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Office of the Press Secretary

For Immediate Release

March 23, 2015

**FACT SHEET: President Obama Announces Over \$240 Million in New STEM Commitments at the 2015 White House Science Fair**

WASHINGTON, DC – President Obama will host the 2015 White House Science Fair today to celebrate the student winners of a broad range of science, technology, engineering and math (STEM) competitions from across the country.

As part of the Fair, President Obama will announce over \$240 million in new private-sector commitments to inspire and prepare more girls and boys – especially those from underrepresented groups – to excel in the STEM fields. With the commitments being made today, the President's "Educate to Innovate" campaign has resulted in over \$1 billion in financial and in-kind support for STEM programs.

The announcements being made today include, among others:

- [\\$150 million philanthropic effort](#) to empower a diverse cadre of promising early-career scientists to stay on track to become scientific leaders of tomorrow;
- [\\$90 million "Let Everyone Dream" campaign](#) to expand STEM opportunities to under-represented youth;
- [\\$25 million Department of Education competition](#) to create science and literacy themed media that inspires students to explore;
- [120 universities and colleges committing to train 20,000 engineers](#) to tackle the "Grand Challenges" of 21<sup>st</sup> century; and,
- [CEO coalition Change the Equation](#) committing expand effective STEM programs to an additional 1.5 million students this year.

**Details on the White House Science Fair**

This year's White House Science Fair has a specific focus on diversity and includes students from under-represented backgrounds who are excelling in STEM and inspiring the next generation with their work.

The 2015 Fair will feature more amazing women and girls in science than ever before, with over 100 students from more than 30 states, representing more than 40 different STEM competitions and organizations that recognize the talents of America's next generation of scientists, engineers, inventors, and innovators. A number of these competitions and teams are supported by the federal agencies, in addition to others.

As part of the Fair, approximately 35 student teams will have the opportunity to exhibit their projects at the White House. The President will personally view some of these projects, which range from breakthrough basic research to new inventions. The President will also deliver remarks to the students, along with invited science educators and business leaders, on the importance of STEM education to our Nation's economic future.

Additional information on the projects, students, and competitions recognized at the Fair can be found [HERE](#).

The White House Science Fair is a key part of the President's *Educate to Innovate* campaign to inspire more girls and boys to excel in STEM subjects. As the President has noted, "If you win the NCAA championship, you come to the White House. Well, if you're a young person and you produce the best experiment or design, the best hardware or software, you ought to be recognized for that achievement, too."

**New Steps Being Taken by the Administration**

[The Department of Education will launch a \\$25 million grant competition to support the creation of science and](#)

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literacy themed media that inspires children, especially those from low-income homes, to play and explore. The Department of Education's Ready-to-Learn Television program is announcing a new competition for five-year grants to support the development of educational television and digital media for young children and their parents. This is the first time in Ready-to-Learn's history that the program will include a specific emphasis on science programming. The new TV shows, interactive learning games, websites, and mobile apps produced by Ready-to-Learn grantees will engage children in the world of science, and help them learn and put into practice the skills they need for success in school. Applicants are also encouraged to develop new models of embedded assessment and learning systems that adapt as children use them. This new competition will build on Ready-to-Learn's prior success in creating high-quality educational programming, including shows like *Word World*, *Super Why!*, and *Peg + Cat*.

The Administration will host a series of roundtables in 2015 that will feature diverse voices in science and technology, with the goal of inspiring the next generation. Starting at the Science Fair itself, the White House will launch a series of roundtables in 2015 that will feature diverse voices in science and technology. Building on the recent launch of "Untold Stories of Women in Science and Technology" on the White House website, the roundtables are intended both to celebrate the work of outstanding individual contributors to science and technology and raise their visibility as role models for the next generation of students. These roundtables will advance the Administration's commitment to having more underrepresented groups, including women and girls, excelling in expanding and well-paying STEM fields: a commitment previously demonstrated in signature initiatives like Race to the Top, which gave competitive preference to states that demonstrated efforts to close the STEM gap for students from underrepresented groups.

### Major Commitments in Response to the President's Call to Action

More than 120 universities are committing to train more than 20,000 engineers to tackle the "Grand Challenges" of the 21<sup>st</sup> century. To power the pipeline of talent that will fuel America's future technological breakthroughs, more than 120 deans of engineering programs at American universities are announcing their plans to expand or launch "Grand Challenge" Scholars Programs on their campuses. Students in these programs will be able to structure their undergraduate experience around a pressing Grand Challenge, including such diverse topics as reverse engineering the brain, making solar energy economical, and providing access to clean water for nearly a billion people who lack it. These programs give students the opportunity to engage in a research or design project in their Grand Challenge topic area, develop entrepreneurship skills, and gain valuable field experience through service learning and projects in other countries. Each participating university will graduate at least 20 students per year from its program, meaning that more than 20,000 Grand Challenge Scholars trained in these interdisciplinary skills will be entering the workforce over the next decade. Participating universities are also committing to develop and share open educational resources that will inspire and enable more students to address Grand Challenges.

Philanthropies are launching \$150 million effort to empower a diverse cadre of promising early-career scientists to stay on track to become scientific leaders of tomorrow. Responding to the President's call to action and recognizing the need to build a pipeline of diverse and innovative scientific talent, the Howard Hughes Medical Institute, the Bill and Melinda Gates Foundation, and the Simons Foundation are launching a new Faculty Scholars Program. The initiative will support direct grants to early career scientists, giving them appropriate resources, scientific interactions, and mentoring to reach their potential and become leaders in their fields. Over the program's first five years, the philanthropies will invest a total of approximately \$150 million in research support. With support at the critical early stage of their careers, these Faculty Scholars will feel empowered to ask new questions, pursue new and exciting research directions, and do the types of high-risk, high-reward research that can lead to scientific breakthroughs. The initiative will also include an emphasis on diversity, given that the scientific disciplines benefit when they are representative of the American population more broadly, and America's ability to innovate is enhanced when it builds on that diversity.

A multi-sector coalition is launching a more than \$90 million "Let Everyone Dream" campaign to expand STEM opportunities. Building on the documentary *Underwater Dreams*, which depicts the unlikely and inspiring story of a group of under-resourced Hispanic high school students taking on a MIT team in an underwater robotics competition, the "Let Everyone Dream" coalition will focus on getting more under-represented students inspired to succeed in STEM subjects. The coalition launches with over \$90 million in supporting commitments, including:

- Youth and family focused media campaign: Televisa, a Mexican multimedia company, will invest \$4 million into national television campaign to raise the visibility of Latinas in STEM, and American media company EPIX will invest \$4 million to support distribution of the *Underwater Dreams* documentary to students and families. In addition, as part of the National Robotics Week in April, the White House screen the *Underwater Dreams* documentary on April 7 for an audience including local students from the area and from the Society for Hispanic Professionals Engineers (SHPE). SHPE will organize an additional 150 screenings for students across the country.
- Expanding access for under-represented students: 3M will commit \$15 million to STEM programs for women and underserved populations; Motorola Solutions Foundation will commit \$4 million for innovative hands-on STEM programming for underserved students; and Rockwell Automation and the i.am.angel foundation will support more FIRST robotics teams in under-represented areas. FIRST is also committing resources to substantially increase the number of girls, minorities, and underrepresented youth that have access to its programs and support the formation of new teams from communities that serve underrepresented youth.

- ***Strengthened connections with higher education:*** Building on its \$25.5 million commitment at the College Opportunity Day of Action, CUNY is announcing a \$10 million commitment to support internship and STEM career-readiness programs for first-generation college students. MIT, in order to ensure that more underrepresented STEM students have access, is increasing the financial aid it will provide to students next year by \$8.4 million. Wellesley College is committing \$20 million to support women in STEM from pre-college to graduate training.

A CEO coalition will expand high-quality STEM education programs to additional 1.5 million students this year. In 2010, CEOs from some of the largest American companies answered President Obama's call by forming *Change the Equation*, with the goal to drive corporate philanthropy into the most effective STEM programs and ensure students of all backgrounds succeed in STEM subjects. To achieve that goal, *Change the Equation* created STEMworks, which identifies programs that meet the coalition's rigorous principles for effectiveness and impact. Building on its expansion of the reach of these effective STEM education programs to an additional 330,000 students in 2014, *Change the Equation* is committing to enlarge the reach of some of the Nation's best, most proven STEM education opportunities to an additional 1.5 million young people this year, with a focus on expansion in lower-income communities. Among others, programs designated for potential expansion include Engineering is Elementary, the MIND Research Institute's ST Math, the National Math and Science Initiative's College Readiness Program, Project Lead the Way, and efforts to build excellent STEM-focused high schools.

### **Growing Community of Organizations Answering President's All Hands on Deck Call to Action**

#### *Creating Learning Opportunities Outside of the School Day*

Youth-serving organizations that annually reach over 18 million children are launching a five-year commitment to bring more under-represented students into STEM. Four of the Nation's largest youth development organizations – Boys & Girls Clubs of America, Girls Inc., National 4-H Council, and YMCA of the USA – are forming a multi-year partnership to tackle jointly the challenge of engaging under-represented youth in STEM learning. This includes a five-year collaboration agreement to operate new, high quality, and community-based STEM programming that captivates and inspires children ages 8-14, with a special emphasis on reaching low-income, African-American, and Latino youth, as well as girls. The effort will develop new STEM programming at community-based sites for times and places where options are typically limited. Programming will include the use of mobile STEM labs, 1-2 day STEM challenges and expos, and multi-week STEM-themed summer camps. The youth-serving organizations committing to partner collectively serve more than 18 million students every year, meaning that this programming effort has the potential to be one of the largest-ever nationally-coordinated expansions of community-based STEM learning for youth in need. The partnership's new afterschool and summer STEM learning program, *Imagine Science*, will pilot jointly-operated activities this summer in Dallas, TX, Omaha, NE, and Orange County, CA, with nation-wide expansion planned for 2016.

Federal agencies, companies, and others are creating new ways to engage students in citizen science. Citizen science and crowdsourcing projects can be powerful tools for engaging students in STEM learning, giving them the ability to gain hands-on experience doing real science, and in many cases take that learning outside of the traditional classroom setting. New commitments to give more students these hands-on experiences include:

- ***Science is everywhere, including the White House:*** The White House will showcase that anyone can participate in citizen science by installing a new rain gauge in the First Lady's Kitchen Garden, and becoming part of the Community Collaborative Rain, Hail and Snow (CoCoRaHS) citizen-science network of over 20,000 active participants who serve as the largest source of daily precipitation data in the United States.
- ***Making use of Federal lands and parks:*** The U.S. Fish and Wildlife Service and the National Ecological Observatory Network's "Project BudBurst" will offer a new online course to support citizen science at wildlife refuges, and the President's "Every Kid in a Park" Initiative will work with organizations and universities such as the Cornell Lab of Ornithology to enable tens of thousands of families and school groups to contribute citizen-science data from Federal lands during the 2015-2016 school year.
- ***New "create your own" citizen-science project app:*** Building on its ConnectED commitment to provide its software for free to all K-12 schools, and responding to the President's call to action, Esri will release this year a free open crowdsourcing app designed to empower citizen science. Teachers, students, and youth groups will be able to easily create their own projects and use this app in the field to report observations and explore them on a dynamic map.
- ***Lending library of citizen-science instruments:*** Arizona State University's Center for Engagement and Training in Science and Society, the Museum of Science Boston, Public Lab, and SciStarter will create a Citizen Science Tool Library, to increase access for students, parents, and other adults to citizen science data collection tools.

More details on the efforts to empower students through citizen science is available [HERE](#).

Organizations are helping more students answer the President's "Nation of Makers" call to action. A diverse array of organizations will support making and innovation across the country by giving more students access to hardware tools like 3D printers, peer networks, and opportunities to showcase their work, including:

- *3D Systems*, the *Youth Adult Library Services Association (YALSA)*, and the *Association of Science-Technology Centers* are forming a network of libraries and museums focused on 3D digital design and fabrication, which will support increased access to 3D printers and relevant educational materials. The first 100 libraries and museums in this network have been awarded Cube 3D printers, and have committed to run over 1,000 3D printing programs across the United States.
- *Aleph Objects* will be donating over \$30,000 worth of LulzBot 3D printers to schools, libraries, and educational organizations.
- *Digital Harbor Foundation*, with the Perpetual Innovation Fund, is establishing a new program to provide educators with free 3D printers and training in order to start youth enterprises for 3D printing at their schools. Participants commit to pay forward a portion of the proceeds from these enterprises to other schools to launch their own programs.
- *The Exploratorium* will offer a free online course during summer 2015 focused on the “how, what, and why” of tinkering and making activities as a follow up to the success of its first course, “The Fundamentals of Tinkering,” which enrolled over 10,000 participants. The Exploratorium is also helping to bring more hands-on STEM learning opportunities to students through the Department of Education’s 21<sup>st</sup> Century Community Learning Centers.
- *littleBits* is launching a campaign to create local “chapters” in 100 cities by end of 2015, giving students, designers, engineers, and others an easy-to-access peer group of fellow makers in the open hardware community.
- *United Negro College Fund*, the *Association of Public and Land-grant Universities*, and the *White House Initiative on HBCUs*, with support from *SparkFun Electronics* and *3D Hubs*, will engage students at more than ten Historically Black Colleges and Universities (HBCUs) in maker activities. This will include the first-ever Making for Change Showcase, which will highlight innovative solutions to community-based challenges.
- *The Urban Libraries Council (ULC)* and its public library members are expanding their commitment to making technology-driven STEM education widely available to all students, including through its annual Innovations Initiative which recognizes individual library success and provides a growing database of leading practices.

Finding new and exciting ways to get students interested in the STEM fields, and helping parents find these opportunities. Many organizations are answering the President’s call to find new and exciting ways to engage students around their passions:

- *The American Association of University Women (AAUW)* and *Verizon*, building on a pilot last summer, will embed a new coding course for girls within their 21-week-long STEM summer camps that will be held on college and university campuses across ten states in summer 2015.
- *CA Technologies*, in partnership with *Boys and Girls Clubs of America (BGCA)*, will host *Tech Girls Rock* workshops throughout the U.S., with the goal of encouraging young women to discover exciting and emerging careers in STEM fields.
- *Galileo Learning*, a provider of STEM and innovation education, will engage students in creating projects ranging from catapults and rockets to 3D printing and fashion lines, starting with four cities this summer.
- *Iridescent*, in response to President’s “Every Kid in a Park” Initiative, will provide online curriculum and mentors to each participating child, teacher, and parent, helping them to explore the physics and engineering in the amazing things they will see in our Nation’s parks.
- *Microsoft* is announcing opportunities for youth to become part of the “Big Dream Movement,” through a new documentary called the Big Dream, which will follow the stories of seven young women who are breaking barriers and overcoming personal challenges to follow their passion in science, math, computing, and engineering.
- *The National Girls Collaborative Project*, with support from *Time Warner Cable*, is launching *The Connectory*, a database of over 8,000 STEM programs from all 50 states. When the site fully launches in April 2015, organizers estimate that it will be the most comprehensive collection of STEM opportunities and programs in the country and a resource for families to connect their kids to STEM learning opportunities, while enabling providers to promote their programs and find collaborators. In close partnership with *The Connectory*, Maker Ed will host a subset of the directory specific to DIY and maker programs and opportunities on its online Resource Library.
- *The New York Academy of Sciences*, with support from the *Jack Kent Cooke Foundation*, is announcing plans to create a “Junior Academy” – a STEM-focused social network for students aged 15-19, which will offer students access to leading research scientists and real-world challenges that expand their imaginations.
- *Society for the Science & the Public* is announcing a new campaign to reach more under-served and socio-economically challenged students by providing micro-grants to key adults – teachers, counselors, and mentors – who agree to mentor a “posse” of 3-5 such students. This campaign will enable students to compete in science competitions while building their capabilities to achieve future success in academic and career pursuits in STEM.
- Producers of the *Teen Choice Awards* are partnering with the *National Science Teachers Association*, and the *National Center for Women and Information Technology* to launch a nationwide multi-media campaign

aimed at closing the female engagement gap in STEM education. This will include the release of *FabLab*, a new network broadcast series that will debut this fall. Mayim Bialick will participate in the initiative by leading a series of science-oriented question and answer segments with students across the country.

- [Victor Cruz Foundation](#) will partner with [BGCA](#), to create STEM activities that build off student interest in sports such as football and make the connection to topics such as materials science, basic physics, and kinesiology. Inspired by his attendance at the 2013 White House Science Fair, the New York Giants wide receiver and BGCA alum Victor Cruz has made a commitment to connect underrepresented young people to hands-on STEM learning through the work of his foundation, and his new program will start this fall with students in New York and New Jersey.

#### *Supporting STEM Teachers*

[100Kin10 is adding over 30 new contributors to its campaign to prepare 100,000 excellent STEM teachers.](#) More than 230 organizations have now come together under the banner of "100Kin10," a network created in response to the President's 2011 State of the Union call to action to prepare 100,000 excellent STEM teachers over 10 years. These organizations have collectively made nearly 350 new commitments to hiring, developing, and retaining excellent STEM teachers to achieve the 100Kin10 goal. The more than 30 new businesses, schools, and organizations joining the network are adding over 40 ambitious commitments to the shared goal, including Business Innovation Factory's online platform to empower STEM teachers to design solutions in their schools, Charlotte-Mecklenburg Schools' digital badge credentialing program for pre-service STEM teachers, Guilford County School's training of 150 new STEM teachers in partnership with local HBCUs, and the launch of an annual educators' award by the Science Friday Initiative. 100Kin10 provides resources and opportunities for collaboration and learning to the network, including continuing to grow the research base. This year, it is awarding its annual Research Design competition to the Charles A. Dana Center and Agile Mind, which will launch a trial this summer to test the effectiveness of teacher-training techniques that incorporate the psychology of student success in math.

[Researchers are fielding the largest-ever "growth mindset" study.](#) Researchers at Stanford University and the University of Texas at Austin are announcing that they will field the largest-ever randomized control study of "growth mindset" interventions, pulling from a random sample of over 100 high schools nationwide. Previous research shows that these interventions, which emphasize that intelligence is not an innate trait but rather an attribute that can grow with hard work and perseverance, can significantly improve academic performance. This national study will enable investigators to estimate what proportion of underperformance in American classrooms is attributable to student mindsets. The researchers will also test a web-based intervention designed for rapid national scale-up. The effort is supported by Bezos Foundation, the Character Lab, the Houston Endowment, the Raikes Foundation, the Spencer Foundation, and the President and Dean for Humanities and Social Sciences at Stanford University.

[Organizations are giving educators new resources and training they need to engage in cutting-edge STEM teaching and learning.](#) Supporting commitments include:

- [100Kin10](#), working with NOAA, NASA, and DOE, will launch a climate and energy challenge for educators later this year, which will ask grade-level teams to develop projects showcasing interdisciplinary approaches to addressing climate change.
- [Discovery Communications' Science Channel](#) and [Discovery Education](#) are partnering with the [Planetary Society](#), [Girls Inc.](#), and [Maker Ed](#), to kick off a multi-year "Support our Science" campaign, beginning with providing two high-need schools with professional development opportunities, hands-on resources, and educational equipment. A third winning school will be selected through a national competition.
- [Edmodo](#), with over 49 million users, will create a dedicated STEM teacher community on its platform, allowing easy sharing of curriculum, connecting with peers, and sharing best practices.
- Pittsburgh's [Grable Foundation](#), is committing \$2 million to support innovative professional development and 21<sup>st</sup> century classrooms, benefiting up to 150,000 students regionally.
- [The National Environmental Education Foundation](#), with support from Samsung North America, is expanding access to dome-shaped schoolyard STEM labs, which provide year-round outdoor environmental classroom space.
- [Project Lead The Way](#), which currently serves more than 6,500 schools across the nation, will in 2015-2016 school year become the first organization to deliver project-based K-12 pathways – including content and teacher training – in computer science, biomedical science, and engineering.
- [The National Student Clearinghouse](#) will include graduation rates by high school socio-demographics characteristics as well as STEM degree completions in its 2015 High School Benchmarks Report, providing a new resource for local school leaders.
- [Udemy](#) will launch a \$5 million philanthropic Teacher Tech initiative to help teach programming skills to K-12 teachers nationwide. As a first step, it will offer free web development courses to 1,000 teachers and up to 95 percent discount to any additional teachers this year.
- [Unity Technologies](#) is launching a new program to help high school teachers develop and deliver courses in interactive application and videogame development. The program will include access to no-charge educational licenses of the Unity 5 engine and editor, a 40-page professional skill standard document, and a 200 page curricular framework.

### *Fostering College and Adult Success in the STEM Fields*

10 universities are partnering to expose their first-year students to design thinking and STEM experiences. Sixty percent of students who arrive at college intending to major in STEM subjects switch to other subjects, often in their first year. To combat this trend, the University Innovation Fellows program is partnering with ten universities and colleges to launch “#uifresh” (University Innovation Freshmen), a campaign to expose all incoming freshmen at a school to the types of experiences in design thinking, entrepreneurship, and innovation that will attract and retain more incoming students in the STEM disciplines. As a first step, the Fellows will work with orientation week organizers to hold experiential learning opportunities that connect first-year students to peer communities of makers and innovators on campus. The University of Virginia, University of Minnesota, and University of Florida are among the universities already participating in this effort.

A research partnership will help thousands of low-income students make the transition into college. Too often, low-income and under-represented students arrive at college fearing that they will not belong or cannot succeed, creating a self-perpetuating cycle of underperformance. Promising research shows that younger students show greater resilience and persistence in college when exposed to stories that older classmates share of their own, similar experiences and fears of when they started college. The College Transition Collaborative, a partnership of researchers and 13 universities and with support from the Raikes Foundation, is announcing plans to deliver and evaluate “belonging” interventions that feature these stories to approximately 40,000 incoming college students this summer.

Expanding access to open educational resources. John Wiley & Sons is committing to lowering costs for STEM students and is partnering with OpenStax College to develop Bio Principles and Bio Concepts, two low-cost teaching and learning solutions in biology based on openly licensed content that will be piloted at 40 institutions this spring and will be available for use in fall 2015.

### *Creating Regional and Local Support Networks*

US2020 is expanding its city-level STEM mentoring network. The long-term goal of US2020 is to mobilize 1 million STEM mentors annually by the year 2020, with an emphasis on reaching underrepresented students. A core component of reaching that goal is building regional networks that connect STEM employers with local schools and non-profits, and building a culture of service and mentorship within STEM companies. Today, US2020 is announcing that its US2020 city network is nearly doubling in size to include 13 cities and over 250 partners. This network helps connect passionate employees with schools and non-profits. US2020 is also announcing the launch of new STEM mentoring awards to celebrate and document adoption of best practices, as well as a major commitment by Cisco to mobilize 20 percent of its workforce to engage in STEM mentoring, starting with a company-wide STEM Mentoring week in April. Major companies such as Texas Instruments continue to join the US2020 effort, building on the example of companies like Chevron, Cisco, Cognizant, Discovery Communications, Raytheon, SanDisk and Tata Consultancy Services, among others.

STEM AmeriCorps is continuing to grow. The Corporation for National and Community Service's (CNCS) STEM AmeriCorps initiative, launched in 2013, has connected tens of thousands of students with the types of engaging STEM experiences that expand their horizons for their future. To build on this momentum, STEM was included as a priority in the overall AmeriCorps application this year, and CNCS will expand its STEM AmeriCorps Summer program to additional states. Key businesses and funders are joining as well, including:

- Best Buy, which will place up to 20 AmeriCorps VISTA members in eight locations, and will support the ability of low-income teens to participate in the FIRST robotics competition.
- STEM Funders Network, a collaboration of 17 foundations and funders, who are working together with the on-the-ground coordination of AmeriCorps members to create STEM learning ecosystems in 25 communities.