group.
- In 4th grade science, the average for the statewide assessment (AIMS) was 53%; for GAP students, it was 93%.

- Two 5th grade GAP students each won 2nd place ribbons at the Yuma County Science Fair, the first time Rancho Viejo students have ever won ribbons at the event.
- The program has been covered by local media and internal (Gowan and Crane) reporting; this has started to increase awareness among the public and key stakeholders of the district's interest in serving the needs of children at grade level and beyond, and of Gowan's commitment to local schools.

Next steps

Based on all the results of this program to date, both Gowan and Crane have committed to continuing the program at Rancho Viejo Elementary School, which will involves an additional investment by Gowan of $40,000 for maintenance, additional software, and field trips. In addition, the partners are expanding GAP to both middle schools in the district at an additional cost of $300,000, which Gowan has already agreed to underwrite.

How to Build an Effective Board
Essential principles for creating a board that works for you

Developing a board is one of the most important things that you can do to further the growth and development of your organization. There are two things you must do to develop an effective board. The first is to get the right people; the second is to make sure that roles and responsibilities are clear.

It is important to begin with the end in mind. Many groups begin with very little structure as they build their organizations; this is a major, and common, pitfall. As these groups develop, there are no rules for term limits, so the founding board, which is highly invested, has no incentive to step aside and allow others to assume leadership roles. While this approach may be very comfortable, and the founding board may consist of great individuals, it prevents growth, new ideas, and sustainability.

Make sure to have officer job descriptions, which include term limits and responsibilities, clearly identified as you begin to build your board. Samples of job descriptions for board members can easily be found on the internet. Those are a place to begin – but each organization should tailor these based upon their needs.

If you have already built a board and run into this type of issue, have the board update their bylaws. Treasure those founders by putting them in a trustee or founders group so that you do not alienate them, and still are able to utilize their great expertise and their passion.

Diversifying your board

There are some basic roles that board members should fulfill, and basic responsibilities they should understand and strive to fulfill. For the typical non-profit board, the category of skill sets usually runs something like this: fundraising, fundraising and fundraising. Well, maybe it should be a bit more diverse than this – but do not ignore the financial needs of the organization. No non-profit ever went out of business by paying too much attention to the financial stability of the organization.

So begin with the financial – fundraising, accounting, and grant writing for example. Who can help you with these important roles? Remember that most money is not really raised by special events, auctions, conferences, grants or sales – at least not in a sustainable fashion. It is raised due to relationships. Again – begin with the end in mind. Build your board with people who have connections to affluent community members who are good corporate or personal donors. Having an accountant on the board is important to aid in the development of proper fiscal protocols, which will keep you all employed (and out of jail).

There are other areas of expertise that you should look for, such as non-profit program management, evaluation, marketing, and legal services. But let's not just focus on the content; you also need to focus on the overall picture.

There are other issues that should be considered when selecting board members; these may be tied to the organization's goals, but not as directly as skill sets and contacts. For example, most non-profit organizations wish to represent the community they serve, however that may be defined. In order to accomplish this, think of the balance of representatives from areas of the community or service area, almost as if you were running an election for the service area. Make sure to balance for gender, age, and ethnicity as you feel appropriate.

I suggest you draw up a matrix. Make multiple categories that run across the top: Skill sets (list the skills you need on the board), gender, area of the community, age group, ethnicity, and/or any other categories you see as being relevant. As you recruit board members, check across the categories to see what you have covered. This will help you to identify who else you need to recruit for the board.

Strategic alliances

One of the categories for the matrix should be "strategic alliances." Think about which organizations you should be affiliated with in order to fulfill your mission. School-community-business partnerships may develop relationships with the Superintendent's office, Chamber of Commerce, local civic and nonprofit organizations, principals, parents, and perhaps even the community foundation office. Look at your mission and think, "Who really cares about this work?" Then, recruit people who can serve you individually while linking you to those organizations.

When approaching board members, the linkage needs to be clear: you want them to help you build a relationship and serve as liaison. You may also consider asking those key partners to designate someone to serve as their representative, which would allow you to formalize the relationship.

Board expectations

"It really won't take very much time," is how many people have tried to recruit me to be on a board. "Really?" I reply. To me, that indicates that the board must not be actively engaged in the mission or the work of the organization. I want to know the expectations: if you ask for nothing, you usually get nothing.

I believe that a much more effective way to recruit is to say, "We really need you to be on this board to do XXX." Hit the person's hot button. If you have done your research you will know what it is. Talk about the work and inspire them to be engaged and to lend their efforts, their mind, and their Rolodex. The top reason most people volunteer is that someone asks them directly and tells them why they are needed. Make the expectations and the role of the board clear. That will lead to success. Minimal expectations will not.

Remember, the board should be strong enough to carry on the mission and objectives of the organization, regardless of what happens to the leader. Without that strong board, the organization itself will not be viable. Building your board is therefore one of the most important tasks you have as a leader; it is the foundation for your success.

The matrix

If you would like additional advice, or a copy of the matrix described above to use as a template, please contact me at BarbaraJoFrank@aol.com.

Written by Barbara J. Frank, Ph.D., a consultant and senior trainer for strategic planning, volunteer management, and partnership management. She served as the partnership director in Lincoln Public Schools in Lincoln, NE for nearly two decades, and served on the board and as a senior trainer for Partners In Education.

The Middle Grades Partnership

In the STEM education reform discussion, it's a given that urban school districts are an untapped source of the potential STEM workforce. In addition to large numbers of students, urban areas offer the infrastructure necessary to teach STEM disciplines: many corporations are based there; government tends to focus its efforts on these populations; and, of course, the majority of potential customers live in and around urban centers. It makes sense that education reform efforts should focus on the nation's cities.

Unfortunately, urban school districts are among worst in the country in terms of achievement. An ongoing partnership in Baltimore, Maryland serves as a potential model for those seeking to enter into education reform.

The Middle Grades Partnerships (MGP) in Baltimore is a public-private partnership designed to raise academic achievement among public middle school students who have had some success in the city schools, and focuses on preparing participating students for rigorous academic coursework in high school and college. Teachers and administrators from participating private and public schools work collaboratively to design challenging academic experiences in summer school sessions at the private schools and after school sessions at public middle schools, all of which are designed to meet the standards set by the MGP and individualized by the teachers and schools involved.

The idea behind the partnership percolated from the experiences of Thomas Wilcox, current President of the Baltimore Community Foundation (BCF) and former Head of School of Concord Academy in Boston, Massachusetts. Mr. Wilcox started City Bridge in Boston, where students from the private Concord Academy taught public school students in Boston and Cambridge. In addition to BCF, the Morton K. and Jane Blaustein Foundation (MJBF) has been a primary supporter of the initiative.

The project itself grew out of a 2004 conference hosted by the BCF, MJBF and the Johns Hopkins Center for Summer Learning. Entitled "Forum on Summer Learning Opportunities in Independent Schools," the conference included local school teachers, administrators, development officers, trustees, foundation staffs, and interested community members who gathered to hear more than 20 representatives of public/independent school partnership programs from across the nation describe their programs and inspire those in Baltimore to plan their own partnership.

Development and scope of MGP

As a result of the 2004 conference, public and independent school administrators and teachers began working together to identify a target population and develop the MGP's curricular goals. Project planners quickly settled on middle school students as a target audience, since the middle grades "are the last opportunity we have to transform kids' habits of mind," said Beth Drummond Casey, director of the Middle Grades Partnership. "At the end of the day, they are still children," which provides an academic advantage in terms of focus and development.

The Middle Grades Partnership

Where:
Baltimore, Maryland

Partner(s):
Two foundations - the Baltimore Community Foundation and the Morton K. and Jane Blaustein Foundation - and several local private schools

Challenge:
Prepare middle school students who had experienced some academic success in urban public schools for rigorous high school and college-level work.

Solution:
The Baltimore Community Foundation led the exploration of a coordinated set of partnerships between local public and private schools. Working with foundation support, these partnerships would ascribe to a set of objectives and collaboratively pursue them through after school and summer programs.

Partner Roles:
Teachers and administrators at partnering public and private schools work together to set the course of instruction. After school programs, hosted at partnering public schools, focus on academics with an emphasis on reading and mathematics. Summer programs, hosted at partnering private schools, expand this academic focus with arts, athletics, and personal development.

Outcomes:
Evaluation of the Middle Grades Partnership is being conducted by Johns Hopkins University. Initial efforts focused on formative evaluation; current efforts are examining outcomes against comparable groups of students. Based on an analysis of initial data, students participating in the program are making noticeable advances in reading and math, and are being prepared for a rigorous course of study at the high school level.

As an overarching objective, they decided that students completing the program would be:

- Intuitive, flexible, and confident mathematical thinkers
- Insightful, fluent, and ardent readers
- Capable, straightforward, incisive writers

With these objectives in mind, twelve MGP sites were chosen and individual sites were given free reign to design their own program to meet the agreed-upon goals. After school programs focus heavily on academics; summer programs incorporate arts, athletics, and personal development into the mix. During the school-year, students participate in two after school sessions per week and at least four Saturday activities, all at a public school site. Summer programs, held on private school campuses, run for four or five weeks.

Program staff themselves develop the curriculum. Each site is self-managed, but all work toward the same goals. Individual partnerships will write a proposal for a grant that offers more than the curriculum. "We work closely with grantees," said Casey, which means that the partnership monitors ongoing projects and makes suggestions for adjustments as individual projects go forward.

Going into its fourth year, MGP graduates have completed Algebra I, written clear and convincing essays, and have developed a willingness to read for both pleasure and in their studies. Much attention has been focused on the program's focus on algebra and higher mathematics, and there is a reason it has become a key element of the program. "Algebra is a gateway course to higher education," Casey explains. Research shows that success in higher level math is a determinant of postsecondary graduation. But the program's other elements are just as important "Each individual project site reflects great thinking and an integrated curriculum," she added. "Academically the instruction looks and feels and acts un-school like."

Evaluation

Although an ongoing evaluation is being conducted in tandem with the project, preliminary district data

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A Note on Building Evaluation Models

Evaluation is an integral component of education reform efforts, and there is some controversy surrounding evaluation methods and outcomes. This controversy might best be summarized by conflicting statements provided by the American Evaluation Association on the Department of Education's adoption of randomized clinical trials as the "gold standard" for education evaluation.

Without getting into the middle of this controversy, the best way to demonstrate it and hopefully provide context for evaluation efforts concerning the MGP and other partnership-driven projects would be to highlight competing statements submitted as commentary on the Department's position.

> While we agree with the intent of ensuring that federally sponsored programs be "evaluated using scientifically based research . . . to determine the effectiveness of a project intervention," we do not agree that "evaluation methods using an experimental design are best for determining project effectiveness." We believe that the constraints in the proposed priority would deny use of other needed, proven, and scientifically credible evaluation methods, resulting in fruitless expenditures on some large contracts while leaving other public programs unevaluated entirely. Statement prepared by: Randall Davies, Ernest House, Cheri Levenson, Linda Mabry (chair), Sandra Mathison and Michael Scriven. This team received valuable assistance from: Lois-ellin Datta, Burt Perrin, Katherine Ryan, and Bob Williams.

An influential group of senior members of the American Evaluation Association opposed this AEA Statement, and did not feel they were appropriately consulted as active, long-term members of AEA. They provided the following opposition statement to the one above:

> . . . [W]e recognize that randomized trials are not feasible or ethical at times. In such circumstances, quasi-experimental or other designs may be appropriate alternatives, as the proposed priority allows. However, it has been possible to configure practical and ethical experimental designs in such complex and sensitive areas of study as pregnancy prevention programs, police handling of domestic violence, and prevention of substance abuse. It is similarly possible to design randomized trials or strong quasi-experiments to be ethical and feasible for many educational programs. In such cases, we believe the Secretary's proposed priority gives proper guidance for attaining high methodological standards and we believe the nation's children deserve to have educational programs of demonstrated effectiveness as determined by the most scientifically credible methods available. Signed by Leonard Bickman, Robert F. Boruch, Thomas D. Cook, David S. Cordray, Gary Henry, Mark W. Lipsey, Peter H. Rossi, and Lee Sechrest.

In this context, it is important to point out that there is a struggle among the education community on what constitutes effective evaluation and how specific programs are evaluated. The evaluation presentation in this study simply provides the approach being taken in this specific case.

For more information, see:

www.wmich.edu/evalctr/jmde/content/JMDE%20Num%203_files/Webpages%20JMDE%20003/JMDE_003_Part_I.htm#_Toc116196689

show marked improvement among students involved in the MGP. At this writing, data have been made available that show that test scores have improved among the target population of students. Scores for the Terra Nova composite test indicate participating students' ability to compete for entrance to the city's most academically rigorous high schools. The threshold score for consideration for entrance to these high schools is 610. "We've heard from two schools," Casey said. "One school has some composite scores in the 700s." Preliminary data for six of the ten schools show that a majority of students are competitive in mathematics and reading, key target areas for the program.

In addition to regular school district testing, the project includes an evaluation by Johns Hopkins. Dr. Clea McNeeley of Johns Hopkins University's Bloomburg School of Public Health explains that the evaluation process is advancing through a series of stages. "At first the evaluation component focused on fine tuning the activities of the MGP and the program has been doing this," she said. "This is best practice in terms of evaluation," said Dr. McNeeley. As the evaluation moves forward, it will look at programs and comparisons to like groups. "An outcome evaluation is very difficult without randomization," she said. What is exciting about MGP, they are really taking on the partnership aspect and trying to leverage partnerships to get the desired result, Dr. McNeeley states.

Kristin Mmari, Assistant Scientist at the Bloomberg School has been conducting interviews among students, parents, and staff to collect qualitative data on the project. "It's a phenomenal program," she said. "The program designers have invested a lot into the summer program and it's been life-changing for some of the students." Kids have found confidence in themselves and they have dreams now, she said. Students have told her "I want to be a biologist or they want to be an (CSI) investigator," Mmari said.

Dr. McNeeley and Dr. Mmari stress the unique aspects of the MGP. "Previous models involving private schools offered a hand out to public schools," said Mmari. "There really is a partnership here and there's a real give and take aspect to this." Both of them emphasized school leadership. "The project has successfully involved all their staff in both the private and public schools," Mmari said. This leads to a real commitment among the participants. In many projects, there's an "us and them" mentality, but the most successful partnerships are saying "we and us". The MGP is working on getting partners onto a true equal plane.

Organizations seeking to enter the education fray should keep in mind that there are many out there who are already engaged; Baltimore's Middle Grades Partnership is one such example. This project is multifaceted and certain aspects of it lend themselves to replication. Urban district areas have non-profits that are knowledgeable about the workings of their schools systems. There are private schools that may or may not be willing to collaborate on improving schools, and the private school/public school partnership model definitely serves as a model. Although there is controversy concerning evaluation, there are postsecondary institutions throughout the nation (also often found in urban areas) that can lend resources to reform efforts. A potential public/private education partnership needn't incorporate all the elements of the MGP to be successful or to have an effect.

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Written by Tony Fowler of ToMolly and Friends.

Resource Links

The Middle Grades Partnership
www.middlegradespartnership.org

MGP Blog, maintained by two participating schools
www.mgpsummerscholars.blogspot.com

The Baltimore Community Foundation
www.bcf.org

Morton K. and Jane Blaustein Foundation
www.blaufund.org/foundations/mortonandjane_f.html

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or call 704-940-3201

primary areas in which we work. We're tackling the issue head-on, but we're also working on disseminating information on this issue in several venues, trying to reach a number of audiences. We're reaching out to teachers and principals, other industries, parents, students, and others. For us it's really important to share this information, let people know what the issues are, why they're important, and what can be done, and talk more about what we all need to do to address them.

KPR: *Looking at your survey there's clearly a gap between what Fortune 1000 executives want to see in terms of workforce preparedness and what they're seeing. Have you asked them why there's a gap, and how it can be fixed?*

Lucore: We didn't specifically ask those questions in the survey, but what we find from our experiences, in terms of how to fix that, are a few things.

First, you need to start early. We start in elementary school, sometimes as early as kindergarten in some cases, with some of these hands-on, inquiry-based curricula.

Kids are born curious. They ask so many questions, and they want to know everything, and that's what science is all about: wondering and asking. And sometimes in school we actually shut that down, discouraging them from asking questions. We need to engage them early and encourage them to ask those questions.

Beyond that, we need to start looking at what are our industry needs. So let's take a student from early on, in elementary school, and map out what we think this student needs from their first step in the door to school to graduating and entering the workforce, perhaps at a company like ours. And let's establish initiatives that are appropriate at each step along that path.

At Bayer for example, we're engaged at a lot of different levels. We start at the elementary level with some science education programs. We working with high schools, through programs like that from the American Chemical Society, and getting high school students engaged in after school programs, through projects, or in internships with industry. Then our foundation is active at the university level, by starting Bayer Fellows at schools to give students experience and exposure to industry and even provide global experiences, which are also very important.

Challenges and Rewards of Partnering - For Education Partners

Reprinted with permission from Bayer's 2006 Forum Highlights Report

Challenges

- Garnering the critical mass of support from business and industry to move from the "discussion phase" to actually making the commitment and staying the course on core programs for the long-term, which can sometimes mean a decade or longer.
- Helping business partners understand the kind of commitment they must make to an education organization that is trying to bring about the kind of radical change involved in standards- and research-based teaching and learning.
- Convincing companies to avoid the "curriculum du jour" trap and instead support standards- and research-based education programs that have a track record, even when these programs may already have the support of other corporate partners.
- Articulating at the outset the outcomes both partners expect and how they will benchmark those outcomes and measure success.
- Identifying the win-win for both parties when the cultures are so different. Business is looking for a better-prepared workforce as one of its outcomes. Yet, the timeframe between when a company invests its money at the elementary school level and when that future workforce becomes mature is quite long.
- Finding common ground and developing mutual respect when the partnership involves scientists/engineers working with teachers, particularly when teachers, who may not be as well-versed as the scientists/engineers in content areas, see themselves as "just teachers."

Rewards

Partnering with business brings a while new level of resources to the table, helping them enhance their programs while overcoming barriers at the school and district level. These include:

- STEM expertise. Professional scientists/engineers can help develop curriculum; work with teachers and students in the science classroom on curriculum implementation, experiments and lab work; and serve as mentors, informal career counselors and science fair judges.
- Financial resources. Particularly unrestricted grants, which allow for operational flexibility. The corporate funding may come from either the business or philanthropic side of the company.
- Human resources. Apart from their scientists/engineers, companies employ professionals with wide-ranging business expertise whose ideas and insights can benefit education partners, such as facilities engineers who can set up materials systems; marketing and public relations professionals who can assist with fundraising and awareness; and corporate executives who can sit on boards of directors or advisory boards and consult on a broad range of issues.
- Political clout. No other sector has the potential to influence this nation's education system more than business and industry at the local, state and national levels.

See Bayer's *2006 Forum Highlights Report* at www.bayerus.com/MSMS/MSMS_News/MSMS_News_Home.aspx.

But again, we see each of these programs as part of a continuum, mapping the path that takes them from start to finish and meet the needs of the student all along the way.

KPR: *Diversity is a primary focus of this survey – why is diversity an important issue to Bayer in STEM education?*

Lucore: Diversity is one of our largest focus areas now – we see the growth of a diverse STEM workforce as critically important to our competitiveness. In terms of K12 education, you have to go back to the issue that American students are generally not pursuing STEM careers, and we have a diminishing workforce. Then realize that women and other minorities now make up two-thirds of the existing US workforce, and the minority population is growing. And those workers are historically underrepresented in the STEM fields. So there's a huge untapped group of people there that we need to reach and attract to STEM careers. We need to let them know what kinds of opportunities are available to them and how to become prepared and to succeed in these careers.

We're starting to do a lot in this area, launching a number of partnerships and programs to address this issue. This is the reason we held our December forum, as well as the one in 2006 – to show everyone, including industry and other funders who want to get involved in this issue, that there are programs that already exist and

About *Making Science Make Sense*

Driven by an interest in having a strong STEM workforce and a scientifically literate country, Bayer pursues the following activities through its *Making Science Make Sense* program:

- **Hands-on work with teachers and students** - Bayer has more than 1,000 employee volunteers working with teachers and students in classrooms and informal learning programs across the country.
- **Community-wide reform initiatives** - the company is spearheading science education reform programs in seven markets, including Pittsburgh (PA), Elkhart (IN), and West Haven (CT).
- **National science literacy campaign** - led by astronaut Dr. Mae C. Jemison, this campaign includes experiment guides, an instructional audio series, a high school film competition, and the *Bayer Facts of Science Education* surveys.
- **Best practices research** - Bayer has held national forums to showcase successful STEM partnership initiatives, and has published two resource guides that provide business leaders and others with information on these programs along with practical advice for how they can support and/or replicate such programs in their local communities.

For more information about *Making Science Make Sense* or to subscribe to the *Making Science Make Sense* E-News Update, visit www.BayerUS.com/MSMS.

are doing a fantastic job of reaching those audiences and helping them to succeed in these careers. It's important to let these industry partners know that they don't necessarily need to reinvent the wheel – there are a lot of good programs that already exist, that can be replicated or grow with their support.

KPR: *In your survey, you asked respondents whether their companies were active in K12 education, and many of them said yes. Do you have a sense as to how they're involved?*

Lucore: There's a whole array of projects out there. There are programs integrated into instruction as part of students' curricula; there are after school programs; there are internship and scholarship programs wrapped into various courses of study; and there are many other models in place. We're very careful in our work, such as our best practices guides and conferences, to highlight a wide range of program models. Because when we go back to the idea of mapping a student's path from beginning to end, there are so many different ways to reach a student: it can take different forms, and it doesn't all have to be through the classroom. The classroom is a good place to start, but there are other venues as well.

KPR: *What should the next step be for companies working in this area?*

Lucore: So much of this lies with industry – it really is our job to step up and support improvement and reform initiatives. We're the end users of the educational system. We need to look at the mismatch between the skills we need in employees and what we're currently seeing, and figure out what we can do to help students get what they need to be prepared for the opportunities available to them.

KPR: *Over the past 13 years of conducting this survey, what have you learned about STEM education?*

Lucore: We have talked to so many different stakeholder audiences in the past several years. In addition to this year's survey of Fortune 1000 executives, we've surveyed parents, principals, teachers, students, the general public, Ph.D. scientists, and HR executives and managers. We surveyed governors one year on the impact that education would play in an upcoming election. We've talked to almost every group we could talk to about various issues in STEM education.

Talking with students, for example, we looked at their favorite ways, and the most effective ways, to learn science. We've asked teachers things like, how scary is it for you to teach science? We found from teachers that a lot of them are afraid to say, 'I don't know.' And sometimes they don't know the answers – no one knows the answer to everything. Same with parents – they can be afraid to say to their children 'I don't know,' instead of

saying 'I'm not sure, but let's look it up together."

So we've gather a lot of interesting data, and I think it all fits together in different ways. We've put together a white paper that looks at the responses of these different groups. We're finding a lot of connections, such as how students want to learn science in a particular way, but teachers aren't necessarily prepared to teach in those ways. So we've been able to highlight some disconnects, and spent some time focused on programs that can help to address those issues.

These surveys have really formed the platform for the whole MSMS program. We want to make sure that we're on the right track in what we're doing, so we go out there and pinpoint these issues and see what the discrepancies are, which allows us to focus on the right things in our work.

KPR: *For a school or district, it can be difficult to know where to start in developing a relationship with a large company like Bayer. What advice do you have for school and district leaders in finding the right contacts?*

Lucore: That's a tough one, because unfortunately at every company it's different. For one company it might be through human resources, for another it might be community relations, for another it may be through an executive with an interest in education... Really, the best answer is the simplest: go on the company's web site to see if they have a program around science or STEM education like we do, and often times you can find contact information through the site. Another option is to find the local number for the company, call and tell them what you're looking for; they should be able to direct you to the right people. I wish there was a better answer, but because it does seem to be so different from company to company, this kind of direct inquiry is really the best way.

KPR: *Once you find the right contact, what should schools and districts focus on in order to build a strong and sustainable partnership?*

Lucore: For schools and districts, you need to start by looking at your objectives and all the ways in which you're trying to achieve those objectives. It could be in the classroom, it could be through after school or extracurricular programs, or through other partnerships, such as with science museums and others. Corporate partners will engage in different ways: some, like Bayer, will not provide funding to school districts, but may support programs outside the classroom or programs that go into schools, or may provide volunteers or other nonfinancial support. So approach them within the full spectrum of your efforts and look for areas of common interest and for opportunities that fit with their outreach model.

Selected Responses from the 2008 *Bayer Facts of Science Education* Survey

All responses from Fortune 1000 executives at STEM-focused firms

Question: How concerned are you that your company will be able to attract and retain the scientific and technically trained employees you need in the United States to remain competitive in the global marketplace?

- Very concerned: 31%
- Somewhat concerned: 51%
- Not too concerned: 16%
- Not at all concerned: 2%

Question: How good a job do you think the U.S. pre-college, or K through 12, education system does in engaging and nurturing girls and minorities to pursue STEM careers?

- A: 0%
- B: 9%
- C: 34%
- D: 41%
- F: 14%
- Don't know: 2%

Question: Do you believe STEM companies have a role to play in ensuring that women and minorities succeed in science and engineering fields?

- Yes, have a role to play: 97%
- No, don't have a role to play: 2%
- Don't know: 1%

Question: How important is it for STEM companies to support pre-college science education programs that help create the next generation of inventors, innovators and discoverers?

- Very important: 66%
- Somewhat important: 32%
- Not too important: 2%
- Don't know: 0%

Question: Do agree or disagree with the following statement: "Direct contact with scientists and engineers is an effective way to help students better appreciate careers in science and engineering?

- Agree: 96%
- Disagree: 1%
- Don't know: 3%

Question: Some STEM companies support pre-college education programs that attract, encourage and sustain girls' and minority students' interest in math and science in school. Does your company or do any of your employees participate in programs such as these?

- Yes: 87%
- No: 17%
- Don't know: 6%

Question: In a recent survey, U.S. parents said it is very important for today's STEM companies to communicate the message to today's students that there are significant opportunities for them in STEM fields. Does your company effectively communicate this to today's students?

- Yes: 54%
- No: 40%
- Don't know, or N/A: 6%

The KPR Guide to Federal Science Education Programs

K12 Partnership Report is pleased to present this directory of science education programs managed by various federal agencies. Programs listed here include traditional grant programs, scholarships and fellowships, programs provided in cooperation with other entities, and much more. This list is extensive, but not exhaustive; if you are aware of programs that should be on this list, please let us know so that we can run updates in future issues.

Department of Agriculture

Office	Program/Name	Website
ADMIN	USDA/1890 National Scholars Program	http://1890Scholars.program.usda.gov
CSREES	International Science and Education Competitive Grants Program	http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1240
CSREES	Alaska Native-Serving and Native Hawaiian-Serving Instititutions Education Grants Program	http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1064
CSREES	1890 Institutions Teaching and Research Capacity Building Grants Program	http://www.csrees.usda.gov/fo/1890capacity.cfm
CSREES	4-H Youth Development	http://www.csrees.usda.gov/youthdevelopment4h.cfm
CSREES	Ag in the Classroom	http://www.agclassroom.org/
CSREES	Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowships Grants Program	http://www.csrees.usda.gov/funding/rfas/national_needs.html
CSREES	Higher Education Challenge Grants Program	http://www.reeusda.gov/1700/funding/rfahec.htm
CSREES	Higher Education Multicultural Scholars Program	http://www.csrees.usda.gov/fo/multiculturalscholarshep.cfm
CSREES	Hispanic-Serving Institutions Education Grants Program	http://www.reeusda.gov/1700/funding/rfahsi03.htm
CSREES	National Research Initiative (NRI): Postdoc Program	http://www.reeusda.gov/nri/
CSREES	Secondary and Two-Year Postsecondary Agriculture Education Challenge Grants Program (SPEC)	http://www.csrees.usda.gov/fo/educationchallengesecondaryhep.cfm
CSREES	Tribal Colleges Education Equity Grants Program	http://www.csrees.usda.gov/fo/tribalcollegeseducationtceg.cfm
CSREES	Tribal Colleges Endowment Fund	http://www.reeusda.gov/serd/hep/progdes.htm
CSREES	Tribal Colleges Research Program	http://www.csrees.usda.gov/fo/fundview.cfm?fonum=1133
Various	Career Intern Program	http://www.usda.gov/da/employ/CareerInternWebSite.htm

Department of Commerce

Office	Program/Name	Website
NOAA	Chesapeake Bay Watershed Education and Training	http://noaa.chesapeakebay.net/
NOAA	Coral Reef Conservation Program	http://www.nmfs.noaa.gov/habitat/ead/fundingopps.htm
NOAA	Estuary Live	http://www.estuaries.gov/welcome.html
NOAA	High School/High Tech	http://www.noaa.gov/
NOAA	Marine Sanctuary Program	http://www.sanctuaries.nos.noaa.gov
NOAA	Monterey Bay Watershed Education and Training Program	http://sanctuaries.noaa.gov/news/bwet/welcome.html
NOAA	Sea Grant College Program	http://www.noaa.gov
NTIA	Public Telecommunications Facilities Program (PTFP)	http://www.ntia.doc.gov/ptfp/attachments/FFO_Notice_06.htm

Department of Defense

Office	Program/Name	Website
Am. Society for Science and Engineering	National Defense Science and Engineering Graduate Fellowship	https://www.asee.org/ndseg
Fleet Training Center	Starbase-Atlantis, San Diego	https://wwwcfs.cnet.navy.mil/naswf/starbaseAtlantis/welcome.cfm

The KPR Guide to Federal Science Education Programs - continued

Department of Defense

Office	Program/Name	Website
Marine Corps	Starbase, Inc.	http://www.defenselink.mil/ra/html/starbase.html
National Defense University	National Security Education Program	nsepo@ndu.edu
National INFOSEC Education and Training Program Office	Information Assurance Scholarship Program (IASP)	http://www.defenselink.mil/cio-nii/iasp/index.html
Navy Fleet Training Center	Starbase-Atlantis, Norfolk	https://www.npdc.navy.mil/starbase.norfolk/index.html
Program Director, NC A&T State University	Historically Black Colleges and Universities (HBCU) Future Engineering Faculty Fellowship Program	http://www.onr.navy.mil/sci_tech/3t/corporate/hbec.asp
The National Science Center-Army	National Science Center Education Outreach	www.NationalScienceCenter.org
U.S. Navy, CNET Code OOKA	Starbase-Atlantis, Pensacola	https://www.cnet.navy.mil/comunity/starbase/sa.html
US Navy	US Naval Academy - Academic Program	http://www.usna.edu

Department of Energy

Office	Program/Name	Website
Brookhaven National Laboratory	Science Undergraduate Laboratory Internship (SULI)	http://www.bnl.gov/education/programs/suli.asp
DOE CSGF Program Coordinator	Computational Science Graduate Fellowship	http://www.krellinst.org/csgf/index.shtml
Fermilab Education	Quarknet	http://quarknet.fnal.gov/
Nuclear Regulatory Commission	Cooperative Education Program	http://www.nrc.gov/who-we-are/employment/student-prog.html
Oak Ridge Institute for Science & Education	Global Change Education Program	http://www.atmos.anl.gov/GCEP/
Office of Fusion Energy	Fusion Energy Sciences Fellowship Program	http://www.orau.gov/fusion
Office of Fusion Energy Sciences	Fusion Energy Postdoctoral Research Program	http://see.orau.org/ProgramDescription.aspx?Program=10093
Office of Science	Albert Einstein Distinguished Educators Fellowship Program	http://www.scied.science.doe.gov/scied/Einstein/about.htm
Office of Science	Community College Institute for Science and Technology (CCI)	http://www.scied.science.doe.gov/scied/CCI/about.html
Office of Science	Faculty and Student Teams	http://www.scied.science.doe.gov/scied/fast/contacts.htm
Office of Science	Laboratory Science Teacher Professional Development	http://www.nrel.gov/education/lstpd.html
Office of Science	National Science Bowl	http://www.scied.science.doe.gov/nsb/index.html
Office of Science	Pre-Service Teacher Program	http://www.scied.science.doe.gov/scied/PST/about.htm
Office of Science	Used Energy-Related Laboratory Equipment (ERLE)	http://erle.osti.gov/erle/
Science Education Program	National Undergraduate Fellowship Program in Plasma Physics and Fusion Energy	http://science-education.pppl.gov/Nuf/Index.html

Department of Health and Human Services

Office	Program/Name	Website
Administration on Developmental Disabilities	University Centers for Excellence	http://www.hhs.gov/grantsforecast/cfda/health/program/acf22.html
CDC Public Health Practice Program Office/DMTS	CDC-Sponsored Self-Study Courses	WWW.CDC.GOV/PHTN
CDC Division of Adolescent and School Health	Coordinated School Health Education Programs	http://www.cdc.gov/HealthyYouth/partners/funded/cshp.htm
Division of Intramural Research/ National Institute of Nursing Research	Summer Genetics Institute	http://www.ninr.nih.gov/Training/TrainingOpportunitiesIntramural/SummerGeneticsInstitute/
Health Resources and Services Administration	Faculty Loan Repayment Program	http://bhpr.hrsa.gov/dsa/flrp/applicationkit.htm
Health Resources and Services Administration	Scholarships for Disadvantaged Students Program	http://bhpr.hrsa.gov/dsa/sds.htm

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Department of Health and Human Services

Office	Program/Name	Website
Health Resources and Services Administration, Division of Health Professions Diversity	Centers of Excellence	http://bhpr.hrsa.gov/dhpd/contact.htm
Health Resources and Services Administration, Division of Health Professions Diversity	Health Careers Opportunity Program	http://bhpr.hrsa.gov/diversity/hcop/default.htm
Health Resources and Services Administration, Bureau of Health Professions Area Health Education Centers Branch, DICP	Health Education and Training Centers (HETC)	http://aspe.hhs.gov/selfGovernance/inventory/Hrsa/189.htm
HRSA Bureau of Health Professions	Nursing Workforce Diversity	http://bhpr.hrsa.gov/KIDSCAREERS/nursing_workforce.htm
Indian Health Service	Health Professions Pregraduate Scholarship Program Section 103(b)(2)	http://www.ihs.gov/JobsCareerDevelop/DHPS/Scholarships/index.html
Indian Health Service	Health Professions Scholarship Program Section 104	http://www.ihs.gov/jobscareerdevelop/DHPS/scholarships/section_104.asp
Indian Health Service	Indian Health Service Scholarship Program Section 103(b)(1)	http://www.ihs.gov/JobsCareerDevelop/DHPS/Scholarships/Scholarship_index.asp
National Institute of General Medical Sciences	Initiative for Minority Student Development (IMSD)	http://grants2.nih.gov/grants/guide/pa-files/PAR-06-553.html
National Institute of General Medical Sciences	Minority Access to Research Careers	http://www.nigms.nih.gov/Minority/MARC/MARCDescription.htm
National Institutes of Health	AIDS Research Loan Repayment Program	http://www.lrp.nih.gov
National Institutes of Health	CCR/JHU Master of Science in Biotechnogy Concentration in Molecular Targets and Drug Discovery Technologies	http://www.jhu.edu/advanced/
National Institutes of Health	Clinical Pharmacology Research Associate Training Program	http://www.nigms.nih.gov/Training/InstPostdoc/PostdocOverview-ClinPharm.htm
National Institutes of Health	Clinical Research Loan Repayment Program for Individuals from Disadvantaged Backgrounds	http://www.lrp.nih.gov/about/Intramural/index.htm
National Institutes of Health	Clinical Research Training Program	http://www.cc.nih.gov/training/crtp/crtp.html
National Institutes of Health	Comparative Molecular Pathology Graduate Partnership Training Program	http://gpp.nih.gov/Prospective/InstitutionalPartnerships/MolecularPathology/
National Institutes of Health	Comparative Molecular Pathology Research Training Program	http://ccr.nci.nih.gov/resources/training/home.asp
National Institutes of Health	Curriculum Supplement Series	http://science.education.nih.gov/supplements/
National Institutes of Health	Extramural Clinical Research Loan Repayment Program for Individuals from Disadvantaged Backgrounds	http://www.lrp.nih.gov/
National Institutes of Health	Fellows Award for Research Excellence (FARE)	http://felcom.nih.gov/FARE
National Institutes of Health	Genetic Epidemiology Branch Fellowships	http://dceg.cancer.gov/geb/fellowships/offer
National Institutes of Health	Graduate Program Partnerships	http://gpp.nih.gov/
National Institutes of Health	Health Communications Internship program	http://internship.cancer.gov/contact.cfm
National Institutes of Health	Health Disparities Research Loan Repayment Program	http://grants.nih.gov/grants/guide/pa-files/PAR-06-515.html
National Institutes of Health	Intramural NIAID Research Opportunities	http://www3.niaid.nih.gov/labs/training/inro/programDescription.htm
National Institutes of Health	Loan Repayment for Contraception and Infertility Researchers	http://www.lrp.nih.gov/about/lrp-contra.htm
National Institutes of Health	National Institute of Environmental Health Sciences Office of Fellows' Career Training Opportunities	http://www.niehs.nih.gov/careers/research/fellows/
National Institutes of Health	NCRR Science Education Partnership Award	http://grants2.nih.gov/grants/guide/pa-files/PAR-06-080.html
National Institutes of Health	NIH Academy	http://www.training.nih.gov/onlineApps/afpi/application/MainAcademy.asp
National Institutes of Health	NIH/National Institute of Standards and Technology Joint Postdoctoral Program	http://www.nationalacademies.org/pga
National Institutes of Health	NIMH Career Opportunities in Research Education and Training (COR) Honors Undergraduate Research Training Grant	http://grants2.nih.gov/grants/guide/pa-files/par-01-008.html
National Institutes of Health	Office of Research on Women's Health-funded Programs Supplements to Promote Reentry into Biomedical and Behavioral Research Careers	http://grants2.nih.gov/grants/guide/pa-files/PA-04-126.html
National Institutes of Health	Postbaccalaureate Intramural Research Training Award (IRTA)	http://www.training.nih.gov/student/Pre-IRTA/previewpostbac.asp

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Department of Health and Human Services

Office	Program/Name	Website
National Institutes of Health	Research Supplements to Promote Diversity in Health-Related Research	http://www.nigms.nih.gov/Research/Mechanisms/PromoteDiversity.htm
National Institutes of Health	Ruth L. Kirschstein National Research Service Award Short-term Institutional Research Training	http://grants.nih.gov/grants/guide/pa-files/PA-05-117.html
National Institutes of Health	Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral Fellows	http://grants2.nih.gov/grants/guide/pa-files/PA-04-032.html
National Institutes of Health	Ruth L. Kirschstein National Research Service Awards for Individual Predoctoral MD/PhD Fellows (F30)	http://grants.nih.gov/grants/guide/pa-files/PA-07-002.html
National Institutes of Health	Ruth L. Kirschstein National Research Service Awards for Individual Postdoctoral Fellows (F32)	http://grants.nih.gov/grants/guide/pa-files/PA-06-373.html
National Institutes of Health	Sallie Rosen Kaplan Fellowship for Women in Basic, Clinical, Epidemiological or Prevention Science	http://www.training.nih.gov/apps/publicForms/postdoctoral/forms/adIndex.aspx
National Institutes of Health	Science Education Drug Abuse Partnership Award	http://grants2.nih.gov/grants/guide/pa-files/PA-02-070.html
National Institutes of Health	Summer Institute for Social Work Research	http://obssr.od.nih.gov/conf_wkshp/sw/
National Institutes of Health	Summer Institute for Training in Biostatistics	http://www.nhlbi.nih.gov/funding/training/redbook/sibsweb.htm
National Institutes of Health	Technical Intramural Research Training Award	http://www.genome.gov/12011106
National Institutes of Health	Undergraduate Scholarship Program for Individuals from Disadvantaged Backgrounds	http://ugsp.info.nih.gov
National Institutes of Health	University Medical Informatics Research Training Programs Supported	http://www.nlm.nih.gov/ep/GrantTrainInstitute.html
National Institutes of Health Loan Repayment Programs	Pediatric Research Loan Repayment Program	http://www.lrp.nih.gov/about/lrp-pediatric.htm

Department of Homeland Security

Office	Program/Name	Website
Science and Technology Directorate	Scholars and Fellows Program	http://www.orau.gov/dhsed/

Department of Interior

Office	Program/Name	Website
Bureau of Land Management	Project Archaeology Program	http://www.blm.gov/heritage/project_archaeology.htm
Bureau of Land Management, Environmental Education & Volunteers Group	Project Learning Tree (PLT)	http://www.blm.gov/education/LearningLandscapes/teachers/plt.html
Bureau of Reclamation	Project WET (Water Education for Teachers)	http://www.projectwet.org/
Minerals Management Service	The National Energy Educational Development Project	http://www.need.org/pgesolarschools/big.htm
National Park Service	National Parks Institutes	http://www.nps.gov/learn/institutes.htm
National Park Service	Parks as Classrooms	http://216.167.117.204/national_website//overview.cfm
National Park Service	Research Learning Centers	http://www.nature.nps.gov/learningcenters/
National Park Service	Youth Conservation Corps	http://www.nps.gov/youthprograms/ycc.htm
Office of Educational Partnerships	BLM Learning Landscapes	http://www.blm.gov/education/LearningLandscapes/index.html
Office of Educational Partnerships	DOI Diversity Intern Program	http://www.doi.gov/hrm/dipprogram.html
Office of Educational Partnerships	Student Educational Employment Program	http://www.usgs.gov/ohr/student/benefit/seep.html
Office of Surface Mining	Summer Watershed Internship Program	http://www.osm.gov/acsi/internindex.htm
U.S. Fish and Wildlife Service	Aquatic Resources Education Program	http://wsfrprograms.fws.gov/Subpages/GrantPrograms/AquaticEd/AE.htm
U.S. Fish and Wildlife Service	Earth Stewards	http://www.fws.gov

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Department of Interior

Office	Program/Name	Website
U.S. Fish and Wildlife Service	Refuge Education Materials	http://www.fws.gov/
U.S. Fish and Wildlife Service	Schoolyard Habitat Program	http://www.fws.gov/chesapeakebay/schoolyd.htm
U.S. Fish and Wildlife Service	Shorebird Sisters Program	http://66.241.214.202/
U.S. Fish and Wildlife Service	Suitcase for Survival	http://www.fws.gov/midwest/IllinoisRiver/trunks.html
U.S. Geological Survey	Cooperative Research Units	http://www.coopunits.org/app;jsessionid=apa3cttro9aoo?path=0
U.S. Geological Survey	EDMAP -- University Geologic Mapping Component	http://ncgmp.usgs.gov/ncgmpabout/edmap
U.S. Geological Survey	U.S. Geological Survey Mendenhall Postdoctoral Research Fellowship Program	http://geology.usgs.gov/postdoc/
U.S. Geological Survey	Water Resources Research Act Program	http://water.usgs.gov/wrri/mission.html
U.S. Geological Survey	Water Resources Research Units Act Program	http://water.usgs.gov/wrri/institutes.html
Various	Student Career Experience Program	http://www.blm.gov/wo/st/en/res/blm_jobs/national_recruitment1/internship_opportunities0.html

Department of Labor

Office	Program/Name	Website
Office of Adult Services, Disabilities Employment and Initiatives Unit	Information Technology Initiative for Individuals with Disabilities	http://www.doleta.gov/sga/sga/01-107sga.cfm
Office of Apprenticeship Training, Employer, and Labor Services, Bureau of Apprenticeship & Training	Apprenticeship Training, Employer and Labor Services	http://www.doleta.gov/etainfo/NtlPgm/ATELS.cfm
Office of Policy and Research	H-1B Technical Skills Training Grants	http://www.doleta.gov/SGA/sga/02-102sga.cfm
Office of Policy and Research	Pilots, Demonstrations, and Research Projects	http://www.doleta.gov
Office of the 21st Century Workforce	Advanced Distributed Learning Initiative	http://www.adlnet.org/

Department of Transportation

Office	Program/Name	Website
Federal Highway Administration	Eisenhower Transportation Fellowship Program	http://www.fhwa.dot.gov/opd/universitygrants.htm
Federal Highway Administration	National Summer Transportation Institutes	http://www.nrc.scsu.edu/
Federal Highway Administration	The Summer Transportation Internship Program for Diverse Groups (STIPDG)	http://www.fhwa.dot.gov/education/stipdg.htm
Research & Innovative Technology Administration	DOT's University Transportation Centers Program	http://utc.dot.gov/

Environmental Protection Agency

Office	Program/Name	Website
Bio Pesticides and Pollution Prevention staff	Integrated Pest Management (IPM) in Schools	http://www.epa.gov/pesticides/ipm/
Office of Atmospheric Programs	Sunwise School Program	http://www.epa.gov/sunwise/
Office of Environmental Education (OEE)	National Environmental Education Program	http://www.epa.gov/Education/grants.html
Office of Radiation and Indoor Air	Indoor Air Quality (IAQ) Tools for Schools	http://www.epa.gov/iaq/schools/index.html
Office of Water	Adopt Your Watershed	http://www.epa.gov/adopt/

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National Aeronautics and Space Administration

Office	Program/Name	Website
Education Division	NASA Explorer School (NES)	http://explorerschools.nasa.gov
Education Office	Educator Astronauts Program	www.edspace.nasa.gov
Elementary and Secondary Education	Elementary and Secondary Education	http://www.education.nasa.gov/divisions/eleandsec/overview/index.html
Headquarters	Minority University Research Education Program	http://www.nasa.gov/audience/foreducators/MUREP.html
Informal Education	Informal Education	http://education.nasa.gov/divisions/informal/overview/
NASA	Higher Education	http://www.education.nasa.gov/divisions/higher/overview/index.html
Office of Education	Learning Technologies Project	http://learn.arc.nasa.gov/pds/FY03/LTP-RFP.doc
Office of Education	Support for Systemic Improvement of Education	http://www.education.nasa.gov

National Science Foundation

Office	Program/Name	Website
Cultural Anthropology Program	Cultural Anthropology Program	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5388&org=NSF&sel_org=NSF&from=fund
Directorate for Biological Sciences	Minority Postdoctoral Research Fellowships and Supporting Activities	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13454&org=NSF&sel_org=NSF&from=fund
Directorate for Education & Human Resources	Centers of Research Excellence in Science and Technology	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=6668&org=NSF&from=fund
Directorate for Education & Human Resources	Math and Science Partnership Program	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5756&org=NSF
Directorate for Education & Human Resources	Nanoscale Science and Engineering Education	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=6669&org=NSF
Directorate for Education & Human Resources	Tribal Colleges and Universities Program	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5483&org=NSF&from=fund
Directorate for Education and Human Resources	NSF Director's Award for Distinguished Teaching Scholars	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=8170&org=NSF&sel_org=NSF&from=fund
Directorate for Education and Human Resources	Robert Noyce Scholarship Program	http://www.nsf.gov/pubs/2005/nsf05528/nsf05528.htm
Directorate for Education and Human Resources	Teacher Professional Continuum (TPC)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12785&org=DUE&from=home
Directorate for Engineering	Bridges for Engineering Education (BEE)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5461
Directorate for Engineering	Grants for the Department-Level Reform of Undergraduate Engineering Education	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5462&org=NSF
Directorate for Engineering	Research Experiences for Teachers	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5736&from=fund
Directorate for Geosciences	Centers for Ocean Science Education Excellence (COSEE)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5511
Directorate for Geosciences	Geoscience Education (GeoEd)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5505&org=NSF&sel_org=NSF&from=fund
Directorate for Geosciences	Opportunities for Enhancing Diversity in the Geosciences (OEDG)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12726&org=NSF&sel_org=NSF&from=fund
Directorate for Mathematical and Physical Sciences	Astronomy and Astrophysics Postdoctoral Fellowships (AAPF)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5291&org=NSF&sel_org=NSF&from=fund
Directorate for Mathematical and Physical Sciences	Discovery Corps Fellowships (DCF)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=6676&org=NSF&sel_org=NSF&from=fund
Directorate for Mathematical and Physical Sciences	Enhancing the Mathematical Sciences Workforce in the 21st Century	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5732
Directorate for Mathematical and Physical Sciences	Pan-American Advanced Studies Institutes Program (PASI)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5327&org=NSF&sel_org=NSF&from=fund
Directorate for the Geosciences	Geoscience Education (GeoED)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5505&org=NSF&sel_org=NSF&from=fund
Division of Biological Infrastructure	Minority Postdoctoral Research Fellowships in Biological, Social, Behavioral, and Economic Sciences	http://www.nsf.gov/pubs/2004/nsf0442/nsf0442_1.pdf

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National Science Foundation

Office	Program/Name	Website
Division of Biological Infrastructure	Postdoctoral Research Fellowships in Biological Informatics	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12720&org=NSF&from=fund
Division of Elementary Secondary & Informal Education	Innovative Technology Experiences for Students and Teachers	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5467&org=NSF&from=fund
Division of Engineering Education and Centers	Engineering Education Programs	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13540&org=NSF
Division of Graduate Education (DGE)	Graduate Research Fellowships (GRF)	www.ehr.nsf.gov/ehr/dge/grf.htm
Division of Graduate Education (DGE)	Graduate Teaching Fellows in K-12 Education	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5472
Division of Graduate Education (DGE)	Integrative Graduate Education and Research Training (IGERT)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12759&from=fund
Division of Human Resource Development	Alliances for Graduate Education and the Professoriate (AGEP)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5474&org=NSF
Division of Human Resource Development	Historically Black Colleges and Universities (HBCU) Undergraduate Program	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5476
Division of Human Resource Development	Louis Stokes Alliances for Minority Participation (LSAMP)	www.ehr.nsf.gov/ehr/hrd/amp.asp
Division of Human Resource Development	Research in Disabilities Education (RDE)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5482&org=NSF&from=fund
Division of Human Resource Development	Research on Gender in Science and Engineering (GSE)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5475&org=NSF&from=fund
Division of Human Resources Development	Presidential Awards for Excellence in Science, Mathematics, and Engineering Mentoring	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5473&org=NSF&sel_org=NSF&from=fund
Division of International Programs	International Research Fellowship Program	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5179&org=NSF&sel_org=NSF&from=fund
Division of International Programs	Japan Society for the Promotion of Science Postdoctoral Awards for U.S. Researchers	http://www.jsps.go.jp/english/index.html
Division of Mathematical Sciences	Mathematical Sciences Postdoctoral Research Fellowships (with Research Instructorship Option)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5301&org=NSF&sel_org=NSF&from=fund
Division of Research, Evaluation & Communication	Research on Learning and Education (ROLE)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5485&org=NSF
Division of Undergraduate Education	Advanced Technological Education (ATE)	www.ehr.nsf.gov/ehr/due/programs/ate
Division of Undergraduate Education	Federal Cyber Service: Scholarship for Service	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5228&org=NSF&from=fund
Division of Undergraduate Education	Science, Technology, Engineering, and Mathematics Talent Expansion Program (STEP)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5488&org=NSF&from=fund
Division of Undergraduate Education (DUE)	Course, Curriculum and Laboratory Improvement (CCLI)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5741
Division of Undergraduate Education (DUE)	Research Experiences for Undergraduates (REU)	http://www.nsf.gov/crssprgm/reu/reu_contacts.jsp
Education and Human Resources	National Science, Technology, Engineering, and Mathematics Education Digital Library	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5487&org=NSF&sel_org=NSF&from=fund
Elementary, Secondary and Informal Education	Informal Science Education (ISE)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5361
Elementary, Secondary and Informal Education	Instructional Materials Development (IMD)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5468
Elementary, Secondary and Informal Education	Presidential Awards for Excellence in Mathematics and Science Teaching (PAEMST)	http://www.paemst.org/controllers/home.cfc?method=view
Mathematical and Physical Sciences Directorate	Partnerships for Research and Education in Materials (PREM)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5439&org=NSF&sel_org=NSF&from=fund
Office of Integrative Activities	Model Institutions of Excellence (MIE)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5739&org=NSF&sel_org=NSF&from=fund
Office of International Science and Engineering	East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI)	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5284
Office of International Science and Engineering	Developing Global Scientists and Engineers	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12831&from=fund
Office of Polar Programs	Arctic Research and Education Program	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13448
Office of Polar Programs	Postdoctoral Fellowships in Polar Regions Research	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5650&org=NSF&from=fund
Various directorates	ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers	http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5383&from=fund